Multinational Enterprises Programme

Working Paper No. 65

Social and labour issues relating to construction activities: The cases of international contractors from Italy, the Republic of Korea and the United Kingdom

by Aldo Norsa
(with contribution by Claudio Sangiorgi, Young-bum Park and Roger Flanagan

International Labour Office Geneva

Note:
Working papers on themes studied within the ILO are intended to stimulate discussion and critical comment.

Copyright © International Labour Organization 1994

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to the Publications Branch (Rights and Permissions), International Labour Office, CH-1211 Geneva 22, Switzerland. The International Labour Office welcomes such applications.

ISBN 92-2-107538-9

First published 1994

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.
The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.
Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

ILO publications can be obtained through major booksellers or ILO local offices in many countries, or direct from ILO Publications, International Labour Office, CH-1211 Geneva 22, Switzerland. A catalogue or list of new publications will be sent free of charge from the above address.

Printed by the International Labour Office, Geneva, Switzerland

Preface

Construction and related engineering services constitute a major industry which accounts for a large share of employment in most developed and developing countries. It is usually characterized by a highly polarized structure, with a relatively small group of large multinational enterprises (MNEs) at one end and a very large number of quite small national enterprises at the other. Because of visible and invisible barriers to entry in foreign markets, the activities of construction firms have been, on the whole, traditionally oriented towards the domestic market. Several factors however have accounted for considerable overseas expansion and diversification of construction MNEs in recent years. Globalization, i.e. broadened geographical inter-linkages of products, markets, firms and production factors, has become a main feature of the industry. The process of globalization is likely to be strengthened in the near future following privatization programmes and liberalization measures such as those which should derive from the Uruguay Round of Multilateral Trade Negotiations.

The three studies in this working paper offer a first look at the main labour and social implications of the international activites of contractors from the United Kingdom, Italy and the Republic of Korea. They examine the factors which have accounted for the expansion of construction MNEs from the three countries and review the business strategies of certain firms. The focus then moves to the main areas of interest to the ILO: employment promotion; equality of opportunity and treatment; security of employment; training; conditions of work and life (including wages, benefits, and safety and health); and industrial relations. Attention is also given to the arrangements which provide for the transfer of so-called "soft-technologies" and to the issues related to the use of migrant labour. Relevant information on these issues was collected through questionnaires and interviews with officials of selected MNEs.

The three studies give a brief account of the range of international players in the industry. At present, the international market for construction is dominated by firms from the major industrialized countries. While MNEs from Italy and the United Kingdom have mainly relied on their specialized technological competence and financial capabilities as their main sources of competitiveness in overseas markets, Korean contractors have attained a remarkably high profile on the international scene mainly through their access to an abundant supply of low-cost unskilled and semi-skilled labour at home and from third countries. The Korean case also provides a good example of the rapid growth of new international contractors from a small group of newly industrializing economies.

The studies were commissioned in response to a request by the Building, Civil Engineering and Public Works Committee of the ILO, which, at its Eleventh Session (April 1987), asked in Resolution No. 98 that a study be carried out "on the social and labour practices of multinational enterprises in the building, building materials, civil engineering and public works sector (including explicitly the important issue of migrant labour)".

Table of contents

Social and labour practices of multinational enterprises in the construction industry: The case of contractors from Italy

Aldo Norsa,
University of Venice, Italy
(with contribution by Claudio Sangiorgi)

Introduction

Despite its high degree of fragmentation, the Italian construction industry has experienced a remarkable international success and Italy ranks among the top countries that export engineering and construction services worldwide. The purpose of this study is to highlight the factors which accounted for the international growth of Italian contractors and examine the main social and labour implications of their operations overseas.

Chapter 1 describes the evolution in the international activities of Italian contractors over the past two decades and discusses the competitive edge of the Italian construction industry. Chapter 2 reviews the business strategies pursued in seeking to increase market presence abroad. Chapter 3 gives a comprehensive account of the social and labour policies and practices of Italian contractors, in particular as concerns employment, training, industrial relations and conditions of work and life of Italian and non-Italian workers employed in construction sites worldwide. The chapter relies mainly on information collected through 12 case-studies for which questionnaires were sent to the leading Italian civil engineering and heavy engineering firms involved in work overseas.

List of abbreviations

ANCE	Associazione Nazionale Costruttori Edili
ANCPL	Associazione Nazionale Cooperative de Produzione e Lavoro
ANIMP	Associazione Nazionale di Impiantistica Industriale
CMC	Cooperativa Muratori Cementisti
EC	European Communities
ENI	Ente Nazionale Idrocarburi
ENR	Engineering News Record
IRI	Instituto per la Ricostruzione Industriale
OICE	Associazione delle Organizzazioni di Ingegneria e di Consulenza Tecnico-Economica
SNIA/BPD	Società Nazionale Industria Applicazioni (Viscosa)/Bombrini-Parodi-Delfino
TPL	Technipetrol
UAMI	Associazione delle Aziende di Costruzione e Montaggio di Impianti Industriali

1. Overview of changes in global construction and engineering services

1.1. Historical background

The origins of the massive presence of Italian contractors overseas can be traced back to the 1920s. During that decade the prospects of carrying out construction works in Africa (in connection with the country's colonial adventures) were so favourable that, in 1929, the Fiat group founded Impresit. The primary objective of that enterprise was to provide management services and financial support to contractors operating abroad. However, the real blossoming of Italian contracting on a world scale took place in the mid-1950s. By that time, the domestic reconstruction of Italy had been completed and contractors had acquired unique skills and know-how, especially in the erection of dams and hydroelectric power stations all over the Alps.

The year 1956 marked a major breakthrough. The contract for the building of the prestigious Kariba Dam, in what was then British Rhodesia, was awarded to four leading Italian firms — Impresit, Girola, Lodigiani and Torno. That was the beginning of a series of achievements in the fields of hydroelectric plants and other major civil construction projects. Impregilo, a joint venture involving the first three firms mentioned, was also created and it has become the leading firm in large-scale civil engineering works.

Overseas activities were confined mainly to the civil sector (with the exception of work in power generation) until the first oil crisis of 1973. Italy had by then become a major industrial power, exporting know-how in an ever-widening range of technologies in the fields of heavy engineering and the construction of industrial plants (typically with turnkey contracts). By the early 1980s the building of factories and related infrastructure (e.g. power generation, electrical and telecommunications) had become the dominant activity in foreign markets.

The role of the Italian construction industry overseas became so important that in 1984 the American magazine *Engineering News Record* ranked it third in the world in terms of the number of contracts concluded for work abroad. That put Italy after the United States and Japan but well ahead of other European countries. That remarkable performance, which was maintained until the end of the 1980s, may be attributed more to the aggressiveness of Italian firms which often exported at a loss, direct from the Peninsula, than to a planned initiative to promote the internationalization of Italian construction.

1.2. The present situation

What is the present position of Italian firms in the global market for civil engineering and heavy construction? CONFINDUSTRIA, the General Confederation of Industry (Italy), in its annual study, showed that Italian exports in construction had done reasonably well in 1991 and was facing the ongoing world crisis from a solid base in some of the most prominent foreign markets. According to that survey, in 1991, 110 firms and groups of firms had secured more than US$17 billion worth of new contracts. That figure had remained relatively unchanged in the four years surveyed by CONFINDUSTRIA. Civil engineering accounted for approximately one-quarter of all those contracts, while heavy engineering accounted for the rest.

As far as the type of work is concerned, building and special works dominated with more than 28 per cent of all civil engineering contracts in 1991. Between 1988 and 1991 that figure exceeded 34 per cent. Ports and railways and underground lines accounted for 21.5 per cent and almost 20 per cent respectively. With regard to heavy engineering, steel mills accounted for more than 19 per cent of total exports in 1991 and nearly 28 per cent over the period 1988-91. Petroleum and petrochemical facilities made up almost 17 per cent of exports and pipelines accounted for over 16 per cent in that year.

In terms of the geographical distribution of new contracts won by Italian firms, 35 per cent of the total (by value) was in the Middle East, 23 per cent in Africa, 21 per cent in Europe, about 12 per cent in Asia and the Far East, less than 5 per cent in South and Central America and more than 4 per cent in North America.

The position of Italy vis-à-vis other countries that export engineering and construction services worldwide slipped from third to fifth place, preceded by the United States, France, the United Kingdom and Japan. According to the *Engineering News Record*, in 1991 the leading 28 Italian firms accounted for only 8.3 per cent of the US$152 billion exported by the 225 top international contractors. In 1990, these firms had a share of 11.1 per cent. The results of the ENR survey were debatable. It may be argued that a more thorough survey that included some of the major contractors mentioned by CONFINDUSTRIA would have shown that the third position held by Italy in 1990 remained unchanged in 1991.

