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TRADE IN CONSTRUCTION AND CONSULTANCY SERVICES: INDIA AND THE GATS

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Abbreviations

AICTE	All India Council for Technical Education
APEC	Asia Pacific Economic Co-operation
ASEAN	Association of South East Asian Nations
BOO	Build-Operate-Own
BOT	Build-Operate-Transfer
CDC	Consultancy Development Centre
CIDC	Construction Industry Development Council
CIS	Commonwealth of Independent States
CMIE	Centre for Monitoring Indian Economy
DSIR	Department of Scientific and Industrial Research
ECGC	Export Commission Guarantee Corporation
ECB	External Commercial Borrowing
EEPC	Engineering Export Promotion Council
EIL	Engineers India Limited
EPC	Engineers Procurement and Construction
EPI	Engineers Project India (Limited)
EU	European Union
EXIM Bank	Export Import Bank of India
FDI	Foreign Direct Investment
FEDO	Fertilizer Engineering and Design Organisation
FIEO	Federation of Indian Exports Organisation
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
GPA	Government Procurement Agreement
HCC	Hindustan Construction Company
HPL	Hindustan Prefab Limited
HRD	Human Resource Development
HSCL	Hindustan Steelwork Construction Limited
IRCON	Indian Railways Construction Limited
LC	Letter of Credit
MDA	Market Development Assistance
MECON	Metallurgical Engineering Consultancy
MFN	Most Favoured Nation
MOST	Ministry of Surface Transport
MPI	Ministry of Programme Implementation
MRA	Mutual Recognition Agreement

NBCC	National Buildings Construction Corporation
NIDC	National Industrial Development Corporation
NPCC	National Projects Construction Corporation
OCCI	Overseas Construction Council of India
OECD	Organisation for Economic Co-operation and Development
PDIL	Projects Development India Limited
RBI	Reserve Bank of India
R&D	Research and Development
RITES	Rail India Transportation and Engineering Services
SAARC	South Asian Association for Regional Co-operation
TCE	TCE Consulting Engineering Limited (a Tata Enterprise)
UK	United Kingdom
UPSBC	Uttar Pradesh State Bridge Corporation
USA	United States of America
WAPCOS	Water and Power Consultancy Services (India) Ltd.
WTO	World Trade Organisation

Foreword

This study examines the construction and consultancy services sectors in the Indian economy in the context of the ongoing GATS negotiations. Given the strong linkages of construction and consultancy services with infrastructural development, employment creation and transfer of technology, it is important to analyse India's potential for expanding trade in these services within the GATS framework.

As of now India is a small player in the global market for construction and consultancy, but has significant potential for increasing its share in world trade. This study identifies markets of export interest to India and entry barriers in those markets. It recommends India's possible negotiating strategies in the WTO for the removal of such barriers. It also recommends a number of regulatory, institutional and other reforms that would enhance the global competitiveness of these sectors, highlighting how domestic reforms are required to support the process of liberalisation.

This sectoral study is a part of the Ministry of Commerce project "Trade in Services: Opportunities and Constraints". I am confident that this paper will provide significant input to policy makers, industry associations and academicians working towards realising the potential of this sector.

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Introduction*

Construction and consultancy services play a crucial role in infrastructural development, transfer of technology and achieving socio-economic development objectives. They together constitute one of the largest services sectors of the economy and account for a significant proportion of employment and foreign exchange earnings. In most developed and many developing countries the share of construction in the total GDP (gross domestic product) ranges between 5–7 per cent.

Trade in construction and consultancy services is primarily through the movement of natural persons (that is, the temporary movement of unskilled/semi-skilled/skilled labour and professionals) and commercial presence in the form of FDI (foreign direct investment), joint ventures, etc. With developments in Internet technology and advanced communications systems, there has been an increase in cross-border trade in some of these services.

International trade in construction and consultancy services is subject to significant barriers, such as regulatory and institutional constraints to the movement of natural persons across countries, equity restrictions on foreign commercial presence, restrictions on establishment of branches of foreign firms, economic needs tests for commercial presence, and local incorporation requirements, etc. Additionally, trade in these services are also affected by domestic regulations relating to the maintenance of safety of construction works, protection of health and safety of workers and users, building regulations and technical requirements, environmental issues, etc. Such regulations are not only applied at national levels but also at regional and local levels. In many countries public sector financing and public procurement practices play an important role in the consumption of construction and related services. Procurement practices are often characterised by lack of transparency in the bidding procedure and are

* I am grateful to Isher Judge Ahluwalia for giving me an opportunity to work in this area and for her encouragement and support. I am also grateful to B.K. Zutshi for his useful comments. I would like to thank Abhijit Sen Gupta and Ruchika Sachdeva for their efficient and prompt research assistance.

subject to discriminatory and discretionary treatment.

The Uruguay Round of multilateral negotiations, which led to the establishment of the General Agreement on Trade in Services (GATS), was the first attempt to remove/reduce some of the above barriers and enhance trade in construction and consultancy services. The primary aim of the GATS 2000 negotiations is to continue the liberalisation process by removing the restrictions on market access and national treatment and by promoting transparency in domestic regulations.

Although construction and consultancy services is one of the key infrastructural services and contributes more than 5 per cent of the GDP, India is a marginal player in the world trade of these services and its share in the global trade is less than one per cent. Given India's considerable infrastructural needs and the abundant supply of low-cost skilled/semi-skilled/ unskilled labour and professionals, India has the potential of expanding trade (both imports and exports) in these services. It is therefore important to identify the country's constraints and opportunities to trade in construction and consultancy services not only for the current round of GATS 2000 negotiations but also to increase productivity, efficiency and global competitiveness of these services.

Coverage of the Sectors

Construction services encompass a wide range of services including construction work for all types of residential and non-residential buildings; construction work for civil engineering, such as construction of highways, railways, bridges and tunnels, waterways and harbours; installation and assembly work, such as air conditioning and heating, gas fitting, insulation; building completion and finishing work; and all other activities relating to construction, such as pre-erection work at construction sites, foundation work, roofing, concrete work, steel bending and erection, masonry work and renting services related to equipment for construction or demolition of buildings or civil engineering works with operator.

Consultancy Services related to construction include various types of architectural and engineering services. The architectural firms provide blueprints and designs for buildings, while engineering firms provide planning, design, construction and management services for building structures, installations, civil engineering works and industrial processes, etc. Under GATS, architectural and engineering services are listed as a sub-sector of professional services.

Objective and Structure of the Study

This study will examine the prospects of liberalising trade in construction and consultancy services and the costs and benefits of such liberalisation under the GATS framework. Other objectives of this study are: (a) to assess the opportunities available to and constraints faced by these sectors in India; (b) to recommend strategies for the Indian government in its negotiations at the WTO; and (c) to suggest various domestic reforms and measures that would be required to strengthen the sectors.

The study consists of five sections:

- Section 1 analyses the place of construction and consultancy services in the domestic and world economy—bringing out the recent trends and developments in these sectors.
- Section 2 discusses the domestic constraints and external barriers to India's trade in construction and consultancy services.
- Section 3 focuses on the coverage of the sectors under GATS, initial commitments made by India and other major trading countries in these sectors.
- Section 4 analyses the possible demand for liberalisation by India's trading partners in construction, architectural and engineering services and India's response thereto in the light of further scope for liberalisation during the GATS 2000 negotiations. This section identifies entry barriers in markets of export interest to India and the demands India should make on its trading partners in this regard.
- Section 5 discusses the regulatory and other reforms required in India to make these sectors globally competitive and to meet the challenges and opportunities arising

from trade liberalisation under GATS.

1. An Overview

1.1 Construction and Consultancy Services in the World Economy

Construction is one of the oldest industries which provides infrastructure for all other industries. It constitutes one of the largest services sectors in the economy – both in terms of its contribution to GDP and employment. In most developed and many developing countries (eg. India, Philippines and Thailand) the share of construction in total GDP ranges between 5–7 per cent.[1] In countries, such as Japan and Korea[2] the share of construction and consultancy services exceeds 10 per cent of GDP. In the United States, construction activity grew from $381.8 billion in 1999 to $420.6 billion in 2000.[3] In the European Union (EU), the estimated investment in construction in 1999 was 781 billion Euro (9.7 per cent of GDP) which was around 48 per cent of the gross fixed capital formation.[4]

Construction and consultancy services are labour-intensive services and contribute substantially towards employment. The share of construction in the total employment of selected countries is presented in Table A1 in Appendix A. During the period 1990–99, employment in US construction services sector increased from 7.7 million to 8.98 million.[5] Construction, architectural and engineering services are the largest industrial employer in Europe, accounting for more than 28 per cent of the total

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1 WTO, 1998a

2 In the year 2000, construction accounted for 14.5 per cent of the Korean GDP (Communication from the Republic of Korea).

3 Its share in the national income in the same period grew marginally from 5.13 per cent to 5.26 per cent. (Bureau of Economic Analysis, USA).

4 European Construction Industry Federation (http://www.fiec.org/en/home.htm)

5 International Labour Organisation: Labousta Database

industrial employment.[6] In 1999, there were around 1.9 million enterprises engaged in construction activities in the EU, which provided direct and indirect employment to approximately 26 million workers. Since architectural and engineering services are often integrated with physical construction activities and/or other business services, it is difficult to obtain separate data on these services. The employment pattern in architectural and engineering services varies across countries. In the USA, engineering is one of the largest and most diverse of all professions, while architecture is comparatively small. The situation is just the reverse in Europe where there are more architects than engineers.[7]

Construction, architectural and engineering services are primarily traded through commercial presence, that is, the establishment of foreign affiliates and subsidiaries of foreign companies. International supply of construction services involve movement of unskilled, semi-skilled and skilled workers and professionals to perform a wide range of work, including designing, management and physical construction work. Increasingly, with developments in communication and Internet, cross-border supply is becoming an important component of trade in some of these services. These include the electronic transmission of designs and blueprints and on-line consulting services. However, given the capital-intensive nature of the services, the requirement of specific skills and technical know-how, which may not be available locally and the strong client-oriented focus of these services, the bulk of trade would continue to take place through commercial presence and the movement of natural persons.

Global trade in construction services is estimated to be over US$120 billion.[8] It is extremely difficult to estimate the share of different regions/countries in the total trade since disaggregated sectoral trade data for cross-border trade and supply through commercial presence is not available. The US is the only country which publishes data

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6 European Construction Industry Federation

7 WTO, 1998b

8 USTR

on: (i) cross-border trade in architectural, engineering and construction services, and (ii) sales of majority-owned affiliates of US firms and purchases from majority-owned affiliates of foreign firms. The US is a net exporter of private construction, engineering, architectural and mining services. The US trade data[9] shows that the exports of these services have increased nearly fivefold from US$867 million to US$4071 million during the period 1990–99. During the same period, imports increased from US$170 million to US$530 million.[10] Between 1991 and 1996, cross-border exports of US architectural, engineering and construction services increased at an average annual rate of 15 per cent from US$1.5 billion to US$3 billion, while imports increased from US$315 million to US$489 million (that is, a nine per cent increase). Countries in the Asia/Pacific region are major importers of US construction and consultancy services, followed by Latin American countries.

Developed countries are the major exporters of construction, architectural and engineering services, while developing countries provide the major markets. Construction services supplied internationally are typically related to large-scale projects, such as airports, harbours and petrochemical plants and are often undertaken by specialised contractors with local sub-contracting. Prior to the 1950s, most construction and consultancy companies in the industrialised countries serviced the needs of their own economy. In the 1950s and 1960s these companies diversified their operation and ventured into Asian, African and Latin American countries. A majority of the projects were related to infrastructure building and were supported by multilateral funding, such as the World Bank or International Development Association. In the 1970s, oil price boom in the Middle East and Gulf countries and consequent infrastructural developments significantly increased exports to those countries. Since the late 1980s, the decline in oil prices, Iran-Iraq war and the Gulf war slowed down the development process in the Middle East, and South Asian, African and Latin American countries started emerging as important markets for construction and related services. With the development of single

[9] Bureau of Economic Analysis (www.bea.doc.gov)

[10] Bureau of Economic Analysis (www.bea.doc.gov).