An interesting feature of the Italian construction industry revealed by surveys conducted by both CONFINDUSTRIA and the ENR is its high degree of fragmentation. This is

particularly evident in the field of civil engineering. It makes for substantial flexibility, which enables Italian firms to win foreign contracts in times of great uncertainty, when it pays to respond quickly to changes in the global market. However, the lack of concentration of firms could pose serious obstacles to a policy of permanent internationalization that requires capital to acquire foreign firms in order to shift from the export of construction and engineering services to the establishment of a commercial presence in foreign markets. This potential weakness of the Italian construction industry in the face of intense competition among highly internationalized groups of enterprises is well illustrated by the results of the latest survey conducted by the magazine *Costruire*. In its special November issue "Classifiche di Costruire 1992" it showed that in 1991 the top 50 Italian civil engineering firms accounted for only 9.5 per cent of the domestic market as opposed to 9.7 per cent in 1990. This lack of concentration is not evident in any other Western European country.

As a result of this weakness, there is likely to be a sudden opening-up of the domestic market to international competition, especially in view of the need for private financing of public infrastructural development projects which could only be assumed by groups that are financially very strong. However, notwithstanding the EC regulations on public procurement introduced since the first directive of 1971, the Italian market has not really been open to foreign competition, mainly because of administrative barriers and various covert obstacles. This might change radically in the immediate future. It is quite conceivable that the major European construction groups, which have so far adopted a "wait and see" policy, could decide to take over certain ailing firms in the Peninsula, thereby taking advantage of the opportunities offered by the emergent privatization of services and related infrastructure.

1.3. Characteristics of Italian construction and engineering services in international contracting activities

In order to appreciate fully the importance of overseas construction for the Italian economy, it is important to note that the share of overseas work in total construction is 15 per cent, and so too is the value of such activity in total exports of goods and services. Furthermore, 15 per cent of all insurance accorded to foreign economic activity is devoted to construction. As the initiatives of CONFINDUSTRIA over the past four years have demonstrated, it is difficult to assess the contribution of these contracts to the national economy. NOMISMA, a prominent economic research centre, did work on this question at the beginning of the 1980s and estimated the amount of "repatriable income" to be between 2 to 3 per cent and 12 to 15 per cent of the final value of the contract, depending on the type of work performed. Turnkey contracts were found to have the higher ratio. On the basis of data issued by CONFINDUSTRIA, one can estimate that the repatriable income for the Italian economy from construction contracts abroad (including turnkey industrial contracts) could amount to as much as $2 billion. The so-called "induced" portion (as an incentive to the export of other Italian goods and services) cannot be precisely quantified. It was, however, shown to be largely positive by NOMISMA, which carried out a regression exercise involving 12 developing countries where major Italian projects were under way.

The ability of Italian construction firms to shift from one geographical area to another and their readiness to propose the export of manufacturing plants whenever the export of goods was no longer competitive seemed largely responsible for the country's increased share of contracts in world markets during the second half of the 1980s, when most other competitors remained in their traditional markets. The emphasis on the building of industrial plants has developed in parallel to the time-honoured skills in civil works, as an increasing number of highly specialized and successful manufacturers, with operations of varying sizes, took advantage of this

opportunity. They diversified into construction either by establishing an "ad hoc" division or by providing support services to engineering firms.

Firms have sought to participate in integrated development projects in which they provide engineering services and selected technologically advanced products, while the local party focuses on the execution of the works. During the 1980s the aim was to exploit the avenues offered by the sizeable Italian aid programmes as well as the opportunities for obtaining international credit.

Indeed, the support of the Italian Government for overseas contracting has been on the increase since 1977 when comprehensive legislation reforming export procedures was introduced. It was noticeable in 1981 when foreign-aid programmes became substantial and ad hoc credits were designed to facilitate market penetration. In recent times there have been cutbacks due to severe national budgetary constraints. Throughout the 1980s, in spite of the inefficiency of the Administration, the country's construction firms were daring enough to consider even informal promises of public support as providing sufficient grounds for preparing project proposals and entering international negotiations. There was the confidence that, if their efforts were successful, the Italian Government would eventually underwrite the contracts.

By virtue of the national political system, the Government has not been selective in granting support to construction enterprises involved in different segments of the industry. As a result, most of the bids for contracts, especially in heavy engineering, came from state enterprises. This often drove the private sector to conclude export contracts in areas where the public sector firms would lose money and the private sector would gain. Before the present budgetary crisis, the State played an important role in supporting export-oriented industry and as a result it postponed the implementation of practically all privatization programmes and liberalization measures. However, because of budgetary constraints there is now a sense of urgency in putting these policy measures into effect. In the last year, the Italian Government has moved swiftly to cut public spending and privatize public enterprises.

The situation with regard to the privatization of Italian construction enterprises has more in common with that of the former communist countries of Eastern Europe than with European Community (EC) Member States, which are generally well advanced in the process of divestment.

2. Construction MNEs: Market access strategies and the international division of labour

There is a basic difference between Italy and other countries that export construction services which should be stressed. Italian contractors operating abroad fall into two categories: civil and non-civil firms, which are responsible for one-quarter and three-quarters of all foreign contracts respectively. Very little cooperation exists between these types of firms, even when they belong to the same corporations. The former are represented by a single association, ANCE, which acts as a lobby through the International Contractor Section. The non-civil engineering and construction firms belong to various organizations, OICE (which includes design firms), ANIMP and UAMI. From the point of view of ownership there is yet another set of characteristics that distinguish private enterprises from public sector firms and cooperatives. The latter have their own association, ANCPL, and are active mainly in the civil sector, with no more than five major companies having experience in working abroad.

A few corporations (industrial and/or financial) deal with overseas contracting through specialized firms: the two large state-owned holdings, ENI and IRI, as well as some private groups, especially Fiat and Ferruzzi. Notwithstanding its initiatives to diversify its operations, ENI, the national oil corporation, owns three contractors operating in related fields: Saipem,

Nuovo Pignone and Snamprogetti. IRI, the largest European non-oil corporation, has a holding — IRITECNA — including two overseas civil contractors — ITALSTRADE and CONDOTTE — and the major plant manufacturer, Italimpianti. It controls ANSALDO, which specializes in power generation and related plants, and SIRTI, which specializes in telecommunications. Fiat, through its holding Fiatimpresit, owns the engineering/building firm, Fiat Engineering and the biggest Italian civil contractor — Cogefarimpresit. It also has interests in Impregilo. The company has direct control of Snia/Bpd and its chemical processing plant Snia Engineering. The multinational Ferruzzi, which is involved in commodities, controls two smaller civil contractors that operate overseas. They are: Cisa (active in manufacturing factories and agricultural buildings) and GAMBOGI, which is involved in the building of chemical plants and has a significant presence in foreign markets through the engineering and construction firm TECNIMONT.

As far as cooperative firms are concerned, their close ties in the domestic market are not replicated in the external environment and so far there has been no noticeable success outside the traditional civil works market. CMC, the largest cooperative builder in Europe, acting independently as well as through alliances with private and public contractors, has made significant inroads.

Apart from major groups, more synergies can be achieved through another solution which seems to be peculiar to Italy, namely, the creation of permanent "joint ventures" between firms which have compatible know-how and operate exclusively abroad. The two best known examples are: GIE, created in 1953 by Ansaldo, Franco Tosi and Riva Calzoni, for the building of power stations. It is now fully owned by the first of the three groups (and renamed Ansaldo Energia) and forms part of the largest Italian public-owned conglomerate IRI. In 1960, Fiatimpresit, Girola and Lodigiani created Impreglio which specializes in dams, harbours and large civil engineering works. All other major firms are privately owned. They are generally parent companies of larger integrated groups and are fully Italian-owned, with the exception of TPL. This company (formerly Technipetrol) was established in 1969 at the time of the oil boom. It was controlled by the French engineering giant TECHNIP (although largely autonomous in its management) and more recently by ABB SAE SADELMI, as the result of the merger of two contractors active in power facilities by foreign groups (respectively, Brown Boveri and General Electric) and now the specialized plant maker of the "multi-domestic" conglomerate ABB.

Private consulting and design firms of Italian origin are relatively weak in international markets. This may be attributed to the lack of opportunity to grow in the domestic market and to an archaic law limiting the provision of design services to private, unincorporated professionals. Some of the major contractors, generally those involved in non-civil activities, therefore have their own design unit and they can also provide services to others. They are known as "construction/engineering firms". Others are accustomed to working with consultants from any country, and have particularly strong links with those from Britain and other Commonwealth countries. Their versatility and ability to adapt are responsible for their success in world markets.

As far as business strategies to increase market presence abroad are concerned, these tend to vary from one enterprise to another, notwithstanding certain common features described earlier. There is in fact no precise pattern with regard to the division of labour in joint ventures, subcontracting arrangements and strategic alliances. This varies according to the characteristics of the parties involved. None the less, the following considerations help to explain the range of strategies followed by Italian contractors, depending on the conditions in which they operate in the national and international contexts.

2.1. Types of contracts

The types of contracts which Italian firms in both the civil and non-civil sectors prefer can vary. On the whole, they include contracts that give them full responsibility for the erection of facilities. Subcontracting arrangements are therefore few and are generally reserved for specialist contractors and a limited number of firms engaged in construction management. Italians tend to think that know-how in construction is precious and can easily be lost by simply offering services without being directly involved in work at the site. This is true of traditional civil contractors who wish to safeguard their technical expertise that is a major source of their competitiveness. If the project is big, they prefer to join forces with firms of their size. Non-civil contractors have similar considerations. They rely on a number of manufacturing firms, with which they have more or less formalized ties, to supply the inputs necessary for maintaining quality and efficiency. In these cases, turnkey contracts are generally preferred in both industrialized and developing countries. The competitive edge of Italian contractors resides in their ownership of the proprietary rights to certain process technologies.