European market, trade among the European countries increased substantially.

International supply of construction, architectural and engineering services involve large movement of workers at all levels of skills. Although, the exact data on movement of such workers is not available, a large proportion of movement of workers into the industrialised countries and the Middle East from developing countries of Asia and Latin America are construction related.[11]

In the recent years, increasing competition among companies and the growing size and technical sophistication of projects have encouraged construction companies to enter into partnership agreements and strategic alliances in bidding for and implementing construction projects. The construction sector is also affected by increased privatisation of public utilities and reduction in financial assistance from the government.

Regulations and Trade Restrictions Affecting Construction and Consultancy Services

Construction, architectural and engineering services are subject to a plethora of rules and regulations related to maintenance of safety of construction works, protection of health and safety of workers and users, building regulations and technical requirements, environmental issues, etc. Such regulations are applied not only at national levels but also at regional and local levels.

One of the major barriers to trade in these services is the differential treatment for foreign service providers. Such restrictions include measures, which affect the mobility of labour, such as, restrictions on entry and stay of persons, regulations concerning requirement of qualifications, work experience and licensing/certification, residency and nationality requirements. International trade is also affected by regulations on the mobility of construction equipment and supply of related services, such as insurance and transport. Lack of transparency in rules, multiple licensing policies, high registration fees

[11] WTO, 1998a

are some of the other barriers to trade. Since commercial presence is an important mode of supply of construction and related services, restrictions on the establishment and operation of foreign firms including limitation on foreign equity, restriction on establishment of branches, local incorporation requirements, economic needs tests for commercial presence, limits on contract amount available to foreign firms, etc. also affect trade in these services.

Government taxation and subsidisation policies can discriminate against foreign service providers. Government sometimes offers explicit and implicit subsidies in the form of mixed credits, financial support and export and operating subsidies, which give local firms a comparative advantage over foreign firms. For instance, in the case of engineering services, the Canadian government, at the provincial and federal level, subsidizes Canadian firms' bids for feasibility studies and other work in third countries. Export subsidies are provided through the Export Development Corporation, the Canadian International Development Agency and the Program for Export Market Development.[12]

In most countries public sector financing and public procurement practices play an important role in the consumption of construction and related services. The two main reasons for government procurement are political patronage and protection of industries from international competition. Procurement practices are characterised by lack of transparency in the bidding procedure and are subject to discriminatory and discretionary treatment. [13] The use of local services by government authorities does not promote full competition. With the increasing global trend towards liberalisation and privatisation of state-owned enterprises, the importance of public procurements and financing are likely to decline in the long run.

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[12] See USTR website for details.

[13] For example, in Canada, local engineers and construction firms are given preference for all government contracts. In Indonesia, foreign firms bidding on high value government-sponsored construction or procurement projects are periodically asked to purchase and export the equivalent value in selected Indonesian products (USTR website).

With respect to movement of professionals, several regional and bilateral initiatives have been undertaken to facilitate access for foreign architects and engineers. For instance, with economic integration there is free movement of professionals and recognition of diplomas and certificates within the EU. A large number of countries have notified Mutual Recognition Agreements (MRAs) under the GATS Article VII:4, which requires notification of existing recognition measures. In the case of architecture, there is an inter-recognition agreement between the USA and Canada. In engineering, The Washington Accord was signed by professional bodies from six countries (Australia, Canada, Ireland, New Zealand, United Kingdom and United States) in 1989. Since then professional bodies from Hong Kong, China and South Africa have also become signatories. The APEC countries have also signed a number of bilateral agreements on recognition of practice standards in engineering.

Although there are significant restrictions to trade in construction, architectural and engineering services there is a distinct move towards liberalisation and increased private participation in these services. Also, companies from both developed and developing countries have shown a keen interest in expanding their businesses beyond national boundaries. The current round of GATS negotiations is likely to play an important role in removing the barriers discussed above and expediting the process of liberalisation.

1.2 Construction and Consultancy Services in India

After independence, industrial and infrastructural developments in India boosted the growth of construction, architectural and engineering services. In the 1950s and 1960s, the government played an active role in the development of these services and most of construction activities during this period were carried out in the public sectors and by government departments. In the first five-year plan, construction of civil works

was allotted nearly 50 per cent of the total capital outlay.[14] The first professional consultancy company, National Industrial Development Corporation (NIDC), was set up in the public sector in 1954. Subsequently, many architectural, design engineering and construction companies were set up in the public sector (Indian Railways Construction Limited (IRCON), National Buildings Construction Corporation (NBCC), Rail India Transportation and Engineering Services (RITES), Engineers India Limited (EIL), etc.) and private sector (M N Dastur and Co., Hindustan Construction Company (HCC), Ansals, etc.). Since the late 1960s government started encouraging foreign collaborations in these services. The Guidelines for Foreign Collaboration, first issued in 1968, stated that local consultant would be the prime contractor in such collaboration. The objective of such an imposition was to develop local design capabilities parallel with the inflow of imported technology and skills. This measure encouraged international construction and consultancy organisations to set up joint ventures and local affiliates in India.[15]

Construction services constitute more than 5 per cent of India's GDP (Table A2 in Appendix A). It is, however, difficult to state precisely the total number of firms engaged in construction and related activities since the size of firms range from one-man operations to large public limited companies and there are a large number of private players in this sector. It is estimated that the sector has grown from a handful of companies employing 500 persons in 1950s to more than 200,000 companies in the year 2001. It is also not possible to compute the precise number of workers employed in construction, architectural and engineering services since many firms hire both professional staff and skilled/semi-skilled/unskilled workers on casual, part-time or project basis. According to the Ministry of Labour estimates[16], around 12 lakh[17] were employed in the construction sector in 1999 and this constituted more than 4 per cent of

[14] The share of construction in the subsequent plans has declined. The share was about 38 per cent in the Seventh plan (1985-90). The Ninth five year plan proposed an investment of Rs 43,500 crores in the construction sector.

[15] Some important foreign affiliates/joint ventures are AFCONS, Gammon, H&G, etc.

[16] In the estimates the coverage in construction, particularly in the private sector is not adequate.

[17] A majority of these that is, around 11 lakh were in the public sector.

the total employment. On the other hand, a CIDC estimate shows that around 31 million people were employed in construction and allied industries in the same year.[18] In the current year, around 28,000 architects are registered with the Council of Architecture.

In India, the profession of architecture is regulated by the Architects Act, 1972. This Act vests the power on the Council of Architecture to regulate the architectural profession and register eligible persons as architects. Under the Architects Act, foreign architects are allowed to practice in India if they are registered with the Council of Architecture. At present, there is no similar Act regulating the profession of engineers.

Indian construction and engineering companies specialise in specific industries and none of the companies are currently in a position to undertake all types of engineering and related work. For example, Gammon, Ansals, AFCONS, HCC specialises in civil engineering work, RITES in rail transport, EPI and MECON in material handling and metallurgy and TCE and WAPCOS in water, power and irrigation projects. Globally, there is an increasing trend towards turnkey projects whereby a single company or a consortium provides a range of services including design engineering, construction, maintenance, management and financing. Only a few large Indian firms can provide such broad range of technical, management and financial services.

A majority of Indian construction and engineering companies cater primarily to the domestic market (more than 60 per cent of the companies earn more than 90 per cent of their income from domestic business[19]) and there are no specialised export companies as in the case of merchandised trade.

With liberalisation of the economy in the 1990s, various steps have been undertaken by the government to make construction, architectural and engineering

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[18] This estimate includes the manufacturing sector as well (The Sixth Asia Construct Conference, India Country Report, 2000-2001, CIDC).

[19] Rao and Wengel, 2000

services globally competitive. Some of the reforms which have a direct impact on these services include simplified procedures for foreign investments[20], automatic approval of foreign equity participation up to 74 per cent in key infrastructure industries, such as construction of roads, bridges, rail beds, ports and harbours; duty concessions on imports of raw materials and equipment and availability of ECB (external commercial borrowing) for the infrastructure projects. Other developments that have helped the growth of these services are development of insurance products to mitigate construction risks, grading of construction agencies, establishment of Construction Equipment Banks, etc.

With liberalisation, there has been an increase in privatisation and foreign direct investments in infrastructure construction projects. Most of these foreign investments and joint ventures are in the form of BOO (build-operate-own) and BOT (build-operate-transfer) projects.

The Indian economy is expected to grow at the rate of about 7 per cent in the next 10–15 years. It has been estimated that an investment of around US$429 billion (Rs 15,000 billion) is required in infrastructural projects to support this growth rate.[21] Development of infrastructure would, in turn, require significant investments in construction and related activities. The amount of actual investment in these areas would depend on the willingness of private and foreign investors to invest in these services. The government, on its part, needs to support the infrastructural development programme by providing appropriate help and guidelines, by making the procedures fully transparent and by encouraging competition.

India's Trade in Construction and Consultancy Services

India is a marginal player in the global trade of construction, architectural and engineering services and currently its share in the total world trade (of US$120 billion) is

[20] There are sector-specific ceilings on foreign equity.

[21] CIDC, 2000-2001.

less than one per cent. The top five countries for construction exports in 1999 are presented in Table A3 in Appendix A.[22]

India's export of construction and related services include export of skilled services for project management, consultancy, design, engineering, and maintenance services as well as unskilled and semi-skilled labour services for construction and repair activities. In the 1970s and 1980s civil work-oriented projects, such as road construction, building, etc. dominated India's exports. Since late 1980s the trend has shifted away from construction towards consultancy and turnkey projects. The rising importance of consultancy contracts has, in turn, created opportunities for ancillary construction services including supply of equipment, maintenance, and other engineering services. Since construction primarily involves the supply of unskilled and semi-skilled labour while turnkey/consultancy exports entail the supply of skilled labour, professionals, equipment and design, etc.; there has been an upward movement on the technology ladder of Indian construction, architectural and engineering services exports.

The majority of Indian export in construction and related services is through commercial presence and movement of natural persons. India's imports in this sector is also through these two modes whereby foreign companies and consortia are granted construction and consultancy contracts and this is associated with some inflow of skilled persons who supervise and manage the projects.

Globally, large construction and infrastructure projects are generally awarded by government and public sector undertakings. Hence, inter-governmental and bilateral relations play an important role in determining the volume and direction of India's exports. In the 1950s, construction, architectural and engineering firms catered to the industrial and infrastructural development in India. They started exporting their services in the early 1960s when a non-aligned foreign policy and emphasis on Third World solidarity encouraged many Afro-Asian countries to approach India for technical inputs

[22] It is worth noting that the bulk of India's export to Bhutan is tied with aid.

into their state-sponsored development programmes. With the oil price boom in the 1970s Indian construction, architectural and engineering firms ventured into the markets of Middle East and Gulf countries. In the late 1980s, Indian companies started operating in East Asia and South Asian countries.

Although the Gulf countries continue to remain an important market for Indian exports of construction services, there is considerable scope for expanding exports in the SAARC region, to countries in South East Asia and to former Soviet Union. The important markets for Indian exports of architectural services includes the USA, UK, Germany, African countries, Middle East, Singapore, Australia, New Zealand and the SAARC countries and the major export markets for Indian engineering services are the USA, UK, Canada, South and East Asian countries and African countries. The projected market size for consultancy services in South East Asia for the year 2002 is presented in Table A4 in Appendix A. India's future trade in construction and related services depends to a large extend on the capabilities of Indian companies to export these services through commercial presence or movement of professionals and skilled/semi-skilled/unskilled labour. Commercial presence depends to a large extend on the ability of the companies to develop financial strength and raise their professional and technological standards to compete with foreign companies from countries, such as the USA, UK, Australia, Japan and Korea. Indian companies can also explore the possibilities of joint ventures with foreign construction and engineering companies whereby Indian consultants can provide the detailed engineering and development of requisite software while the foreign company can provide the conceptual design and process know-how.

Given India's competence in information technology, there are excellent prospects for exporting design, blue print and consultancy services through Internet to developed countries, such as the USA, Canada, UK and Australia. Export to these countries can include new activities, such as feasibility studies, techno-economic viability studies, geotechnical, structural design and architectural design services, etc. which can be delivered electronically.

India has comparative advantage in the export of low-cost skilled/semi-skilled/unskilled labour and competent and low-cost professionals with good command of English. However, the extent to which India can export these services depends on external factors, such as the entry restrictions and immigration policies in the current and potential markets, and domestic factors, such as upgradation of skills and technology pertaining to construction and engineering services and strengthening of the financial base of the companies.

Given India's considerable infrastructural needs, there is significant scope for expanding imports of construction and related services. Foreign collaborations in turnkey projects will facilitate transfer of technology, ease financial constraints and expedite industrial and infrastructural development. Many infrastructural projects have already been opened up for privatisation and foreign investment. The total foreign direct investment and technical collaborations approved during the period August 1991 to March 2001 in consultancy services related to construction and design and engineering services is presented in Table A5 in Appendix A.[23]

Thus, overall, there is substantial scope for increasing trade (both exports and imports) in construction and related services resulting in productivity and efficiency gains for the sector and the economy as a whole.

2. Domestic and External Constraints

India is a small player in the global market for construction, architectural and engineering services and presently, Indian construction and consultancy companies do not have the necessary resources to meet the domestic infrastructural demand. India's export possibilities in these services are limited due to the domestic regulatory, structural and financial constraints and external barriers to trade in these services.

[23] In the recent years, architects from China, Philippines, Indonesia, Vietnam, Thailand, SAARC nations and African countries have shown interest in operating in India (The Council of Architecture).

This section outlines the main domestic and external constraints contributing to the poor performance and low global competitiveness of construction and consultancy services sector.

2.1 Domestic Constraints

One of the main constraints faced by Indian construction and consultancy companies is lack of finance. Investments in construction and related activities require a smooth flow of finances and many Indian companies find it difficult to fund the initial investigation and viability studies, provide for the bid bond and security deposits, or find funds for procurement of equipment and machinery, etc. Currently, only few large Indian companies have the necessary reserves to fund large projects.

The Indian government through the Ministry of Commerce, EXIM Bank, etc. provides some financial assistance to the construction companies but it is not adequate given the huge investment requirements of international projects. Owing to higher interest rates the cost of borrowing is higher and this reduces the competitiveness of Indian exporters *vis-a-vis* their foreign competitors.

It is not as if financial constraints are unique to India. Construction companies across the globe face similar problems. In order to ease financial pressure, companies from many countries, such as Japan, Germany and Korea pool their resources in consortia while applying for global tenders. However, Indian companies, in general, do not undertake such pooling of resources. Often several Indian companies bid for the same project overseas resulting in loss of time and money. Also, the individual bids often show gaps in technical and manpower resources which could have been avoided if the resources were pooled in a consortia.[24]

[24] Rao and Wengel, 2000

Bidding is generally a two-step procedure. First, a company has to prepare a technical bid. If the technical bid is shortlisted by the customer, the bidder has to prepare a financial bid. For the financial bid, the companies need to arrange for bank guarantees or earnest money without which the bid is not considered. Indian bidders require approval from various agencies (commercial bank, EXIM Bank, etc.) at various stages before they can obtain bank guarantees or earnest money. Indian companies find this multiple approval procedure time consuming and cumbersome and the overall bidding process expensive. In order to support the financial expenses of bidding, government reimburses 50 per cent of the bid cost. Even with this 50 per cent reimbursement, the remaining 50 per cent of the cost prohibit many enterprises from bidding and only a few large enterprises, such as IRCON, EIL submits more than 15 bids per year.

Indian firms have a poor success rate in the international market. It varies from 20 per cent for strong companies to less than 10 per cent for weak companies. As a result, the companies which bid for 20–30 projects per year, succeed only in procuring up to 5 orders while the companies which bid for 10–12 projects may secure only one contract. In the Middle East where 40 per cent of the projects are manned by Indian labour, Indian consultants and contractors on an average secure only 0.4 per cent of the contracts per year.[25]

One of the reasons for the failure to secure global contracts is that many Indian companies do not comply with international standards of quality, work ethics and efficiency. Since firms do not follow requisite norms of quality, project management, etc., projects tend to run behind schedule and this, in turn, increases the cost of the project resulting in additional financial pressures. It is not surprising that due to the lack of efficiency and quality standards many domestic projects also run behind schedule, thus increasing the cost of construction work. An analysis carried out by the Ministry of Programme Implementation on the status of mega projects (that is, projects above Rs 100 crores) showed that over 65 per cent of them were running behind schedule due to

[25] Rao and Wengel, 2000

various reasons resulting in a cost overrun of 60 per cent.[26]

A large volume of construction and engineering projects are contracted under global tenders. In order to procure information on such business opportunities, companies have to participate in business delegations of trade associations, maintain contacts with diplomatic missions, register themselves through multilateral financial institutions and establish overseas presence through joint ventures, branch offices or parent companies. Although, Indian companies have a reasonably good network of overseas representation, these offices are not as productive as those from developed countries and add to the financial pressure due to the high cost of maintenance and low revenue generation capabilities. For successful international bidding, companies require information on project opportunities, local customs and regulations, etc. In India, there is no organised system of collecting such information. While officials in embassies of developed countries play an active role in procuring and disseminating such information, Indian embassies, barring a few, do not have a streamlined process of procurement and dissemination of information related to the country's development plans. [27]

The ability to provide a total service package is becoming an important advantage in the international market. Both public authorities and private clients abroad are rarely demanding specialised services and are looking for firms to provide a complete package including design engineering, construction, maintenance, management and project financing. Most Indian companies are specialised to undertake specific tasks or do not have the technical, management and financial base to support large turnkey projects. Even large engineering firms, such as EIL and PDIL are losing business to large foreign EPC (Engineering Procurement and Construction) firms.[28] Also, very few Indian firms have the financial strength, management skills and technical base to support large infrastructural projects, which are in the process of being implemented in India.

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[26] This information is provided by CDC.

[27] See Rao and Wengel, 2000 for details.

[28] Status of Consultancy Services in India, 2000.

Indian contractors have to pay high charges on account of bank guarantees of ECGC (Export Commission Guarantee Corporation). As compared to many of their competitors, they also have to pay higher ECGC charges for providing credit insurance cover to project exporters.

Currently, under Section 80 HHB of the Income Tax Act project, exporters are given only 50 per cent income tax exemption and under Section 80 (0) consultants in construction and engineering projects are not given any exemptions. On the other hand, product exporters including software exporters have full income tax exemptions. High level of taxes has a negative impact on the export of construction and related services.

The Indian construction and engineering companies have to pay normal custom duties on import of capital goods used in overseas projects. Owing to this, many companies prefer not to import such goods on termination of their projects abroad. However, many of these capital goods can be used effectively in future projects both within and outside the country. The fresh purchase of equipment and machinery for every new project is not economically viable because they increase the cost of the projects. Moreover, many of India's competitors are able to offer lower quotations by reusing the equipment and machineries.

In the past, Indian companies had to import most of the equipment and machineries. Although many high-tech equipment and sophisticated designs are now produced in India, there are associated problems of high cost and late deliveries. Owing to these reasons Indian companies often prefer foreign suppliers for their overseas contracts. In such circumstances when foreign capital goods are used, the Indian contractor, in effect functions as a manpower supplier.

Indian companies primarily operate in the domestic market and they do not have a well-planned and aggressive marketing strategy for the international market. Companies from developed countries and even developing countries like Turkey closely monitor the

international demand for construction and related works. For example, in the 1980s many Turkish construction companies were awarded large contracts in West Asia. Following the Gulf war and other developments, such as the reduction in surplus of oil producing states, exports to the Gulf countries reduced. During the same time, the breakdown of the Soviet Union and the adherence to free enterprise by the newly independent republics of CIS opened new business prospects. Turkish companies immediately repositioned themselves and successfully secured large contracts in the CIS states. A similar market orientation was undertaken by the US, European and Japanese exporters of engineering services. On the other hand, despite a close historic relationship and, hence, a knowledge of CIS states, India could not penetrate these markets.

India has comparative advantage in the supply of technical manpower at low cost. However, India needs to upgrade the standard of workforce to international levels[29] through suitable training. Only few large companies provide in-house training facilities. India has several good technical institutes but there are only few management institutes designed to serve the needs of consultancy and construction business.

Most international companies invest heavily in R&D and this, in turn, increases their competitive edge. On the other hand, Indian companies find it financially difficult to invest in R&D and have to depend on developed countries for the import of technologies.

Construction, architectural and engineering services sectors operate under a large number of ministries and departments at both the central and state level, local municipal bodies and non-governmental organisations (as presented in Table A6 in Appendix A). Each of these ministries/departments/organisations enjoys some regulatory authority and there is no nodal ministry to control and guide the operations. This has resulted in red tapism and delays owing to a plethora of rules and regulations, multiple licensing and clearance procedure. Some of the rules and regulations affecting these services are presented in Table A7 in Appendix A.

[29] This is especially true for managers.

2.2 External Constraints

Trade in design engineering services is highly skill-intensive and depends on a nation's technological capabilities. In the export of such services India faces stiff competition from industrialised countries, such as the USA, UK, Japan, France, Germany. Most products and processes are innovated in the developed countries and are licensed by the enterprises based there. The developed countries themselves also specialise in a particular sector; for example, the US firms lead in offshore drilling technologies and power and process firm construction; French firms in nuclear power plant construction while Japanese firms in high-speed railroad.[30] On the other hand, a large proportion of Indian exports is characterised by relatively outdated technology and labour-intensive contracts.

Construction, engineering and architectural services are charaterised by significant barriers to entry of new firms, especially in the international markets. The selection criteria for consultants and contractors tend to give considerable weightage to non-price factors, such as past international experience, size of firms, reputation and affiliations of firms. Indian firms are trapped in a vicious circle—many international clients reject them for lack of experience; on the other hand, they cannot gain experience if they are not able to secure international contracts. Firms from developed countries are organised on a transnational basis and possess requisite managerial expertise, information systems, and linkages and scale for operating overseas affiliates and joint ventures. Only few enterprises from developing countries are equipped to do so.

In respect of financing, firms from developed countries enjoy an advantage over those from developing countries like India. Developed countries, such as the USA, UK, have well-established international banking industry. Most OECD governments provide export credits to their construction industry which allow the foreign buyer of the exported

[30] Rao and Wengel, 2000

construction services to defer payments. Many developed countries also use tied aid to support their construction industry. Loans and grants to developing countries for specific infrastructure, utility or other construction projects are often tied to the procurement of goods and services from the donor country. Tied aid gives the companies from developed countries a distinct advantage over their Indian competitors since the recipient countries are often under pressure to award contracts to firms from the donor countries. Even in the case of imports and financial inflows into India, many multilateral funding agencies are imposing a number of conditionalities while sanctioning the loans. Often preference for foreign consultants and professionals leaves Indian consultants with similar skills in subservient /secondary position and hence restrict the transfer of technology. Owing to these reasons, although there are several on-going multilaterally funded projects in India, the share of Indian firms is less than one per cent.[31]

India has a comparative advantage in the export of low-cost unskilled/semi-skilled/skilled labour and professionals.[32] Presently, there are several non-tariff barriers on the cross-country movement of labour and professionals. Temporary movement of professionals are constrained by recognition barriers, including, requirement on qualification, work experience and licensing/certification.[33] Such regulations are common in case of accredited services, such as architectural and engineering services. Residency and nationality requirements also act as barriers to movement of service personnel. Other non-tariff barriers include strict eligibility conditions for application for work permit/visas, cumbersome procedure for actual application and processing of these work permits and visas, limitations on the length of stay and transferability of employment in the overseas market. Many developed countries, such as the USA and Japan have

[31] For details see UNCTAD, 2000; Rao and Wengel, 2000.

[32] However, the Council of Architecture has pointed out that Indian architects are now facing stiff competition from their counterparts in China, South East Asia and Africa because many architects from these countries are offering similar services at lower rates.