It is well known that Italian firms are individualistic since the vast majority are not integrated in industrial groups or financial holdings. Nevertheless, they do participate in different types of "joint ventures" according to the projects. These ventures may be of a temporary or permanent nature and involve either Italian firms, enterprises in the host country, or contractors from other industrialized countries.

They tend to sponsor projects in virtually all cases, and act as "project initiators". The strategy of having direct dealings with host countries is considered crucial for success in overseas bidding. Italian firms, regardless of their size, try to maintain a permanent presence in potential markets and, once they have obtained their first contract, they choose to remain even in times of political instability. The aim is to demonstrate that they can be relied upon under any circumstances.

By virtue of the variety of currency and commercial regulations which govern the operations of Italian firms in different countries, it has become customary to establish subsidiaries abroad in order to circumvent potential obstacles. Being present in a large number of countries is one of the keys to success, for it enables Italian contractors to obtain timely information about developments in the local market before calls for tenders are officially issued.

Since the beginning of the 1980s, due to mounting international competition, the construction industry has been getting strong support from the Government of Italy, not only through bilateral aid and project co-financing schemes, but also through numerous counter-trade deals. According to the ENR surveys, project financing by Italian contractors during the 1980s was the highest in the world — more than 22 per cent of all awards as opposed to 15 per cent in the case of Japanese contractors.

In spite of an increasing shortage of capital in all sectors of the economy in the 1990s, project financing remains a potent strategy for winning contracts abroad. This practice is favoured by the fact that both national and foreign banks are entitled to state support when they grant loans to Italian contractors for this purpose. The flexible use of a variety of currencies in these schemes is a typical feature of the project financing system.

Countertrade also provides certain advantages and it is gaining momentum as a result of the financial difficulties being faced by many Third World countries and States in Central and Eastern Europe. Apart from the two state-run corporations — ENI and IRI — which virtually have their own foreign and commercial policies with selected nations and thus organize counter trade systematically, many other firms have become accustomed to such arrangements. These may be entered into either through bilateral agreements between governments or when there are problems of insolvency with respect to projects for which contracts have already been awarded.

Another example of innovative financing is the 1982 agreement between Italy and the World Bank which was subsequently renewed. Italy was the first country to sign a protocol for

the co-financing of projects in developing countries for a three-year period with provisions for renewal. Although there is no direct connection, World Bank sources note that throughout the 1980s, for every lira contributed to the Bank's programmes, Italian contractors obtained orders for construction projects and they were worth more than four times the value of the contributions. A recent assessment of the period 1987-92 shows that under that scheme, Italian contractors obtained the highest share of all payments for civil engineering works. It was 14.9 per cent, followed by 11.6 per cent and 10.4 per cent for Japanese and French contractors respectively.

2.2. Project execution

Italian construction firms have chosen to maintain their traditional skills as builders. They have remained faithful to their specialization in civil works, resisting the temptation to diversify into the role of service providers through subcontracting. A similar attitude prevails among non-civil contractors who generally base their international success on specialized industrial know-how and are seen as vehicles for exporting inputs "made in Italy". Italian contractors discovered that it was more profitable to sell factories than products and this accounts for the rise of a number of firms. An early example was Fiat Engineering which built car manufacturing plants in Togliattigrad and in Belo Horizonte. More recent cases are Danieli (for small steelworks), Cogein (tanneries), Inglen (glass plants), Snia Engineering (chemical process plants) and there are several agro-food industries involved in the building of factories for specialized activities. In general, even the largest non-civil contractors began as specialists in specific technologies (e.g. Saipem for petroleum pipelines and drilling, with special emphasis on offshore work).

It is less common in Italy as opposed to other countries to find engineering firms acting as project managers in various fields. The main example is Snamprogetti which began as the engineering arm of the state-run oil corporation ENI. Others tend to have foreign origins, such as CTIP, Foster Wheeler Italiana and TPL. With the exception of the last companies mentioned, project execution is handled by the parent company, with the local branches generally providing marketing services and logistical support. ABB SAE SADELMI is the only true multinational (or multi-domestic) major contractor. It is fully owned by Asea Brown Boveri and has affiliates in many foreign countries.

2.3. Technology, procurement of supplies and subcontracting

Probably the strongest competitive advantage of Italian construction firms is their ability to improve, refine and adapt foreign technologies to suit different requirements worldwide. The construction industry therefore depends heavily on imports of know-how, technologies and supplies which are then re-exported with added value. This capability is embodied in the skilled labour, as well as the production technologies and organizational know-how that is available in the country. Italian contractors are essentially experts at "combining" resources that are brought into the host country from a number of places and put together to satisfy requirements on the local market.

Construction equipment has traditionally played a major role in these processes. In the case of overseas contractors, it is procured in a variety of ways, depending on the regulations in force in the host country. It is one of the typical "local components" which is subject to negotiation when the question of project financing crops up. These supplies are left on the site at the end of the project and therefore bring benefits to the economy of the host country. The role of Italian contractors in promoting the use of national equipment is exemplified by large groups of companies, such as Fiat, which has tried and tested its earth-moving equipment in projects in different parts of the world. The linkages between contracting firms and building

materials industries are difficult to assess, since Italy has a weak system of "trading companies" which could promote such exports.

Another major resource is labour, which is critical for carrying out work under subcontracting arrangements. Italian attitudes and policies towards subcontracting differ widely depending on the type of project. Industrial plant makers, for example, subcontract all civil works and when the main contract is turnkey (as has been the case with all deals in the former Soviet Union), preferably to Italian ad hoc consortia. Other non-civil contractors (for instance those involved in specialized fields such as pipelines or offshore platforms) provide their know-how and facilities to third parties through what could be considered a form of "franchising". Traditional construction firms normally subcontract all the specialized works but avoid "labour only" contracts. They prefer to manage the workers in order to have a better control of the quality of the end-product. Subcontracting on all sites is not a common practice among Italian firms which are neither accustomed to fulfilling the role of "construction managers", nor are they equipped to do so. When projects are large, they prefer to resort to different joint venture arrangements as long as the tasks of each partner are clearly designated.

The involvement of local actors in international projects is of great interest to Italian contractors, although most of their activities are in highly specialized works requiring technical knowledge which cannot be easily transferred to others. The construction of housing and small civil buildings has never been particularly attractive to builders from Italy. The only significant exception is the construction of roads, a sector in which pressures for the participation of local builders are mounting everywhere. While smaller Italian contractors face considerable challenges from such competition, the largest firms have managed to create local subsidiaries which are likely to serve as vehicles for the transfer of technology to the host countries concerned.

2.4. Government policy

Until the mid-1970s it was widely felt among Italian contractors that the availability of stronger financial backing from governments and export/import banks favoured their competitors. They therefore made great efforts to promote their image through the execution of large projects abroad, which were becoming a big business, and also to convince national opinion that they could open the way for Italian exports. They proved to the politicians that the lack of a competitive export credit programme hindered them from increasing their share of a booming international market. The turning-point in government policy came in 1977, when Parliament approved comprehensive reforms (the Ossola Law) aimed at providing exporters with financial support comparable to that offered by other major industrialized nations. That law was complemented by another in 1981, supporting all necessary commercial efforts and procedures before the actual bids were made. It also provided for a global insurance scheme to cover all risks. These laws are still deemed by the industry to be among the best in the world. They also created a healthy climate of competition for foreign lending in the Italian banking community, at least until the very recent turmoil in global financial markets which dealt a serious blow to the credibility of the heavily indebted Italian State and secondly in the eventual devaluation of the lira and its present uncertain fluctuation. As a result, the Italian market is regarded with great caution by international investors and lending is only accorded at rather high interest rates.

2.5. Financing

Since 1977, when the aforementioned reforms were approved, Italian contractors have been able to offer their customers deferred terms of payment at OECD "consensus" rates, by taking advantage of an interest subsidy granted by Mediocredito Centrale, a special credit bank. When

the credit rating of the importing country is unsatisfactory, the contract can benefit from insurance coverage extended by SACE, the Italian government export credit insurance firm.

Commercial banks and private financial institutions play a crucial role, since official agencies do not lend on their own but simply make up the difference between the OECD "consensus" rate and the market rate. Both Italian and foreign banks are allowed to participate in these schemes. The involvement of foreign banks has always been encouraged by the authorities because of the traditional domestic shortage of financial resources and the higher interest rates. Italian know-how, together with the openness of its export credit market to foreign commercial and merchant banks which have more expertise in project financing, help to explain the success of overseas contracting. The so-called "triangular policy" which was introduced in 1977 under the Ossola Law has aroused much attention in international circles. According to this policy, the SACE insurance guarantee covers loans granted by foreigners to importers of Italian goods and services, and thus encourages international banks to lend "higher risk borrowers" — a category into which most customers fall.