[33] As discussed in Section 1.1, many countries have notified MRAs under the GATS Article VII:4. At present, India does not have any mutual recognition agreements in architectural and engineering services. Indian architects have to undertake professional examinations for practising in many countries like the USA and UK. However, foreign architects do not have to undertake any professional examinations to practise in India.

quantitative limits on the number of entries. Apart from these restrictions there are also entry barriers in the form of economic needs tests, local market tests and management need test. All these restrictions raise direct and indirect (due to uncertainty and delays) costs on entering a foreign market.[34]

While establishing their presence in the international markets Indian companies often face restrictions on foreign equity participation. Apart from these, they may be required by law to form joint ventures with local firms. There are also restrictions on geographical location and branching, etc. Since the temporary movement of labour often complements trade through commercial presence in these services, restriction on foreign direct investment in construction and allied activities may also translate into barriers to temporary cross-border movement of labour.

Most Middle East countries give price preferences to local bidders/contractors. In many of these countries it is mandatory for bidders to get the bid guarantee and other bank guarantees issued through local banks. Owing to this the bidder has to pay for the bank guarantee twice—once in the home country and once abroad. Many countries in the Middle East and North Africa (for example, Libya) have significant restrictions on imports (such as excessive import levies) which make it difficult to import machineries and other equipment in to those countries.

Many Indian companies have pointed out that they are at a disadvantage in international bids for construction projects since the pre-qualification for these projects are based on the value of work and not the quantity of work. Even though Indian firms may have the experience of completing larger construction projects than their competitors who pre-qualify for the bids, the value of their work in terms of dollars is much less. Some Indian companies have suggested that the evaluation should be on the basis of the volume of work. However, evaluation based on the volume of work can raise additional questions about how to evaluate the quality of the civil work.

[34] It is worth noting that India has also imposed many of these restrictions.

Other external restrictions include discriminatory tax policies of foreign governments, practices, such as government procurement and sourcing[35] and government subsidies,[36] that tend to favour local firms over foreign service providers. Governments of many countries grant price-based preference to local domestic suppliers. In some countries government approvals are required to enter certain services sectors. This approval process often favours the local firms and in some countries certain sectors are reserved for domestic service providers. In case of construction, architectural and engineering services government subsidies in the form of mixed credits, financial support, and export and operating subsidies provide the local players with a competitive advantage over the foreign firms. Additionally, unwritten rules with regard to accounting or advertising practices, and consumer protection laws may also discriminate against foreign service providers. There are also restrictions on the use of the firm's name, which given the importance of reputation in most of these services, hurts the competitive position of the firms.

3. GATS and Construction, Architectural and Engineering Services

As noted in the Section 1 there has been a distinct move towards liberalisation and private participation in construction, architectural and engineering services. Nevertheless, as discussed in Section 2, there are significant barriers to trade in these services, which restricts countries from establishing their presence overseas and operating in foreign markets. This section will present a brief overview of GATS, the coverage of the services under GATS and commitments made by different member countries and India to liberalise trade in construction and consultancy services in the Uruguay Round.

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[35] In Canada local engineers and construction firms are given preference for all government contracts. The USTR report has pointed out that in Japan the process of bidding is not transparent and preference is often given to local firms.

[36] For example, as discussed earlier, Canada subsidises firms bidding for feasibility studies and other work in third country.

3.1 A Brief Overview of GATS

The General Agreement on Trade in Services (GATS), established in the Uruguay Round (1986–1994), is the first ever set of multilateral, legally enforceable rules governing trade in services. The main aim of GATS is to progressively liberalise trade and investment in services through periodic round of negotiations.

Under GATS, services are traded in four different modes:

1. Cross-Border Supply or Mode 1 refers to delivery of services across countries, such as electronic delivery of architectural designs, blueprints and consultancy services.
2. Consumption Abroad or Mode 2 refers to the physical movement of the consumer of the service to the location where the service is provided and consumed.
3. Commercial Presence or Mode 3 refers to the establishment of foreign affiliates and subsidiaries of foreign service companies. It is analogous to foreign direct investment in services.
4. Presence of Natural Persons or Mode 4 refers to the temporary movement of service providers to provide services to clients in overseas markets.

The GATS Agreement enforces two types of general obligation on the part of the signatories.

- Most Favoured Nation Treatment: Under the MFN treatment a country is obliged to provide a treatment to a country, which is no less favourable than the treatment it provides to any other country (that is if a GATS member country offers a certain privilege to any other country, whether it be a member or not, it has to extend the same treatment to all GATS member countries). However, GATS allows member countries to undertake exemptions to this clause, in initial commitments, subject to review.

- Transparency: This clause requires every country to publish all measures of

general applications that affect the operation of the Agreement. This clause is extremely important for traders doing business in a foreign country, as they are often not aware of the laws and regulations of the other country.

Under GATS, for each of the above-mentioned modes of supply of services, a country can negotiate and make commitments to liberalise market access and national treatment for specific sectors in the sectoral schedules of commitments and across sectors in the horizontal schedule of commitments. The former is applicable to the particular sector while the latter relates to all sectors and could override, complement or qualify the sectoral commitments. In its schedule of commitments a country can impose restrictions on market access and/or national treatment. A country is said to have imposed a market access restriction if it does not allow (or partially allows with some restrictions) foreign service providers to enter and operate in its market. A national treatment restriction exists when foreign service providers are allowed to enter the market but are treated less favourably than domestic suppliers of the same services. GATS also allow a country to impose additional restrictions. A country is said to have made a "full" commitment in a particular mode of supply of services if there are no restrictions on market access or national treatment. A country is said to have made "partial" commitments if the commitments are subject to some restrictions on market access or national treatment. If the country does not make any commitment to liberalise the sector and retains the right to impose restrictions in the future then it is said to have made an "unbound" commitment.

3.2 Coverage of Construction and Consultancy Services under GATS

The Uruguay Round was the first attempt to multilaterally negotiate for the removal of barriers to trade in construction, architectural and engineering services. In this Round, architectural and engineering services were listed as sub-sectors of professional services while construction and related engineering services were listed as a separate category.

In the Services Sectoral Classification List (MTN.GNS/W/120), which was drawn

up during the Uruguay Round based on the United Nations Provisional Central Product Classifications, *construction and related engineering sector* covered the following services:

General construction work for buildings (CPC 512)

This sub-category includes construction work (including new work, additions, alterations and renovation work[37]) for all types of buildings, residential or non-residential, whether privately or publicly owned.

General construction work for civil engineering (CPC 513)

This covers construction work for structures other than buildings, such as highways and streets, railways and airfield runways, bridges and tunnels, waterways and harbours, dams, pipelines, communication and power lines, mining and manufacturing plants, and stadia and sports grounds.

Installation and assembly work (CPC 514, 516)

This includes such activities as the assembly and erection of prefabricated constructions, installation work for heating and air-conditioning, water plumbing, gas fitting, electrical wiring, fire alarm construction, insulation, fencing and lift construction.

Building completion and finishing work (CPC 517)

This sub-category covers special trade construction work for the completion and finishing of buildings, such as glazing, plastering, painting, floor and wall tiling, carpeting, carpentry, interior fitting and decoration, ornamentation fitting.

Other (CPC 511, 515, 518)

This includes pre-erection work at construction sites, as well as special trade construction work, such as foundation work, water well drilling, roofing, concrete work, steel bending and erection and masonry work. It also covers renting services related to equipment for construction or demolition of buildings or civil engineering works with operator.

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[37] Although repair and maintenance work are not explicitly mentioned in the UN CPC description, it may be assumed that they would normally be included, unless involving services, which belong elsewhere in the classification.

In the Services Sectoral Classification List (MTN.GNS/W/120*), consultancy services (that is, architectural and engineering services)* were listed as a sub-sector of professional services. The four broad sub-groups under this sub-sector are:

Architectural services (CPC 8671)

This covers all types of architectural services except those classified under urban planning and landscape architectural services, which are: (i) advisory and pre-design architectural services (86711); (ii) architectural design services (86712); (iii) contract administration services (86713); (iv) combined architectural design; and contract administration services (86714); and (v) other architectural services (86719).

Engineering services (CPC 8672)

This includes all engineering activities except integrated engineering services that are: (i) advisory and consultative engineering services (86721); (ii) engineering design services for the construction of foundations and building structures (86722); (iii) engineering design services for mechanical and electrical installations for buildings (86723); (iv) engineering design services for the construction of civil engineering works (86724); (v) engineering design services for industrial processes and production (86725); (vi) engineering design services n.e.c. (86726); (vii) other engineering services during the construction and installation phase (86727); and (viii) other engineering services (86729).

Integrated engineering services (CPC 8673)

This covers engineering services related to turnkey projects, which are: (i) integrated engineering services for transportation infrastructure turnkey projects (86731); (ii) integrated engineering and project management services for water supply and sanitation works turnkey projects (86732); (iii) integrated engineering services for the construction of manufacturing turnkey projects (86733); and (iv) integrated engineering services for other turnkey projects.

Urban planning and landscape architectural services (CPC 8674)

This includes: (i) urban planning services (86741); and (ii) landscape architectural

services (86742).

The above sub-categories do not explicitly cover services provided by surveyors or topographical engineers. In the CPC classification, such services belong to either or several of: "site investigation work" (5111, a sub-sector of construction services), "advisory and pre-design architectural services" (86711, a sub-sector of architectural services), "advisory and consultative engineering services" (86721, a sub-sector of engineering services), or, "surface surveying services" and "map-making services" (86753 and 86754, included in "related scientific and technical consulting services").[38]

As is evident from the above sectoral classifications, construction and related engineering services and architectural and engineering services are closely interrelated services sectors. For example, engineering services (CPC 8672) under architectural and engineering services includes construction-related engineering services. On the other hand, the supply of construction and related engineering services involves services provided by professional architects and engineers. Hence, it is extremely difficult to differentiate and distinguish between these two sectors.

In the Uruguay Round, WTO member countries have separately listed commitments in construction and consultancy services and there were some countries who have committed in only one of the sectors. Therefore, commitments in construction and consultancy services have to be discussed separately. Since these two categories of services overlap each other, this is likely to have some implications on the nature and degree of the commitments.

[38] Since the functions of a surveyor or a topographical engineer differ from country to country, one would need to look at the content of the services provided in order to determine where those services belong in the classification.

3.3 Discussion of Commitments

3.3.a Construction and Related Engineering Services

This section will discuss the nature and significance of commitments made by the member countries in construction and related engineering services. Emphasis is placed on the restrictions imposed by different countries on market access and national treatment in the four modes of supply of services, namely cross-border supply, consumption abroad, commercial presence and the movement of natural persons.

At the Uruguay Round and subsequent accessions, 69 WTO members have undertaken commitments in 55 schedules[39] for at least one of the sub-sectors under construction and related engineering services. Within these, 22 schedules cover all the sub-sectors in the sector, while 8 schedules cover only one sub-sector. On an average, around 3–4 of the sub-sectors are covered per schedule. The largest number of commitments are in general construction work for civil engineering (46 schedules), followed by general construction work for buildings (45). The least number of commitments are in "other services" (32 schedules).

Construction and engineering services are primarily traded through commercial presence (Mode 3) and movement of natural persons (Mode 4). Commercial presence or Mode 3 is mainly supplied through FDI in construction projects, joint ventures and foreign presence in the form of BOO and BOT operations. Hence, limitations on establishment and the operation of foreign firms, such as nationality requirements, restrictions on foreign ownership and staffing affects trade *via* this mode. Supply of construction and related engineering service involves temporary movement of skilled/semi-skilled/unskilled labour and professionals to provide a wide range of

[39] The difference between 55 schedules and 69 WTO members is due to the fact that the European Union has submitted a consolidated schedule for its 15 member states. Aruba and the Netherlands Antilles have separate schedules, but are not counted separately. The slight difference with the number appearing in the document S/CSC/W/9 is essentially due to new accessions and the exclusion of Aruba and the Netherlands Antilles.

services including physical construction work, designing, project management, etc. Trade through Mode 4 is affected by residency requirements, limits on entry and stay of personnel, and problems associated with the recognition of credentials and licenses. Restrictions on Mode 3 that is, commercial presence also affects trade *via* Mode 4. For instance, restrictions on foreign equity participation in services, conditions relating to staffing and management by local persons, nature of incorporation, partnership, and geographic and branching restrictions can limit the scope of movement of natural persons. Recently, with the developments in information technology, cross-border trade of these services (that is, electronic transmission of designs, blueprints, consulting services, etc.) is gaining importance. Developed countries have a comparative advantage in the supply of these services through Mode 3 that is, commercial presence, while for the developing countries like India temporary movement of labour (Mode 4) is the most important mode of supply.