In recent years the increasing size of the national debt has obliged SACE to become much more selective in according insurance coverage to Italian projects abroad. The contractors are of the view that this is reducing their competitiveness, bringing it to what it was in the mid-1970s. This can partially explain the rush by some Italian groups to acquire specialized firms in other industrialized countries. It was a way of preparing for the present situation in which the use of Italian management and the possibility to export plants from other countries could become important sources of competitiveness.

The opinion expressed by the industrial community on the official policy concerning exports of construction services is well summarized in a recent document issued by ANCE (the Italian Association of Contractors). Approximately 50 per cent of the value of all foreign contracts involving members of ANCE obtained some form of public support, usually in the form of partial insurance offered by SACE. Consequently, the major issues of concern cited in the document relate to project insurance, development aid and financial policy in general. The support offered by the Italian Government to local contractors is multifaceted. However, it lacks coordination and advanced planning, and is often less transparent than it should be. As a result, firms go prospecting abroad without knowing for sure the extent and form of support that will be provided by the Government once the contract has been obtained. They therefore have to take major risks and devote considerable resources to lobby for support, to circumvent bureaucratic obstacles and to avoid delays which could jeopardize the success of their ventures.

2.6. Bureaucratic and financial constraints

The main complaints are about the inefficiency of the public administration which contrasts sharply with the vitality of the private sector. In a survey conducted in the late 1980s, 90 per cent of the leading construction firms identified SACE as the primary cause of reduced competitiveness because of the heavy bureaucratic procedures and the resultant delays in handling matters.

Some contractors claimed that feelings of uncertainty about the Government's response put them at a disadvantage when preparing bids for international tenders. Others, more courageous, noted that the inability to obtain an advance commitment from the Government sometimes made Italian contractors greater risk-takers, and they made attractive offers, with the confidence that once the deal was signed they would find a way of getting the necessary support.

With regard to financing, they would like to see a more aggressive use of "mixed credits", as is done by the French, who combine grants, development aid and export credits well below the "consensus" rates. Some Italian contractors feel disadvantaged vis-à-vis the Japanese, who benefit from the cheap yen-financing raised in their domestic market. Notwithstanding the

inefficiency of its bureaucracy, Italy is strongly committed to the promotion and support of the construction and engineering business abroad.

The weakest point in this policy relates to the exercise of control since insurance is optional and, according to a 1983 Swiss study, it is the second most expensive in the world. Moreover, it only covers the most risky cases and serves what can be called the "club of major contractors", leaving smaller firms "out in the cold". This insufficiency of control can contribute to occasional defaults which are bound to tarnish the image of the Italian construction industry as a whole. Incidentally, it is of interest to note that, at present, the perceived menace by the State to default on the repayment of the foreign debt by far overshadows the above-mentioned problems which are not major and occur only occasionally.

2.7. Foreign aid policies

When compared with other major industrialized countries, foreign aid policy was introduced quite late in Italy. A comprehensive law was passed in 1979 and it came into effect in 1981. A new regulation was implemented with the enactment of Law No. 49/1987. In the beginning, Italian foreign aid policy supported the uncompetitive design and consulting firms. Between 1981 and 1984, 10 per cent of total disbursements went towards the support of those enterprises. The appropriations grew to US$3 billion per year until recent restrictions were imposed in a bid to reduce the national debt. Funds were used for development projects in which local contractors could play a leading role. Aid funds are being increasingly used together with export credits in the form of "mixed credits" and co-financing with international agencies is also being successfully implemented.

Since Italy has no significant colonial past and no special military commitments, it is in a position to protect its commercial interests in all countries and be an ally to most. Furthermore, trade agreements often provide a leverage for winning contracts. Italian contractors have traditionally found it easy to lobby for their interests with the Government. The esteem with which they are regarded may be attributed to the fact that the massive emigration of Italian workers up until the 1960s, when the country became a major industrial power, has been replaced by the export of construction services. This has helped to reinforce the Italian presence overseas. This might explain the non-economic reasons for which the Government has backed these contractors throughout the 1970s and the 1980s.

Both the attitude and support of the Government are being called into question, not only because the State has come dangerously close to bankruptcy, but also in the wake of scandals surrounding public procurement practices. The latter have cast doubt on the construction industry as a whole and threatens to tarnish its image abroad. According to some of the opinions expressed in the annual report of CONFINDUSTRIA, the problems associated with Act No. 49/1987 and Italian foreign aid policy in general, are due to excessive bureaucratic procedures which cause unacceptable delays. They suggest that these should be simplified and that the number of countries which receive Italian credits should be enlarged to include, for example, Mexico, as well as the two Koreas, in view of their possible reunification.

The focus of the Italian construction industry remains on exports, particularly in the light of the severe cut-backs in national investment. The emphasis is on developing and strengthening the permanent presence of Italian contractors in the most promising foreign markets with the long-term aim of exporting related goods and services through these entities.

The acute shortage of capital is forcing local firms to develop into true multinational enterprises (MNEs) through the acquisition of foreign firms, especially in other industrialized countries. In its latest survey of civil engineering firms, ANCE showed that, in 1991, 25 per cent of all work in Europe and North America was carried out through subsidiaries.

2.8. Patterns of internationalization of MNEs

Apart from the enterprises which administer overseas projects from their headquarters in the Peninsula, there are several Italian groups which either rely on foreign branches that are more or less autonomous, or which exercise full control over firms operating in other markets. Internationalization allows Italian enterprises to operate in foreign markets in the same way as they would at home.

There are three avenues through which the process of internationalization may occur. Sometimes a contractor, after completing a project in a foreign country, may decide to remain in that particular market by opening a local office. If a significant amount of new work can be secured, this could develop into an autonomous branch of the Italian parent company. In a second case, a contractor, if faced with difficulties to work in a certain country, may buy a local company or a firm which is already active in that market. Thirdly, an enterprise, especially when seeking contracts in heavy and industrial engineering, may, through the acquisition of a smaller but specialized firm, enter a certain market niche that may be entirely new. This may have the effect of enhancing commercial opportunities in that context.

Leading Italian contractors are following these patterns of internationalization of their operations at a somewhat slower pace than their competitors. This may be partly because of a scarcity of capital due to their relatively small size and their lack of integration in major groups, and partly because of their cautious approach, given the present uncertainty of the world economy. Acquisitions are given special emphasis in Western Europe where markets are to be integrated progressively. As regards other parts of the world, Italians find that they manage to work quite well through their existing networks of subsidiaries and branches.

In the field of civil engineering, in Central and Eastern Europe, GAMBOGI (Ferruzzi group) and COGEI (Italimprese group) jointly control the Hungarian contractor Betonutepito, while Cogefarimpresit (Fiat group) and Lodigiani control the German company Watis Bau. Di Vincenzo has created a new firm, DVS International, in Slovenia.

In the EC, Fiatimpresit has the widest network. It controls the sixth Spanish building group (Hasa Huarte), has a stake in the leading Portuguese firm, Soares da Costa, and also has subsidiaries in Germany, Great Britain and France. In this latter country, Recchi owns the majority of the civil contractor Chagnaud, and in Spain it controls 50 per cent of the firm Lasan.

As regards heavy engineering, the conglomerate Ansaldo (IRI group) recently acquired the Danish firm, Volund Systems. Danieli, the leader in the construction of small steel mills can rely on a Swedish firm, Sun Birsta. Saipem (ENI group), one of the foremost specialists in the building of pipelines, is particularly active in offshore operations through the British firm European Marine Contractors, a joint venture with Brown and Root.

3. Social and labour policies and practices of Italian construction mnes

Information on the social policies of Italian MNEs was collected through 12 case-studies for which questionnaires (published in the appendix to this report) were sent to the leading civil engineering and heavy engineering firms involved in work overseas. The information was organized according to the subjects of interest to the ILO: employment, training, conditions of work and life and industrial relations. Throughout, a distinction was made between non-Italian and Italian expatriate workers. The following section provides the background to the discussion of the results of the survey, by describing the structure and operations of construction MNEs.

3.1. Patterns of organization and operation of MNEs with overseas projects

In general, multinational enterprises are organized along similar lines regardless of their country of origin. None the less, there are some noticeable differences. One constraint with which MNEs are usually confronted is that of organizing their production according to the needs of projects which are located in areas remote from their headquarters and the duration of which can extend over several years. In order to be able to meet those needs, firms must have a central office and a network of peripheral units located on the project sites as well as in urban centres where the administrative and commercial activities can be carried out more efficiently.

These firms have a highly centralized management. There are "area managers" in charge of the network of offices and sites. Within the firm there are specialized services geared to support the decision-making process at different levels. In other words, there are line managers and supporting staff positions.

3.2. On-site organization

The construction site plays a critical role as the physical location where all the works for a given project are performed and as the basic unit of a work team which constitutes a critical component in a construction firm. The importance of good on-site performance is well expressed in an observation which was made in several of the replies to the aforementioned questionnaire. It states: "Once you've won the contract, during the works it's decided how much your income will be." All the Italian MNEs which have been studied have construction sites in various parts of the world, but they differ by size, type of activity, terms and conditions of contracts, relationship with other partners and geographical location, among other factors.

It is easy to understand that each of these calls for a different pattern of organization. However, the main occupations on the construction site, even if referred to by different names, are basically the same all over the world. They are the following:

- the Director of works is responsible for the execution and completion of projects according to the terms of the contract and agreed budget. The degree of autonomy in solving unexpected problems depends on the individual's expertise;
- the Chief of Workers is responsible for supervising all jobs performed on the site. This position is generally held by a technician "coming from the ranks" of the MNE who has acquired experience in similar work over the years;
- the Administrative Director is responsible for administrative matters which include the management of workers and all non-technical issues;
- Contract Engineer/Chief Engineer: responsible for engineering services, quality control of all supplies delivered to the construction site and the execution of all construction work.

These are permanent positions on the construction site overseas. The individuals constitute a team and should prove their ability to work and solve problems together. The successful completion of a project depends primarily on good relations among members of the team. The choice of the right persons for the above-mentioned positions is made through informal contacts, the interest expressed by candidates and their needs. Greater weight is accorded to the former. With time, these key professional staff members tend to identify with the enterprise for which they work and to remain the most stable element in its organization.

3.3. Patterns of operation

The project cycle for overseas construction sites is basically the same for all MNEs involved in civil or heavy engineering projects. The typical phases can be summarized as

follows: (a) market prospecting and identification of calls for bids; (b) preparation of the offer; (c) presentation of the offer and negotiation with the client; (d) organization of resources; and (e) execution of the works.

The first phase is a permanent and ongoing process that is not limited to a single contract. It involves the monitoring and prospecting of international markets for which MNEs may use the services of other enterprises of the group which are permanently located in different countries. The other four phases are generally carried out by task forces within the MNE with the single aim of obtaining a given contract and carrying out all the relevant activities for completing the project(s). All of these activities are generally carried out by professionals with a strong sense of entrepreneurship. They work on a largely independent basis, sometimes even as "freelance" professionals. They may not necessarily be specialized in construction or well-versed in the technical aspects of this field. Matters requiring technical expertise are entrusted to the project engineers during the second phase when the offer is being prepared and the actual management of the project is being undertaken.

3.4. Survey of 12 leading enterprises

Twelve Italian major MNEs in construction were surveyed, using a questionnaire to which they have either answered in writing or through interviews. The enterprises in the sample are active in both civil and heavy engineering contracting abroad and often also in the manufacture of certain inputs essential for the projects in which they are involved. They belong both to the private and public sectors. No cooperative group was of the size required to be included in the sample.

The case-studies provide insights into the traditional activity abroad, that is, construction sites managed from the home office. It also focuses on more recent developments, such as the acquisition of foreign companies which work partly in their respective domestic markets and partly with the parent Italian company on overseas projects. An examination of the recent developments is particularly important for Italian MNEs which seek contracts in heavy and industrial engineering. Through the acquisition of much smaller but highly specialized firms they can gain access to new market niches and take advantage of synergies.

It has become common policy for these firms to seek alliances with Italian or foreign partners not mainly for the purpose of carrying out the work itself but rather to share the risks involved in international projects and to gain access to important sources of financing. These alliances can have various configurations. The most common are joint ventures according to the legal rules of the countries where the projects are located. If the MNE is the general contractor, subcontracting is largely used for all phases of the work, especially when it involves the assembly of components. In the case of the firms which were interviewed, many reported that they used local subcontractors who often provided labour for the least complex operations. The specialized subcontractors tended to be Italian. The latter were said to play a substantial role in the project, accounting for between 15 per cent and 30 per cent of the total value of the project.

3.5. Labour

Until the 1980s, Italian contractors operating abroad recruited expatriate workers during the peak periods. The numbers rose to between 30,000 and 40,000 in the case of civil construction and were estimated to be similar in the case of non-civil works. The recent trend has been to expand abroad through joint ventures (e.g. in the former East European countries), the creation of local subsidiaries (especially in Third World countries) or the acquisition of specialized firms in industrialized countries. The objective is to broaden technical know-how and to try to become truly multinational enterprises. Italian labour overseas now consists — at

least in the case of large contractors – almost exclusively of skilled workers, technicians and project engineers. They originate from the home country and increasingly from subsidiaries in other industrialized countries. They may also be recruited from other countries. Recent estimates by Italian trade unions put the number of expatriates at some 6,000. Workers on overseas construction projects tend to be people with a vocation for working abroad. They are very mobile and also highly committed to their employers.

Italian workers were traditionally recruited at home. They were often persons who had moved up the professional ranks faster than their colleagues, because of their experience overseas. Individuals of this kind are becoming increasingly scarce because there is greater competition among companies for such manpower. The level of multinational operations has become so high that most of the Italians abroad can no longer be even considered "expatriates" in the strict sense of the term because they tend to spend most of their time working overseas and increasingly do not conform to the union rules of their country of origin. This has led to an increasing gap between the interests of the Italian construction workers employed abroad and those employed at home, which is of serious concern to the Italian trade unions in the industry. The "expatriates" have national contracts and are considered as being "temporarily detached abroad". Pay and working conditions are governed by Italian law and they are also given an extra sum for working abroad. This may be paid in different currencies. There are also entitlements for their dependants.

On-the-job training is prevalent and individuals may also be attached to a given firm with which they are familiar. The use of foreign labour is extensive. Italian contractors seem flexible when it comes to recruiting staff from developing countries. In this regard, project managers are appreciated for their ability to adapt to different cultural environments. A salient feature is the growing use of technicians from other industrialized countries and the recruitment of professionals who have been trained in the developing world and are accustomed to working in contexts governed by foreign regulations. They therefore have no reason to adapt to the Italian rules, nor are they asked by their employers to do so.

3.6. Non-Italian workers: Conditions of work and pay

The MNEs surveyed operate all over the world and they have a high profile in the former communist countries of Central and Eastern Europe. While the presence of Italian contractors is on the increase in the Far East, it is still quite weak in the United States, notwithstanding a few recent contracts for civil works. Foreign workers, and in particular those from developing countries, are employed in a wide range of occupations on the overseas construction site. The situation is quite different in the home country. The MNEs surveyed do not employ foreign workers on project sites in Italy. However, they probably rely extensively on subcontracting firms which do hire such foreign labour. Italian trade union sources note that almost 20 per cent of the 1.6 million construction workers come from non-EC countries. This is a recent development which is still not fully reflected in the official statistics, nor is it revealed through interviews.

The non-Italian workers are mainly from Third World countries. They are usually recruited through the foreign subsidiaries under arrangements with governments which negotiate for the employment of teams of workers abroad. Italian contractors appreciate the high level of expertise of electronic engineers from India and specialized workers from Northern Africa and Eastern Europe. The site managers, almost without exception, come from Italy, while foreign workers and technicians are employed in different positions.

The hiring of non-Italian workers is done according to the legislation of the different countries of origin or the laws of the country in which the particular project is located. Sometimes Italian MNEs delegate the recruitment and management of foreign workers to firms that specialize in such activities. The contracts are always terminated at the end of each project,

but the workers can be rehired for employment on another site. Some of the MNEs reported that there were certain countries in which workers of a certain nationality (or nationalities) were not considered acceptable, for political or other reasons.

In general, the working time of non-Italian workers varies from 48 to 60 hours per week. However, some MNEs reported a 40-hour working week. Comparisons with the working time of Italian personnel are difficult because of the differences in the qualifications and occupations of the workers involved. As regards holiday entitlements, these are the same for both Italian and foreign staff.

The wages of foreign workers are usually lower than those of the Italians. However, the respondents made no clear comparisons in this regard. There can also be differences between the wages paid to workers of different nationalities. These disparities generally reflect recognized differences between wage standards in the countries of origin. Non-Italian workers are paid either in the currency of the country where the project is located or in that of their country of origin plus "pocket money" in the local currency. Although they are not granted a repatriation allowance like their Italian colleagues, at the end of the project they can receive cash awards.

In some cases, a part of the foreign workers' wages is paid to their respective government authorities in order to cover the social insurance and pension plan contributions. All the companies reported that both Italian and foreign workers are fully covered by accident insurance for the duration of the project.

As regards health services, Italian enterprises usually enter into agreements with medical institutions in the host country to provide such services to non-Italian workers. Only one of the MNEs surveyed stated that it had an agreement with Italian health services. On average, contractors pay their workers a minimum of two journeys per year (and a maximum of four) to their countries of origin.

The quality of accommodation for non-Italian workers is always lower than that provided for Italians. The former are generally housed in campers and prefabricated units. The MNEs avoid, as much as possible, the signing of contracts that provide for apprenticeships/training periods for local technicians. For a number of official and other reasons, they are often obliged to accept local firms as subcontractors. However, these firms are sleeping partners and do not actually play the role expected of subcontractors.

The contracts of non-Italian workers may be cancelled at any time if there has been "incorrect behaviour" on their part. However, the employer must justify the decision by demonstrating that there was "fair cause" for the action taken.

3.7. Freedom of association and the right to organize and bargain collectively

With respect to the exercise of trade union rights, the MNEs declared that, in this regard, they tend to conform to local laws. However, according to the Italian trade unions, there are a few cases in which these rights are denied.