The type of market access commitments made by member countries in the Uruguay Round is presented in Table 1.

Table 1: Commitments made by Members in Construction and Related Engineering Services

(Percentages of full, partial and no commitments by sub-sector and by mode of supply)

Market Access	**Cross-border Supply**			**Consumption Abroad**			**Commercial Presence**			**Presence of Natural Persons**		
	F	P	N	F	P	N	F	P	N	F	P	N
General Construction Work for Building	29 *27*	10 *13*	60 *60*	67 *60*	21 *27*	13 *13*	60 *31*	33 *63*	6 *6*	2 *0*	96 *98*	2 *2*
General Construction Work for Civil Engineering	27 *24*	12 *14*	61 *61*	61 *55*	20 *27*	18 *18*	51 *29*	43 *65*	6 *6*	4 *0*	94 *98*	2 *2*
Installation and Assembly Work	32 *30*	4 *6*	64 *64*	66 *60*	19 *26*	15 *15*	55 *32*	36 *60*	9 *9*	2 *0*	96 *98*	2 *2*
Building Completion and Finishing Work	31 *28*	5 *8*	64 *64*	72 *62*	18 *28*	10 *10*	64 *36*	28 *56*	8 *8*	3 *3*	92 *92*	5 *5*
Other	24 *21*	18 *21*	58 *58*	27 *21*	58 *64*	15 *15*	27 *12*	64 *79*	9 *9*	0 *0*	97 *97*	3 *3*

Source: WTO 1998a

Notes:

1. F: Full commitment (indicated by "none" in the market access column of the Schedule)
   P: Partial commitment (limitations inscribed in the market access column of the Schedule)
   N: No commitment (indicated by "unbound" in the market access column of the Schedule)
2. The figures in *italics* indicate the percentages taking into account horizontal commitments applicable to all sectors.

With the advent of Internet and growth of software technology, there has been an increase in trade through Mode 1 (cross-border supply). However, in the Uruguay Round a large number of countries including Australia, Brazil, European Union, Indonesia, Japan, Korea, Kuwait, Thailand and the US did not make any commitments in this mode (58–64 per cent of member countries as shown in Table 1). Many of these countries have not undertaken commitments in this sector due to the reason of technical infeasibility. Only a few countries, such as Argentina, Canada, Norway and United Arab Emirates have undertaken commitments to fully liberalise trade *via* this mode.

The offers are most liberal for Mode 2 that is, consumption abroad with around 60 per cent of countries undertaking full commitments in market access across all sub-sectors except “other services”. An overview of commitments in Mode 2 indicates that the developed countries (for example, the US, EC, Canada, Australia, etc.) have made liberal commitments in this mode while developing countries, such as India, Pakistan,

Brazil, Egypt, etc. have left this mode unbound. Indonesia has not imposed any restrictions on market access under this mode but has retained the option of treating domestic suppliers more favourably by undertaking an unbound commitment under national treatment.

Most member countries (for example, Australia, Japan, Kuwait, USA) have made liberal commitments in Mode 3 or commercial presence with 51–64 per cent of them undertaking full commitments in market access across all sub-sectors, except "other services". However, if one includes the limitations imposed by the horizontal commitments then these figures come down to 29–35 per cent. Brazil has committed to removal of all restriction on market access under Mode 3 from January 1, 2000. The most commonly observed market access limitations are on the type of legal entity allowed for commercial presence, followed by limits on participation of foreign capital, and on the value of transaction or assets. Egypt, Indonesia and Malaysia have allowed foreign service suppliers to set up offices only through joint ventures while India along with these countries have imposed ceilings on the foreign equity participation. In Korea, foreign service providers willing to establish a branch and undertake most of pre-erection work, construction work for buildings, and most construction work for civil engineering are subject to a compulsory sub-contracting system. However, Korea has not scheduled any specific national treatment restrictions. The commitments made by Canada are different from that of other countries in the sense that individual provinces have imposed some restrictions. Under commercial presence, Ontario and Newfoundland have imposed some restrictions while others have fully liberalised this mode. In Ontario, a non-resident consuming or using tangible personal property is required to deposit four per cent of the contract amount with the treasurer or post a guarantee bond for the same. Similarly, in Newfoundland a deposit of six per cent of the contract amount is required. The most common national treatment restrictions under this mode are nationality and residency requirements.[40]

[40] WTO, 1998a, Table 3b.

Like all other services sectors covered by the GATS, Mode 4 or movement of natural persons is the most restricted mode. Across all the sub-sectors, over 95 per cent of members have left this mode unbound except to the extent that they have agreed to liberalise in their horizontal commitments. Under this mode, around 39 members have imposed restrictions on national treatment with reference to licensing, standards and qualifications while 14 members have imposed nationality and residency requirements.[41]

Only two countries, Liechtenstein[42] and Indonesia, have undertaken MFN exemptions specific to the construction sector. However, there are some members who provide preferential treatment to suppliers from neighbouring countries. For instance, Indonesia offers preferential treatment in international bidding to suppliers from Brunei Darussalam, Malaysia, Philippines, Singapore, Thailand, etc. Such preferences are given in order to foster civil works, industrial construction and economic development in the ASEAN region. The duration of this exemption corresponds with the length and validity of the ASEAN treaties.

Overall, although a large number of member countries have committed in construction and related engineering services, coverage of the sub-sectors and commitments to liberalise have been very limited due to the failure of member countries to significantly liberalise the two main modes, Mode 3 and Mode 4. It is worth noting that the restrictions in Mode 4 also affect the scope of the commitment in Mode 3 and *vice versa* since these two modes are highly complementary in this sector.

Commitments made by India in Construction and Related Engineering Services.

The commitments made by India in the construction and related engineering services (presented in Table B1 in Appendix B) have been very limited both in terms of

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41 Table 3b, WTO, 1998a.

42 Liechtenstein has opened up commercial presence and movement of natural persons only to foreign services suppliers from those countries, which have extended similar rights to Liechtenstein. This has been done to ensure adequate market access to service providers from Liechtenstein.

sectoral coverage and modes of delivery. Among the various sub-sectors presented in Section 3.2, India has only scheduled commitments in general construction work for civil engineering. Within this sub-sector, India has included construction of roads, bridges, railways, runways, tunnels, waterways, subways, dams, pipelines, power lines, etc. in its commitments and has excluded construction work of warehouses, industrial buildings, and residential and non-residential buildings. India has left Modes 1 and 2 unbound for reasons of technical infeasibility. However, with the advent of Internet there has been an increase in cross-border trade in consultancy services related to construction.

Although India has scheduled commitments in Mode 3, which is one of the main modes of supply of these services, the commitments are confined to certain construction works (highways, streets, runways, railways, bridges, harbours, dams, etc.). India has also imposed some restrictions on commercial presence, such as the foreign equity holding is limited to 51 per cent. With subsequent liberalisation of the economy, foreign equity limitations in many of these areas are no longer valid. For instance, at present, foreign direct investment up to 100 per cent equity is allowed for the construction of roads and bridges. In order to secure better terms for technology transfer, in its horizontal commitments, India has stated that preferential access will be given to foreign service suppliers offering the best opportunity for technological transfer. India has not scheduled any national treatment restriction under commercial presence.

India, like most of the other members, has left Mode 4 unbound except as scheduled in the horizontal commitments. The horizontal commitments relating to the entry and temporary stay of persons, allow business visitors to stay for 90 days and intra-corporate transferees (that is managers, executives and specialists with at least one year prior service with the parent company) to stay for up to five years. In addition, certain professionals including engineers are permitted entry and stay for a period of one year.

3.3.b Consultancy Services

In the Services Sectoral Classification List (MTN.GNS/W/120) architectural and engineering services are classified under professional services. Hence, they face similar market access and national treatment limitations as applied to other professional services. Nevertheless, as compared to some professional services, such as legal and accountancy services, architectural and engineering services are subject to fewer restrictive regulations. The nature and significance of commitments made by member countries in the four modes of supply of services are discussed below.

At the end of the Uruguay Round and subsequent accessions, 70 WTO members[43] made commitments in at least one of the four sub-sectors—architectural services, engineering services, integrated engineering services and urban planning and landscape architectural services. The largest number of members made commitments in engineering services (69 members), followed by architectural services (61 members). Around 43–44 members have scheduled commitments in integrated engineering services, and urban planning and landscape architectural services. The market access commitments made by WTO members in the four different modes of supply of services are present in Table 2.

In the recent years, cross-border trade in architectural and engineering services is becoming important with the increase in electronic transmission of designs, blueprints and consulting services. Table 2 shows that as compared to the commitments in construction and related engineering services, member countries have made liberal commitments in cross-border trade, with 55–72 per cent undertaking full commitment in this sector.[44] Most developed countries[45], excluding the members of the European communities, have agreed to completely liberalise cross-border trade in this sector. In Japan and Korea, foreign service suppliers are required to have a commercial presence

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[43] The numbers count the 15 member states of the European Union individually. Aruba and the Netherlands Antilles have separate schedules, but are not counted separately.

[44] If the horizontal commitments are included the percentages become 45–59 per cent.

[45] Including Australia, the United States.

for trade in architectural services *via* Mode 1. Many developing countries, such as Thailand, Brazil, Indonesia have left this sector completely unbound. With regards to limitations on national treatment, the Malaysian schedule stipulates that an architect, engineer or other relevant professionals registered in Malaysia must authenticate the designs.

Although the potential of trade via Mode 2 that is, consumption abroad is very limited, most countries have made liberal commitments in this mode.

Table 2: Commitments made by Members in Architectural and Engineering Services

(Percentages of full, partial and no commitments by sub-sector and by mode of supply)

Market Access (Number of Members with Commitments)	Cross-border Supply			Consumption Abroad			Commercial Presence			Presence of Natural Persons		
	F	P	N	F	P	N	F	P	N	F	P	N
Architectural Services (61)	60 *52*	18 *26*	22 *22*	76 *68*	12 *20*	12 *12*	48 *24*	48 *72*	4 *4*	6 *0*	86 *92*	8 *8*
Engineering Services (69)	57 *50*	21 *28*	22 *22*	64 *55*	19 *28*	17 *17*	52 *24*	45 *72*	3 *3*	5 *0*	90 *95*	5 *5*
Integrated Engineering Services (43)	72 *59*	9 *22*	19 *19*	78 *66*	9 *22*	13 *13*	66 *31*	25 *59*	9 *9*	6 *0*	88 *94*	6 *6*
Urban Planning and Landscape Architectural Services (44)	55 *45*	27 *36*	18 *18*	61 *52*	27 *36*	12 *12*	45 *24*	52 *73*	3 *3*	3 *0*	94 *97*	3 *3*

Source: WTO 1998b

Notes:

1. F: Full commitment (indicated by "none" in the market access column of the Schedule)
   P: Partial commitment (limitations inscribed in the market access column of the Schedule)
   N: No commitment (indicated by "unbound" in the market access column of the Schedule)
2. The figures in *italics* indicate the percentages taking into account horizontal commitments applicable to all sectors.

As in the case of construction and related engineering services, most of the trade in architectural and engineering services take place through sales by affiliates located in the foreign markets. Hence, restrictions on commercial presence like investment constraints and limitation on corporate structure restrict the ability of the foreign firms to

provide architectural and engineering services. Trade through Mode 4 is also restricted by the imposition of residency or nationality conditions, registration or licensing requirements, etc. In many countries, government regulators and/or professional associations impose barriers to trade in these services. These can be across industry or specific to certain kind of services.

As compared to Modes 1 and 2, commitments are more restrictive in Mode 3. In the Uruguay Round, 48–66 per cent countries undertook full commitments in this sector, which is quite high compared to other service sectors. However, if one includes the limitations imposed by horizontal commitments, these figures decline to only 24–31 per cent. Members, such as Australia, Japan, Kuwait and Korea have undertaken commitments to completely liberalise trade through *via* Mode 3. However, many countries, such as the EU and Malaysia have imposed certain nationality conditions. In Indonesia the foreign service supplier have to form a joint venture with a local firm to enter into the domestic market and in Brazil, the foreign service suppliers have to join with the Brazilian suppliers in specific legal entity where the Brazilian partner maintains the leadership. With regard to national treatment limitations, 27 members have imposed nationality and residency requirements, 29 have imposed licensing, standards and qualification requirements and 14 have imposed registration requirements.[46]

Commitments in Mode 4 are mostly unbound except as specified in the horizontal schedule and around 90 per cent of the offers are partial in nature. After taking into account the horizontal commitments not a single member country have undertaken commitments to fully liberalise this sector.[47] The most common national treatment restrictions include nationality and residency requirement, licensing, standards and qualifications, registration requirements, etc.

There are only a few MFN exemptions specific to the architectural and engineering

[46] Table 5b, WTO, 1998b

[47] WTO, 1998b

sectors, but a number of members have allowed entry to foreign professionals on a reciprocal basis.[48] Korea and Malaysia made additional commitments in these services. They concern simplified examination procedures for foreign architects (Korea), qualifying examination in English for architects and engineers (Malaysia), and a future commitment to allow joint contracts between domestic and foreign architects (Korea).

Commitments made by India in Consultancy Services

As in the case of construction and related engineering services, India's commitments in architectural and engineering services are very limited both in terms of sectoral coverage and modes of delivery (Table B2 in Appendix B). India has scheduled commitments in engineering services and has excluded architectural services, integrated engineering services and urban planning and landscape architectural services from the schedule. Commercial presence is allowed only through incorporation in which the foreign partner can have equity ownership of a maximum of 51 per cent. India has left all the other sub-sectors unbound thereby retaining the right to introduce restrictions in the future. The restrictions imposed by horizontal commitments are similar as in the case of construction and engineering services.

Overall, India's commitment in construction, architectural and engineering services were very restrictive in terms of its coverage and India did not even offer to bind the *status quo*.

4. Strategies for Current Negotiations

It is evident from the preceding sections that there are significant restrictions on trade in construction and consultancy services. In order to facilitate the expansion of trade in these services, there is an urgent need to identify the external barriers to trade and

[48] Some countries apply preferential treatment to nationals or firms of other countries with historical links.

formulate possible negotiating strategies for the removal of such barriers during the GATS 2000 negotiations. Since the negotiations are on a reciprocal basis, in order to secure liberal commitments from its trading partners, India should be willing to commit to further liberalisation.

This section identifies markets of export interest to India, entry barriers in those markets and demand that India should make on its trading partners in the on-going round of WTO negotiations. This section will also analyse possible demands for liberalisation by India's trading partners and India's response to such demands.

In the Uruguay Round, countries have scheduled commitments separately for construction and related engineering services and architectural and engineering services. This classification makes it difficult to assess the boundary between services provided under the two sub-groups. Given that there is significant overlap between these two groups of services and commitments in one sector will have implications for the other, the two groups can be combined into single services sector—"construction and consultancy" services.

4.1 Markets of Export Interest to India and Entry Barriers in those Markets

Many countries of export interest to India, such as Bhutan and Saudi Arabia[49] are not WTO members. Among the WTO member countries, UAE and Kuwait in the Gulf region are important markets for Indian exports and would continue to be so in the near future. In its schedule of commitments, Kuwait has not imposed any restrictions on Mode 3, that is, commercial presence. However, in both Kuwait and UAE it is mandatory for foreign firms to be associated with local agencies in order to secure contracts. In these countries projects are awarded to local firms who in turn act as the main contractor or sponsor and allocate the work to foreign companies.

[49] See Table A3 in Appendix A for reference.

South East Asian countries also provide a potential market for Indian export, especially in construction and engineering works related to infrastructure development. In these markets Indian companies face stiff competition from Japanese and Korean companies. Among the WTO member countries, Malaysia, Indonesia and Thailand offer significant possibilities for Indian exports. However, in the Uruguay Round, Malaysia undertook partial commitments in Mode 3 allowing commercial presence only through joint ventures/incorporations, etc. with foreign equity holding not exceeding 30 per cent. In its schedule, Malaysia has also stated that architectural and engineering services can only be supplied by a natural person. In Indonesia, foreign firms are allowed only through joint ventures with local partners or joint operations. Foreign firms bidding on high value government-sponsored construction or procurement projects are periodically asked to purchase and export the equivalent value in selected Indonesian products.[50] In the Uruguay Round, Indonesia has imposed registration and licensing requirements. In Thailand foreign equity participation is limited to 49 per cent. Almost all South East Asian countries have left Mode 4 unbound except as indicated in their horizontal commitments.

Among the SAARC countries, Nepal and Bhutan are important markets for multilaterally funded projects and aid projects but they are not WTO members.[51] There is significant scope for increasing Indian exports to Bangladesh. However, Bangladesh did not make any commitments in the Uruguay Round. Indian construction companies find it difficult to operate in Sri Lanka due to political instability. Business prospects of Indian companies in Pakistan depends on future Indo-Pakistan relations. Until our trade relations with Pakistan improve, exports to Pakistan are likely to be negligible. In the Uruguay Round Pakistan made commitments in construction work for civil engineering. In Pakistan, commercial presence is through joint ventures and/or partnerships with Pakistani engineers or engineering companies. Former Soviet Union and Eastern Europe are in need of reconstruction and could be potential markets for Indian exports. They are

[50] USTR .

[51] Nepal is in the process of seeking accession to the WTO.

currently facing a shortage of funds and have shown preference for projects accompanied with tied aid.

India has a tremendous potential of exporting design engineering and consultancy services to the developed markets, such as the USA, Canada, Australia and the UK. However, in the Uruguay Round many developed countries have imposed significant restrictions on the movement of natural persons and commercial presence—the two main modes of supply of these services. In their commitments on architectural services EU, Canada[52] and Japan have imposed nationality and residency requirements.[53] Since India has not signed MRAs with any countries, Indian architects have to undertake professional examinations in countries, such as the UK and the USA.

Given India's competence in software exports there is a scope for increasing cross-border trade, especially with the developed countries. However, in the previous round many of these countries did not make commitments in Mode 1 (cross-border) under construction and related engineering services due to the reasons of technical infeasibility.

In the on-going round of multilateral talks, India should negotiate for the removal of the above-mentioned barriers to exports, especially those on Mode 3 and Mode 4.

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[52] For architectural and engineering services, Quebec has imposed citizenship requirement while Newfoundland, New Burnswick, and Nova Scotia have imposed residency requirements.

[53] In the United States two-thirds of the officers, partners, and/or directors of an architectural firm in Michigan must be licensed in Michigan as architects, professional engineers and/or land surveyors. For integrated engineering services, under Mode 4, the US has imposed citizenship requirement for licensure in the District of Columbia. Under national treatment, the US schedule states that in-state residency is required for licensure in Idaho, Lowa, Kansas, Maine, Mississippi, Nevada, Oklahoma, South Carolina, South Dakota, Tennessee, Texas and West Virginia.

4.2 India's Demands and Negotiating Strategy

This sub-section would analyse India's possible negotiating strategies for the on-going GATS negotiations. More specifically, this section would analyse the nature of liberalisation that India would demand from its trading partners in each of the modes of delivery of services and its own commitments to liberalise in response to demands from the trading partners.

India has comparative advantage in trade *via* Mode 1, that is, cross-border supply. The Indian software industry is highly developed and is of international standards. Also, India has a large pool of professionally trained manpower who are capable of providing consultancy and design engineering services through the Internet. In the on-going round, India should push other countries, especially the developed countries, such as the USA, Canada, UK and Australia, to undertake full commitments in this mode. In particular, India should target countries/markets that have filed commitments in architectural and engineering services but has left this mode unbound due to technical reasons. It is likely that in the near future cross-border trade would substitute for movement of professionals for whom the barriers are much more rigid and difficult to remove. On a reciprocal basis, India should offer full commitments in Mode 1. It is extremely difficult to restrict trade *via* this mode. Moreover, since Indian architects and engineers are globally competitive[54], there are no immediate threats to Indian consultancy companies if India opens up Mode 1. India can also use liberal commitments in Mode 1 as a leverage to obtain commitments in Mode 3 and Mode 4.

Consumption abroad or Mode 2 is not an important mode for the supply of construction and consultancy services. In the Uruguay Round, India's major trading partners among the developed countries have not imposed any restrictions on trade in construction and related engineering services through this mode. India along with other

[54] This has been pointed out by the Consulting Engineers Association of India and the Council of Architecture.

developing countries, such as Pakistan, Brazil and Egypt had left this mode unbound. Since there are no significant restrictions on trade *via* this mode, India can offer to bind Mode 2 during the GATS 2000 negotiations.

Although India has not been very successful in establishing commercial presence in important international markets due to various domestic and external constraints, India has the potential of expanding trade *via* Mode 3. India's trade in the Middle East, the SAARC region and the African countries has been mainly through commercial presence and movement of natural persons. In the Uruguay Round, some of our target countries, such as Bangladesh and Sri Lanka did not make any commitments in construction and consultancy services. India should negotiate with these countries to get commitments in Mode 3. India has the potential for establishing commercial presence in the South East Asian countries. Negotiations with countries, such as Malaysia, Indonesia and Thailand should focus on the removal/relaxation of foreign equity ceilings on commercial presence, requirement of local management and staffing (for example, Malaysia) and the form of commercial presence (that is, commercial presence may only be allowed through joint ventures with local firms). In countries, such as Malaysia where contracts are awarded only to local companies, India needs to explore the possibilities of joint ventures and foreign collaborations with local partners. Among the Gulf countries, Kuwait in its horizontal schedule has stated that commercial presence is subject to economic needs tests and prior authorisation. Kuwait also stated that the movement of persons is only permitted as a part of a commercial establishment. In the on-going round, India should emphasise that Mode 3 and Mode 4 should be de-linked in the sectoral commitments. This would facilitate labour mobility, especially in middle and lower levels of skills where India has a comparative advantage.

In response to demand from the trading partners, India needs to broaden her commitments in Mode 3 and bind the existing regime. In the Uruguay Round, India's commitments in construction and consultancy services were extremely limited both in terms of sectoral coverage and modes of delivery. Commercial presence was only allowed through incorporation with a foreign equity limit of 51 per cent. Government of

India's current FDI policy is much more liberal than what is stated in the sectoral commitments. For example, FDI up to 100 per cent equity participation is allowed in the construction of roads, bridges and port projects. International companies, such as the Port of Singapore Authority, P&O Australia have already started investing in Indian ports and multilateral agencies, such as the World Bank, Asian Development Bank, etc. are funding various national highway projects. Many OECD countries (for example, the USA, UK, Germany, Australia, Korea and Japan) have shown interest in investing in India. Recently, many Scandinavian countries have also shown interest in setting up operations in India. In the on-going round of negotiations, India can receive pressure from these countries to open up Mode 3. In response, India should offer to bind the existing regime. On a reciprocal basis, India can use commitments in Mode 3 to demand liberal access for Indian consultants in the markets of developed countries.

Any import of foreign technology should take into account the country's requirements, health and safety conditions, environment conditions, etc. and aim at upgrading the skill levels of the domestic workforce. Hence India, in the horizontal commitments, can continue to give preferential access to the foreign suppliers offering the best opportunity for technological transfer.