3.8. Italian workers: Conditions of work and pay

The MNEs surveyed usually employ nationals for particularly complex jobs which require high standards of quality. The Italians based abroad are mainly managers, specialized technicians and foremen. The control and supervision of all phases of the project are therefore carried out by expatriate skilled labour. Only one of the MNEs reports that there are countries in which Italian workers are not wanted for political or other reasons. Neither the countries nor reasons were specified. It notes that some Italian firms are none the less still able to secure contracts in such countries.

The terms and conditions for recruiting Italian staff are prescribed by the national legislation. As regards occupational safety and health, the rules of the host country are applied. Some enterprises also observe the Italian safety rules when they are more stringent. The contracts are always terminated at the end of the project, although immediate rehiring for other projects is common practice. The working week consists of six days, with working hours ranging from 48 to 60 per week. Only one of the MNEs reports a 40-hour working week. Wages are normally paid in lire plus a certain amount in the local currency as "pocket money". In addition to their salary, Italian workers are entitled to a repatriation allowance and often at the end of the project they receive extra cash awards.

The social insurance contributions are calculated according to the provisions of a ministerial decree issued at the beginning of every year. As regards health-care facilities, agreements are concluded with local, and in several cases Italian, providers of medical and related services. Foreign-based Italian workers enjoy the same holiday entitlements as if they were at home.

While the standard of accommodation for Italian personnel is always higher than that provided for the foreign workforce, there are differences according to the occupation of employees. Hotel rooms or mini-flats in guest houses are reserved for the managers, bungalows for the technicians and prefabricated units for the other workers. On average, the MNEs pay a minimum of two and a maximum of four journeys to Italy per year. The travel costs for dependants are defrayed by the contractors only when they are explicitly provided for in the contract of employment. This benefit is generally granted to the top-level management only.

The contracts of Italians working overseas may be cancelled at any time if there has been misconduct on their part. However, the employer must justify the termination of contracts of employment.

3.9. Freedom of association and the right to organize and bargain collectively

Workers' rights, including the right to strike, are recognized, and there is no evidence of any significant labour dispute on construction sites overseas. This may be attributed to the high wages paid to workers, which could also explain the low unionization rate among expatriate Italian workers. The vast majority only join unions when they have a grievance.

3.10. Implications of internationalization

As mentioned previously (see section 2.8), there is a growing trend to the international expansion of Italian contractors by the means of cross-border acquisitions. The very fact that this drive towards internationalization is strongly focused on Western Europe has some implications for research on the social and labour practices of Italian construction firms. In view of the creation of the Single European Market, in fact, those issues should be better addressed at the level of the European Community, and not at the level of a single country.

There are no major differences in the labour legislation in force in the different Western European countries. Multinational enterprises have no choice but to comply fully with the rules in any European country where they choose to acquire a firm. The social and labour legislation in Italy is just as advanced as that which is in force in the most industrialized countries of Europe. Moreover, since the rationale behind acquisition is to obtain the status of a national competitor in the given domestic market, the acquiring firm tries to gain acceptance in the new environment by respecting the social policy and avoiding practices that could become a source of friction.

In the light of these developments, it is quite probable that the process of internationalization in the construction industry in Europe could lead to the emergence of a new

type of firm which could be called "multidomestic", as the Swedish-Swiss conglomerate Asea Brown Boveri refers to itself. Should this phenomenon become widespread, one could be tempted to call into question the suitability of having country-specific labour regulations and, instead, to envisage the application of "pan-European" social and labour practices as being more appropriate. Such considerations could be the basis for formulating interesting hypotheses which may provide stimulating topics for further research.

Conclusions

Specialized industrial know-how, ability to improve and adapt technologies to suit different requirements and strong financial backing from the Government are the main factors which explain the international competitive edge of Italian contractors.

A few other distinctive features should be recalled. Italian contractors fall into two broad categories: civil and non-civil firms. The latter group accounts for the bulk of overseas operations. Very little cooperation exists between firms of the two groups, even in the case in which they belong to a same conglomerate. With the exception of a few cases, the trend to truly multinational dimensions, i.e. the establishment of a network of foreign affiliates which locally take responsibility for the administration and execution of a project, is a recent phenomenon. There are three avenues through which this process of internationalization is occurring:

— the opening of a local office in a foreign country: if the local office is capable of ensuring a significant amount of work to the parent company, it could develop into a fully autonomous affiliate;
— the acquisition of a small, highly specialized firm, in order to enter certain market niches;
— the acquisition of a company which is active in a specific foreign country, in order to rapidly gain familiarity with a new market environment.

The workforce employed by Italian contractors on their construction sites overseas comprises Italian and non-Italian expatriate workers. The companies surveyed usually employ workers from Italy for complex jobs which require high standards for quality. Managers, technicians, project engineers and skilled workers are primarily Italian. These qualified workers are in high demand, their remuneration and working conditions are generally good. Unionization is quite limited.

Non-Italian workers are mainly from developing countries. They are recruited through the local affiliates of the contractor under arrangements with governments of developing countries which organize the employment of teams of workers abroad. In some cases, recruitment and management of foreign workers are delegated to specialized firms. Wages and working conditions are usually inferior to those of Italian workers. Comparison, however, is difficult because of the differences in qualifications and occupations of the workers involved.

Bibliography

Building Europe Report (Milan, Editrice Abitare-Segesta, June 1993).

CONFINDUSTRIA Centro Studi: *Osservatorio sui grandi lavori delle imprese italiane all'estero*, No. 3 (Milan, Nov. 1993).

---: *Osservatorio sui grande Lavori delle imprese italiane all'estero*, No. 4 (Rome, Nov. 1992).

Corso, A., Minelle, F.: *Le prospettive della ingegneria impiantistica italiana: i prossimi dieci anni*. Il Sole, 24 ore (Milan, 1989).

Engineering News Record, Years 1991-92-93.

Grandi, A: *I rapporti fra strutture organizzative e grandi progetti internazionali*, Working Paper (n.d.).

Strassmann, W.P.; Wells, J.: *The global construction industry* (London, Unwin Hyman, 1988).

Le classifiche di costruire 1991 (Milan, Editrice Abitare-Segesta, Nov. 91).

"L'impiantistica Italiana fra crisi, Recessione e nuove frontiere", Acts of ANIMO-OICE-UAMI meeting at Santa Margherita Ligure, Genoa, 24-26 Oct. 1991.

VII colloquio internazionale grandi lavori all'estero. Acts of international meeting at Saie, Bologna, 20-21 Oct. 1992.

Appendix

Questionnaire sent to Italian MNEs in construction

(a) Role of the enterprise in international contracting

1. Which is the role of your enterprise in international contracting (general contractor, subcontractor ...)?
2. Do you usually seek alliances with Italian or foreign partners in international contracting? If so, why?
3. Are these alliances permanent or temporary? Specify existing joint ventures (for both cases).
4. Do you frequently subcontract part of the work to Italian or foreign enterprises?
5. What is your market share in the different geographical areas?
6. How do you deal with issues concerning procurement and supplies in your overseas projects?

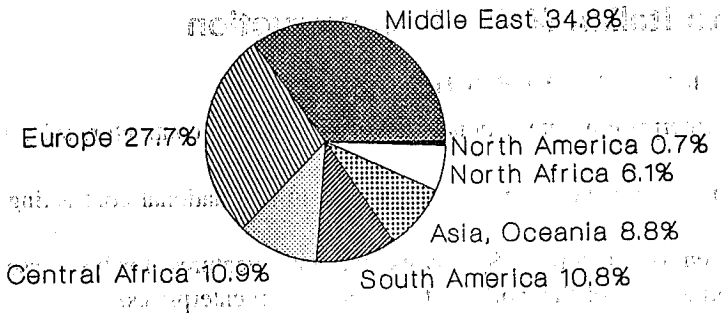
(b) Non-Italian workers

1. Do you employ non-Italian workers on construction sites in Italy and abroad?
2. Why do you employ non-Italian workers?
3. Through which arrangements are non-Italian workers recruited?
4. For which kind of activities are foreign workers usually employed?
5. Are there non-Italian managers or specialized technicians on your overseas construction sites?
6. Are there countries which do not accept workers of certain nationalities on construction sites located in their territory?
7. Are the terms of employment of non-Italian workers prescribed by Italian legislation or by the laws of the host country in which they will be based?
8. What are the terms of the employment contracts concluded with non-Italian workers?
9. What is the length of the standard working week for non-Italian workers employed overseas?
10. Are the wages of foreign workers the same as those paid to Italians?
11. Can non-Italian workers exercise basic trade union rights? Do they have the right to strike?
12. Under what circumstances can the contracts of employment of non-Italian workers be terminated?
13. What is the policy of your company with regard to holiday entitlements and travel by overseas workers to their country of origin?
14. Describe the housing and other amenities provided on the work site for non-Italian workers.