Since India has a comparative advantage in the supply of manpower, restrictions on the temporary movement of unskilled/semi-skilled/skilled labour and professionals is the main impediment to expansion of India's trade in construction, architectural and engineering services. These restrictions include recognition of licensing,[55] standards and qualifications, economic needs tests, nationality and residency requirements[56] and registration requirements. Most WTO members have left Mode 4 unbound, except as indicated in their horizontal commitments. In the current round of multilateral talks, India

[55] Almost all of India's major trading partners have a procedure for licensing and registration of engineers and hence foreign engineers have to procure local licenses and get themselves registered before practising. India does not have an Act regulating the profession of engineers and therefore there is no procedure for licensing and registration.

[56] Many developed and developing countries have residency and nationality requirements.

should negotiate for improved market access, reduced discretion and greater transparency in the terms for entry and recognition.[57] India may not be able to negotiate away all need-based restriction but should address the discrimination against Indian professionals holding equivalent qualifications as others. If Indian architectural and engineering degrees are recognised in developed countries, such as the USA, UK, Canada and Australia it is likely that they will be recognised in most of the countries of export interest to India. One way to solve this issue is to negotiate bilaterally for mutual recognition with some countries where India would like to have greater presence.[58]

In this respect it is worth noting that the GATS already contains a strong provision for recognition under Article VII. This provision encourages transparency, non-discrimination and objectivity in rating of recognition and also encourages countries to enter into mutual recognition agreements or extend recognition autonomously to other member countries. However, in practice it is difficult to secure recognition, particularly in developed markets, because it involves a considerable degree of harmonisation of qualifications.

Unskilled/semi-skilled labour has virtually no mobility in foreign markets due to immigration requirements. India should push for more liberal access for unskilled and semi-skilled labour, especially in markets like the Middle East.

India, like most other countries, has imposed significant restrictions on Mode 4 that is, movement of natural persons. In the current round of negotiations, India may

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[57] It is worth noting that in India a person can provide architectural services if he/she is a resident of India and is registered with the Council of Architecture. There are no nationality and citizenship requirements in India. Moreover, membership of professional associations is not mandatory for practising in India. In the current round India should argue for the removal of nationality and citizenship requirements.

[58] In case of architecture, the European Union and European Economic Area have introduced the principle of free movement of professionals and the mutual recognition of diplomas. Canada and the USA have inter-recognition agreements in architecture and many countries have signed in the Washington Accord for engineering services. These include countries, such as Australia, Canada, Hong Kong and South Africa. A large number of bilateral agreements relating to mutual recognition of practice standards in engineering have been signed among APEC member countries.

receive pressure from developing countries like Bangladesh to open up Mode 4. Also, many developed countries, especially those that are interested in investing in India, would prefer liberal market access for their own consultants, architects, managers and engineers. In the GATS 2000 negotiations, India may consider to provide liberal access to foreign professionals provided that its major trading partners among the developed countries undertake significant liberalisation in movement of natural persons, much beyond the present horizontal commitments and on sectoral basis. Since India has a large number of unskilled/semi-skilled/skilled labour who are virtually unemployed or underemployed, it would not be possible for India to remove the restriction on entry of these workers.

Government financing and procurement play an important role in the construction services in many countries. The government not only directly procures construction and related services but also outsources such services to private sectors. Procurement practices are often subject to discriminatory treatment for foreign service providers and lack of transparency in bidding.

Article XIII of GATS exempts all services *purchased by the government agencies for governmental purposes and not with a view of commercial resale, or with a view to the use in the supply of services for commercial resale*, from the MFN, market access and national treatment provisions. The same Article provides that there shall be multilateral negotiations on government procurement in services within two years of entry into force of the WTO (that is, the beginning of 1997), but these have not been implemented. Given the importance of public procurement in the construction sector, these provisions in fact exclude much of the trade in the sector from the GATS disciplines. Nevertheless, construction services have been included in the GATS schedules under the plurilateral Government Procurement Agreement (GPA). Many developing countries including India did not participate in the GPA.

Many WTO member countries have emphasised the need to include transparencies in procurement policies within the multilateral agenda for the new round. However, India has strongly opposed the inclusion of any new issues (including

transparencies in government purchases) in the GATS agenda. The Indian government is of the view that transparency in government purchases is a non-trade issue and is part of the countries' domestic policies. During the Fourth Ministerial Conference of the WTO in Doha in November 2001, it was decided that negotiations on the new issues including transparency in government procurement would not start before the year 2003.

Under GATS, there are no strong general disciplines on subsidies and such policies are allowed if the country has included them in their Article XVII commitments. Many developed countries subsidise construction and consultancy services[59] which may have a distorting effect on trade from developing countries. Government subsidies may also be discriminatory against foreign service providers.

If government procurement and subsidies are raised as a part of multilateral negotiations, India can suggest that the member countries should explicitly state the existing government procurement policies and subsidies in the relevant sectoral commitment schedules and provide some information on their nature, magnitude, etc. The member countries should also clearly state whether such policies have resulted in any limitation on foreign service providers. India should also push for the removal of constraints to movement of natural persons arising due to government procurement policies.

Developed countries often use tied aid to support their construction industries. Thus, companies from these countries have an added advantage over companies from developing countries, such as India since the recipient countries are often under pressure to award contracts to firms from donor countries. In the on-going round India should strongly emphasise that development aid should not be tied with any conditionality whereby preference is given to players from donor countries. Also, India should bargain for removal of other non-tariff barriers to trade imposed by the developed countries to

[59] For example, as discussed earlier, in the case of engineering services, the Canadian Government, at the provincial and federal level, subsidises Canadian firms' bids for feasibility studies and other work in third countries.

protect their domestic industries.

India and other developing countries provide the major markets for construction and related services and in the current round they are likely to receive pressure from the OECD countries to open up their markets. India has unilaterally liberalised construction and consultancy services and many infrastructure projects have already been opened up for privatisation and foreign investments. Given India's infrastructural needs and current financial constraints, it is in India's own interest to open up these services for foreign investments. In the GATS 2000 negotiations, India should offer to bind the *status quo*. On a reciprocal basis, India should demand liberal commitments from developed countries in Mode 1 and Mode 4. In export markets, such as the Gulf countries, SAARC countries and South Asian countries India's negotiations should focus on the removal of restrictions on commercial presence and movement of persons.

5. Domestic Reforms

The Indian economy is expected to grow at a rate of around 7 per cent in the next 10–15 years. It is estimated that an investment of Rs 15,000 billion (US$429 billion) is required in the infrastructure sectors to sustain this growth[60] which would, in turn, create enormous demand for construction, architectural and engineering services. At present, Indian construction and consultancy services suffer from various structural, regulatory and financial constraints (discussed in Section 2) and only a few Indian companies have the technical capabilities and/or financial strength to manage large turnkey projects. Although foreign investment would help to ease the financial pressure and enable technology transfer, international investors have been rather slow and hesitant in investing in India due to the various infrastructural and regulatory constraints.

This section will discuss regulatory and other reforms that are required to increase the productivity and efficiency of Indian construction and consultancy services. Any

[60] CIDC, 2000-2001

initiative to liberalise through multilateral negotiations can only be successful if it is backed by appropriate domestic reforms. The government and various industry associations/organisations have to work in close co-ordination and initiate necessary measures to make construction and consultancy services globally competitive, enable India to take advantage of the market access opportunities created by the GATS as well as facilitate the implementation of its own commitments.

One of the main constraints faced by Indian construction, architectural and engineering companies is the lack of funds. Also, it is extremely difficult for a single company to offer a wide range of services required by the turnkey projects. In order to resolve these problems, Indian companies can pool their resources in a consortium while applying for global tenders. The growing complexity of international projects requires multi-disciplinary capabilities, which is difficult for a single company to offer. Owing to this, Indian companies are not very successful in bidding for large infrastructure projects. If Indian companies can bid in consortia with other companies with complementary capabilities, it will improve their chances of success. Since credit offered to projects has emerged as an important basis for international competition, Indian companies should explore the possibilities of collaborating with financial institutions, both domestic and foreign.

As the globalisation of markets increases it would become increasingly difficult for individual companies to survive without entering into some form of strategic alliance. Indian firms can join with like-minded firms from other developing countries to form global networks. This would not only enable them to compete with the established multinationals in niche markets but also promote investment, transfer of technology and trade among developing countries. In countries, such as Malaysia, where bidding can only be carried out through local collaborations, India companies have to explore the possibilities of joint ventures with local partners.

Often many Indian companies bid for the same international project. In countries like Korea, the government selects the best offer after careful examination and only such

offers are allowed to be placed in international tenders. India should also adopt similar procedures since it will not only save resources spent on multiple bids but also improve the success rates of bids submitted.

Currently, the EXIM Bank only allows 15 per cent of the project finance for overseas bids. This is not adequate since most overseas projects, especially the large infrastructure projects, require huge investments which are beyond the capabilities of most Indian companies. Indian exporting companies would benefit immensely if the EXIM Bank were to finance up to 25 per cent of the project cost.[61] For this purpose, the project exporters can be asked to contribute a certain part of their receipts from project exports in a fund kept with the EXIM Bank and the Bank can then make it available to the bidders on a case by case basis.

Global market for construction and consultancy services is highly competitive. For international bidding, companies need to undertake regular market research and procure advance information on the business environment. Construction projects, especially the large-sized projects, require interfacing with different institutions in the host country. Currently, in India there is no organised system for collection and dissemination of information. Indian embassies abroad need to play an active role in collecting and disseminating such information. Some leading organisations/associations, such as CDC and CIDC can also play active role in collecting and disseminating such information among their members.

Indian companies should try to market themselves through professional journals and electronic information networks. Indian companies would also gain if multilateral financing institutes include competent construction and consultancy firms from India in their database.

Since public procurement constitute an important part of government expenditure

[61] This has been pointed out by the industry.

on construction and allied services, diplomatic support and strong government-to-government relations plays an important role in determining the volume of exports. The future growth of construction, architectural and engineering services exports depends to a large extent on India's relationship with the neighbouring countries, South East Asian countries and the Middle East. Indian missions in these countries need to be more pro-active in soliciting business for Indian companies.

Foreign construction companies have pointed out that many projects in India are offered only on a non-convertible rupee payment basis. Only projects financed by international development agencies are permitted payments in foreign currency. Foreign construction firms are not often awarded contracts unless local firms are unable to perform the work.[62] These restrictions will have to be removed in order to encourage FDI in construction and related industries.

At present, very few Indian companies provide in-house training facilities and invest in R&D. In order to become globally competitive, Indian companies need to upgrade their skills by setting up in-house training facilities and investing in R&D. Instead of absorbing international technology, greater emphasis should be placed on developing domestic capabilities. There is also an urgent need to set up technical and management institutions catering to the needs of construction and related services. In order to enhance their credibility and global competitiveness, Indian companies need to adhere to international quality standards and obtain the relevant ISO 9000 certifications. In its selection procedure, the government should give preferences to companies which are ISO 9000 certified.

If India wants to push for a reduction in recognition related barriers during the GATS 2000 negotiations, there is an urgent need to upgrade and standardise the domestic training and certification procedures to international levels. Construction and consultancy related professional organisations in India need to work closely with their foreign

[62] USTR website

counterparts to determine the criteria for recognition (this includes the level of education and/or work experience, type of training, professional licensing, etc.), to frame the operational aspect of the Mutual Recognition Agreements (MRAs), and also to administer the MRAs once they have been signed.[63]

India has opened up construction and allied industries for foreign investments. However, any import of technical know-how and skills can be beneficial only if it takes into account the country's requirements, health and safety conditions, environment conditions, etc. and aims at upgrading the skill levels of the domestic workforce. The government should closely monitor internationally funded projects and select those contracts that provide the best opportunities for technological transfer. The government also needs to see that foreign investments do not result in monopoly profits.

The current rule stipulates that an exporter must have a different account for each project and cannot transfer funds from one account to the other. As a consequence, if an exporter enjoys a surplus in one account he cannot use it to support a project where there is shortage of funds. Indian exporters should be given the freedom and flexibility to transfer funds between different projects. However, as a precautionary measure the government can introduce some rules and regulations, which would obviate any wrong transaction or misappropriation of funds.