(c) Italian workers

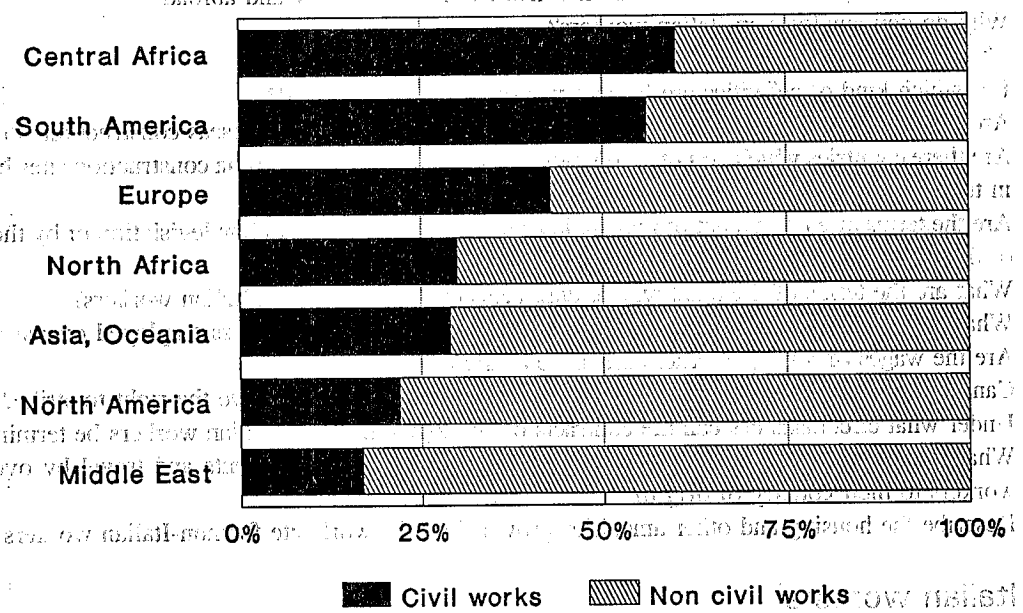
1. What type of work are Italian workers usually employed to do?
2. Are there countries which object to the presence of Italian workers on the job sites concerned?
3. Are the terms of employment of Italian workers prescribed by Italian legislation or by the laws of the host country in which they will be based?
4. What are the terms of the contracts of employment?
5. What is the length of the standard working week for Italians working on overseas projects?
6. Please provide information on the wages and social insurance contributions of these workers?
7. Can these workers exercise basic trade union rights? Can they go on strike?
8. Under what circumstances can the contracts of employment be terminated?
9. Describe the housing and other amenities provided for Italians working on overseas job sites.
10. What is the policy of your company with regard to holiday entitlements and travel by these workers to their country of origin?

Figure 1. Geographical distribution of overseas contracts awarded in 1990



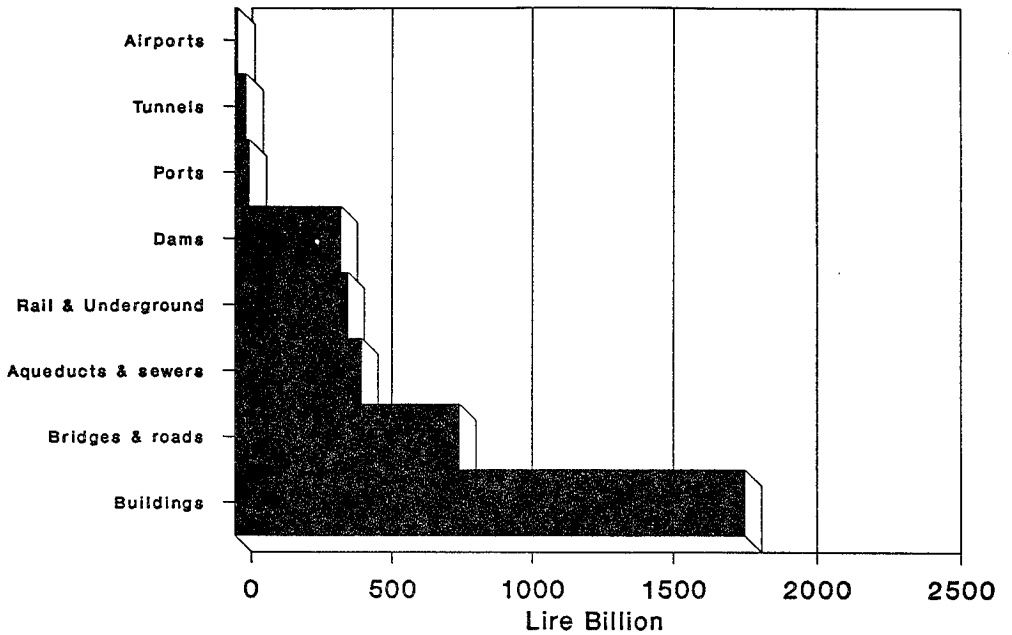
Source: Confindustria.

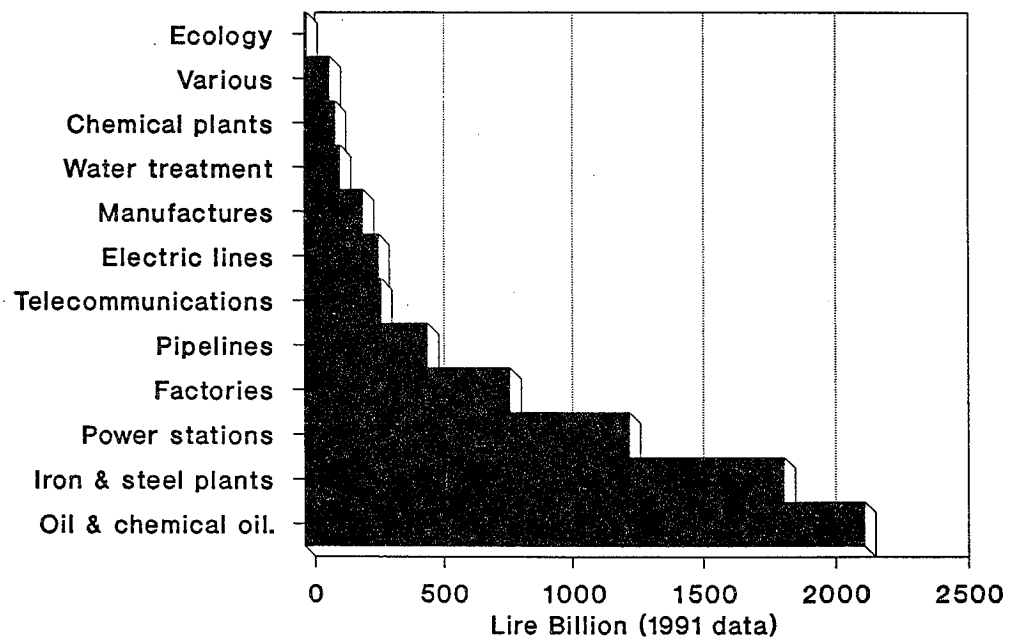
Figure 2. Geographical distribution of contracts for civil and non-civil construction projects overseas in 1991



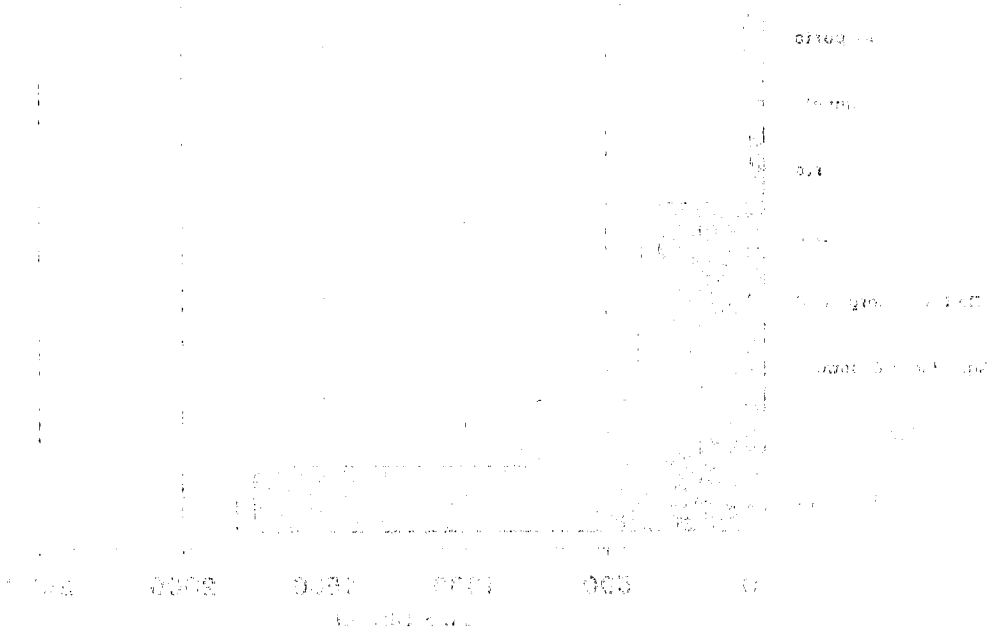
Source: Confindustria.