On termination of the project work, Indian project exporters have to pay normal custom duties for the import of capital goods used in overseas projects. Project exporters should be given the necessary duty relief for re-import of capital goods. Indian construction companies have suggested that there should be a zero-per cent duty on re-imports since these machineries and equipment can be used in subsequent overseas assignments or in future projects within India. Re-use of capital goods will reduce the cost of the project and enable Indian companies to offer their services at competitive rates.

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[63] See Chanda, R. (1999), *Report on Movement of Natural Persons*, Ministry of Commerce for details.

Currently, under Section 80 HHB of Income Tax Act project exporters are given only 50 per cent income tax exemption and under Section 80 (0) consultant in construction and engineering projects are not given any exemptions. Such high levels of taxation have a negative impact on exports. Since export of construction and allied services can make significant contributions to the foreign exchange earnings of the country, the government needs to provide appropriate tax relief on the exports of such services.

Construction and allied industries are subject to a plethora of rules and regulations at the central, state and local government levels which are implemented in order to maintain the safety of the construction work, protect the health and safety of workers and users, protect the environment, etc.[64] The approval procedure for construction projects, especially infrastructure projects, is extremely cumbersome and time consuming. For efficient performance of the sectors there is an urgent need to make the rules more transparent, remove bureaucratic delays and eliminate the procedure of multiple clearance.

In India there are several industry associations/organisations connected with construction, architectural and engineering industries which look after specialised interest of particular segments of the industries. For example, FIEO (Federation of Indian Export Organisations) looks after service exports, the EEPC (Engineering Export Promotion Council) turnkey contracting and OCCI (Overseas Construction Council of India) construction exports. There is a need for a nodal agency that could coordinate the functions of all these agencies. This nodal agency should be given the responsibility of developing a proper system of accreditation and rating of construction companies in India. The agency can then select company or groups of companies which are most suitable for particular overseas bids. This system of evaluation of performances and gradation would enable the clients to select the most suitable company for their required

[64] None of the rules and regulations is applied in a discriminatory manner on foreign firms.

work. This gradation can be done based upon a basket of parameters, such as quality standards, project management standards, R&D, etc.

India has a comparative advantage in the export of unskilled, semi-skilled and skilled labour. However, there are several constraints related to the movement of unskilled and semi-skilled labour, such as system of forged passport, existence of recruitment agencies who charge the workers illegal commission, etc. The state governments should work closely with the law enforcing agencies and take necessary action so that Indian workers do not face any immigration and visa related problems in the overseas markets. The Indian companies should maintain a data bank for skilled or semi-skilled workers who have worked abroad.

Unlike other knowledge-based professions, such as law, medicine, architecture, chartered accountancy, etc., there is no law in India to enforce legal bindings on accountability for engineers. Since there are no statutory bodies to regulate the practice of engineering profession, it is extremely difficult to access the levels of training and experience of an engineer. Also, in the absence of statutory regulations and licensing procedure it is difficult for Indian engineers to get recognition in the international market. Hence, it is absolutely essential to introduce an "Engineers Bill" that would set up a system of qualitative assessment of the levels of training and experience of engineers. As mentioned earlier in the study, many countries have signed the "Washington Accord" which enables engineers from these countries to freely move across borders on a reciprocal basis. This accord is open to all countries which can satisfy the accreditation criteria. India can also become a member after enactment of the legislation of the "Engineers Bill".

Conclusion: Future Prospects for Liberalisation

In developing countries, such as India, construction and consultancy services, especially those related to infrastructural development, play a crucial role in the growth, employment creation and transfer of technology. Although these services contribute towards a significant proportion of the GDP, India is a marginal player in the global market of construction and consultancy services. Presently, Indian construction and consultancy companies do not have the requisite financial or technological strength to cater to the growing infrastructural needs. Inspite of its comparative advantage in the supply of low-cost manpower, India's export in construction and consultancy services is highly constrained by various domestic structural, regulatory and financial constraints and external barriers, such as restrictions on foreign equity participation, economic needs tests and restrictions on the cross-country temporary movement of labour and professionals.

This paper discusses India's potential for expanding trade—both exports and imports—in construction, architectural and engineering services. The study suggests various reforms and measures, which if implemented, would enhance the efficiency, productivity and global competitiveness of the sectors. The study also recommends that India should actively participate in the GATS 2000 negotiations and push for the removal of external barriers to trade in these services. Since India has already opened up the construction and consultancy services sector to foreign service providers, India should offer to bind the existing regime.

This study emphasises that strengthening domestic capacity is the first step towards enhancing participation in world trade. In order to benefit from multilateral liberalisation, India's negotiating strategy needs to be backed by appropriate domestic reforms. The government and various industry associations have to work in close co-ordination towards implementation of a regulatory environment which would improve the productivity and efficiency of the sectors and enable the country to gain from market access commitments under the GATS.

Appendix A

Table A1: Labour Employed in Construction and the Share of Construction in Total Work Force of Selected Countries

	Year	Total Labour in Construction	Total Workforce	Share of Construction in Total Work Force(%)
Argentina	1996	852300	10542000	8.08
Australia	1998	622100	8553100	7.27
Bangladesh	1996	1015000	54597000	1.86
Brazil	1997	4583000	41978000	10.92
Canada	1998	756900	14326400	5.28
Denmark	1998	177540	2692370	6.59
Germany	1998	3183000	35860000	8.88
Japan	1998	6620000	65140000	10.16
Korea	1998	1577000	19926000	7.91
Malaysia	1998	745900	8599600	8.67
Norway	1998	145000	2242000	6.47
Pakistan	1997	2307000	34180000	6.75
Philippines	1998	1511000	28262000	5.35
Sri Lanka	1998	309340	5946150	5.20
Sweden	1998	220000	3979000	5.53
Thailand	1998	1279600	32138000	3.98
United Kingdom	1998	1896000	26947400	7.04
United States	1998	8518000	131463000.00	6.48

Source: ILO Database (www.ilo.org)

Notes: It is estimated that, in India, in 1999 labour employed in the construction sector was around 12 lakhs and this constituted more than 4 per cent of the total employment.

Table A2: **Share of Construction in Gross Domestic Product of India**

	Construction (Rs crore)	GDP (Rs crore)	Share (%)
1993–94	40,593	781,345	5.20
1994–95	42,531	835,864	5.09
1995–96	45,696	896,990	5.09
1996–97	46,785	964,930	4.85
1997–98	51,622	1,012,816	5.10
1998–99	54,342	1,083,047	5.02
1999–2000 QE	58,728	1,151,991	5.10
2000–01 AE	63,847	1,221,174	5.23

Source: Data for 1993–94 to 1997–98 from National Account Statistics 2000
Data from 1998–99 onwards from website www.nic.in/stat/t1.htm

Note: At constant 1993–94 prices
QE: Quick Estimate, AE: Advance Estimate

Table A3: **Top Five Countries for Construction Export and Import[1] (1999)**

(Rs million)

Country	Value
Bhutan	11,390
Saudi Arabia	1,940
Malaysia	1,290
UAE	156
Bangladesh	67

Source: India Country Report, 2000–01, CIDC

Note: 1 The services provided by the foreign contractors are basically incorporating domestic inputs. As such there is little import, except in case of commodities. Imports of services are primarily limited to repatriation of the profit elements for the contractors and the services rendered by the consultants.

Table A4: Projected Market Size for Consultancy Services in South East Asian Countries

(US $ millions)

Country	Projected Market Size in 2002
Indonesia	475.0
Malaysia	142.0
Philippines	81.0
Singapore	141.0
Thailand	616.0
Vietnam	100.0
Total	1555.0

Source: Extracted from Globalisation and Consultancy edited by Aggarwal, *et al, 1998*

Table A5: Total Foreign Direct Investment and Technical Collaborations Approved during August 1991 to March 2001 in Consultancy Services

Areas of Consultancy Services	No. of Collaborations Approved			Amount of FDI Approved (Rs million)	% to Total Amount Approved for all Sectors
	Total	Technical	Financial		
Design and Engineering Services	304	60	244	12306.29	0.48
Management Services	195	22	173	5049.87	0.20
Marketing	54	7	47	526.68	0.02
Construction	15	2	13	567.58	0.02
Other Consultancy Services	46	7	39	4277.47	0.17
Total	614	98	516	22727.59	0.88

Source: Secretariat for Industrial Assistance, SIA Newsletter, April 2001

Table A6: **Some of the Ministries, State Departments and Other Organisations Regulating and Guiding the Operation of Construction and Consultancy Services**

Central Government Ministries/Departments

Ministry of Commerce
Ministry of Environment and Forest
Ministry of Finance
Ministry of Home Affairs
Ministry of Industries
Ministry of Labour
Ministry of Urban Affairs and Employment
Bureau of Indian Standards
Cabinet Committee on Foreign Investment
Central Excise and Customs Department
Central Public Works Department
Chief Labour Commission
Employees Provident Fund Commission
Factories Inspector
Foreign Investment Promotion Board
Inspector of Boilers
MRTP Commission
Registrar of Companies
Secretariat of Industrial Assistance

State Government

Fire Department
Labour Department
Law and Order
Mining Department
Pollution Control Board
Revenue Department
Sales Tax
State Electricity Board
Town and Country Planning
Urban Development authorities
Water Supply and Public Health Department

Others

Council of Architecture
Consulting Engineers Association of India
Consultancy Development Centre
Construction Industry Development Council

Engineering Export Promotion Council
Export Import Bank of India
Federation of Indian Export Organisations
Municipal Committee
Overseas Construction Council of India
Reserve Bank of India
Security and Exchange Board of India

Table A7: Some of the Laws Affecting the Construction and Consultancy Services Sectors

Architects Act (1972)
Building and Construction Workers Act (1996)
Child Labour Act (1986)
Industrial Disputes Act (1947)
Industrial Employment (Standing Orders) Act (1946)
Maternity Benefit Act (1951)
Minimum Wages Act (1948)
P F and Pension Act (1952)
Payment of Bonus Act (1965)
Payment of Gratuity Act (1972)
The Air (Prevention and Control of Pollution) Rules (1983)
The Environment (Protection) Act (1986)
The Water (Prevention and Control of Pollution) Cess Rules (1978)
Trade Union Act (1926)
Workmen Compensation Act (1923, 1934, 1952 and 1987)

Appendix B

Table B1: India's Commitment in Construction and Related Engineering Services

Sector or sub-sector	Limitations on market access	Limitations on national treatment
Construction work for civil engineering (CPC Ex. 513) Roads & Bridges only: Construction of highways, streets, railways, runways, bridges, tunnels, subways, waterways, harbours, dams, pipelines, communication lines, power lines and construction work of constructions for mining and manufacturing not elsewhere classified e.g. power plants, iron foundries, blast furnaces and coke ovens. It excludes construction work of warehouses and industrial buildings, residential and non-residential buildings.	1) Unbound* 2) Unbound* 3) Only through incorporation with a foreign equity ceiling of 51 per cent 4) Unbound except as indicated in the horizontal section	1) Unbound* 2) Unbound* 3) None 4) Unbound except as indicated in the horizontal section

Source: India's schedule of Specific Commitments (GATS/SC/42) www.wto.org

Notes: 1) Cross-border supply, 2) Consumption abroad, 3) Commercial presence, 4) Presence of natural persons

* Unbound due to technical infeasibility

Table B2: **India's Commitment in Architectural and Engineering Services**

Sector or sub-sector	Limitations on market access	Limitations on national treatment
Engineering Services (CPC 8672)	1) Unbound 2) Unbound 3) Only through incorporation with a foreign equity ceiling of 51 per cent 4) Unbound except as indicated in the horizontal section	1) Unbound 2) Unbound 3) None 4) Unbound except as indicated in the horizontal section

Source: India's schedule of Specific Commitments (GATS/SC/42) www.wto.org

Notes: 1) Cross-border supply, 2) Consumption abroad, 3) Commercial presence, 4) Presence of natural persons.

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