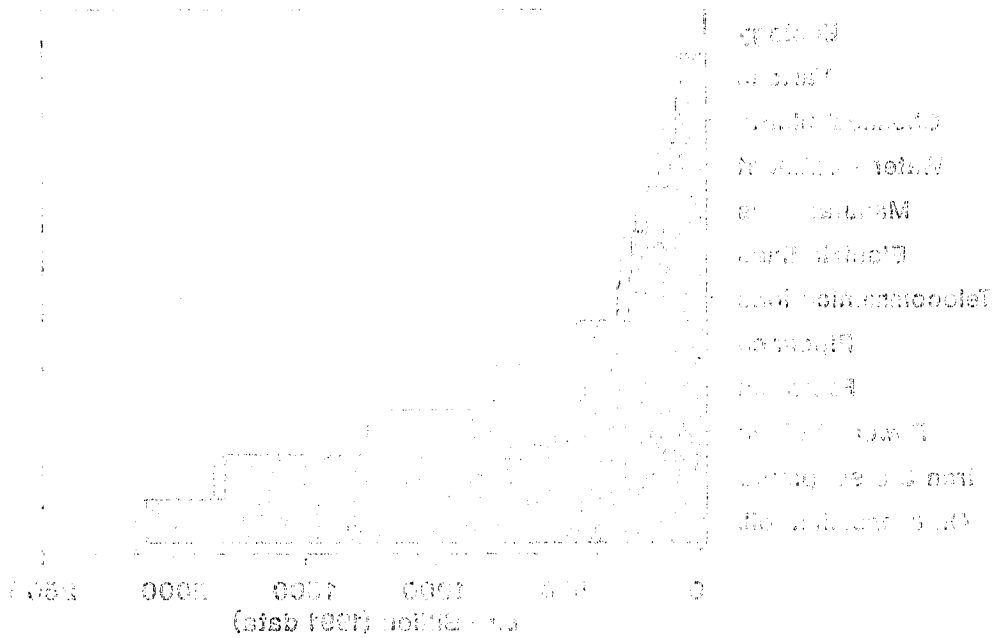
Figure 3. Overseas contracts awarded for civil and non-civil works in 1990 by type of project





Source: Confindustria.





Social and labour-related issues in international construction: The case of contractors from the Republic of Korea

Young-bum Park,
Korea Labor Institute, Republic of Korea

1. Introduction

The implementation of an overseas construction project requires certain labour-intensive services for which the temporary relocation of low-cost labour from the home country, or the recruitment of workers from a third country may be necessary. Rising labour costs in the home country have forced construction firms to recruit larger numbers of foreign workers to work on overseas projects. By the early 1990s, foreigners constituted almost 80 per cent of the workforce on such sites. This cross-border movement of labour raises a number of social and employment-related issues. They include the following: conditions of work and pay of workers brought from the home country and those recruited locally or from a third country; the provision of basic amenities such as housing and medical care, and social security coverage. These will be examined in this working paper which focuses on the policies and practices of construction enterprises from the Republic of Korea.

For the purpose of this research, information has been drawn from the relevant labour legislation and regulations, contracts of employment as well as the results of quarterly surveys and unpublished records of the Overseas Construction Association of Korea. The reports submitted to the Ministry of Labour by labour officers stationed in overseas construction sites have also been consulted. Other information was obtained through field research by the author to overseas construction sites in Iran from 19-23 April 1993, and also interviews with major construction firms including Daewoo Corp., Shinwha Engineering and Construction Co. Ltd., Hyundai Engineering and Construction Co., Daerim Engineering and Construction Co., and the Dongah Engineering and Construction Company. Daewoo, Shinwha and Hyundai are three of the five Korean construction companies listed among the top 250 international contractors in 1990, by *Engineering News Record.*

2. Construction MNEs from the Republic of Korea

Korean construction firms attained a remarkably high profile in international markets during the 1970s, and particularly in the early 1980s, when they accounted for more than 10 per cent of the total value of international contracts awarded. Their largest market was in the Middle East which accounted for almost 90 per cent of all overseas contracts. The decline in construction activity in the Middle East meant that the share of Korean contractors in the total value of contracts awarded slipped progressively from 10.8 per cent in 1983 to 5.8 per cent in 1985 and 1.7 per cent in 1988. The surge in building activity in south-east Asia meant that contracts awarded to Korean firms continued to increase in the late 1980s. In 1990, a Korean company was given the contract to work on the second phase of the Great Man-Made River Project (Libyan Arab Jamahiriya) and that resulted in a sudden rise in the value of contracts obtained.

The success of Korean enterprises may be attributed to their access to an abundant supply of low-cost unskilled and semi-skilled labour, their management skills, their good record with regard to the timely completion of projects and the high standard of their work.

The employment opportunities in the Middle East were good. During the 1970s, the wages of Koreans working on projects were usually three to four times higher than those paid at home (Asan Foundation, 1988, pp. 237-247). Those who migrated were highly motivated and committed to the goal of delivering projects that met acceptable standards and were completed on time. The Middle Eastern nations also preferred workers from the Republic of Korea since their presence never exceeded the duration of the project. Immigration-related problems, therefore, did not arise.

The Korean Embassy in Saudi Arabia estimated that in 1983, the cost of hiring workers from other developing countries was about 56 per cent of the cost of recruiting Korean labour and the productivity was about 78 per cent of that of Korean workers (Asan Foundation, 1988, pp. 301-305). Confronted with fierce competition, in the late 1970s, construction firms began to hire such workers. The proportion of foreign workers in Korean construction firms rose from 7.1 per cent in 1979 to 27.1 per cent in 1983 and 49.7 per cent in 1987. By the first quarter of 1992, it had reached 79.7 per cent.[1]

The development of the local construction industry was given a boost in the post-Korean War period (1950s) when reconstruction programmes and building projects awarded by the US Army Corps of Engineers offered opportunities for the industry to grow quickly. Local contractors acquired experience working with their international counterparts. The number of construction companies rose from 60 in 1945 to approximately 1,700 in the late 1950s.[2] Korean contractors acquired a wealth of knowledge in areas such as building standards, project evaluation techniques and management skills. The US Army projects required the use of advanced machinery and equipment which helped to stimulate the modernization of the local construction industry.

The construction industry grew at annual rates of between 17.4 and 19.7 per cent between 1962 and the start of the 1990s. The range of projects in which they were involved included highways, multi-purpose dams, harbours, subways, industrial complexes, communication networks, electric power plants and residential homes. Projects financed from foreign sources were closely monitored to ensure that they conformed to international standards. That afforded local contractors the chance to raise their standard of performance to levels that made them competitive in international markets[3] (Ministry of Construction, 1990).

In the wake of the first oil shock (1973) which dealt a severe blow to the domestic economy, the Government and business community began to seek opportunities for boosting exports, including construction services.

Throughout the 1970s and early 1980s, it gave strong support to construction firms which were encouraged to increase their presence in the Middle Eastern market. Apart from the granting of subsidies and tax benefits, the Government also regulated the industry so that a permit was required in order to bid for contracts and a licence was necessary to operate in the international construction market.

A programme was implemented to rescue insolvent firms in the mid-1980s. An overseas construction firm which benefitted under the programme was supposed to return its overseas construction licence and terminate its activities abroad. Firms involved in mergers were exempted from paying registration and purchase taxes.[4]

In 1983, there was a sharp drop in the value of contracts awarded to new foreign firms in the Middle East, and that downward trend continued until the late 1980s. Korean contractors were hit hard by the cut-backs in the Middle Eastern market because they had concentrated their overseas projects in that region.

Increased demand for construction services in the domestic market has led to reduced interest in expanding operations abroad. The total value of domestic contracts awarded between

[1] See Y. Park (1990, pp. 16-22) for a detailed analysis on the impact of overseas construction on the economic growth of the Republic of Korea.

[2] Of the 60 construction companies referred to, only two were locally owned.

[3] During its first and second economic development plans, the Republic of Korea borrowed US$2.5 billion from international agencies and foreign governments.

[4] Seventeen overseas construction firms participated in the programme and six firms, including Hanyang, Samik Housing, Life Housing, Hanshin, Samik and Jinheung returned their overseas construction licences and turned to another industry or limited their business to the domestic construction industry. Taepyoungyang merged with another firm in the same group. Eight firms including Samho, Kuje, Kyoungnam, Nankwang, Dongyang, Jeongwoo, Koryo and Duksu were taken over by other firms.

1987 and 1990 amounted to US$84.8 billion — 175 per cent higher than the value of contracts for the preceding four years. Notwithstanding the relative reduction of overseas activities, Korean contractors tried to penetrate the markets of developed countries, such as Japan and North America. However, they have had little success, since most tenders in these countries were awarded to firms from member States of the Organization for Economic Cooperation and Development (OECD).

The future of Korea's construction industry does not seem to be too bleak[5] and opportunities in South-East Asia[6] are likely to compensate for the fall in demand for construction services in the Middle East. In 1992, projects in the Asian region accounted for 76 per cent of the value of contracts.

The Government and the business community are now concentrating their efforts on gaining access to markets in Central and Eastern Europe, and in China. The Overseas Construction Association of Korea estimates that the value of contracts will stand at US$4.2 billion in 1993 and could reach US$10 billion by the late 1990s (Choi, Sep. 1991).

3. Recruitment and employment of Korean and foreign workers on overseas construction sites

The period of employment for a Korean employee overseas is generally one year. It can be extended by mutual consent thereafter. For locally recruited workers, employment is of a temporary nature and may be terminated without advance notice. Workers are asked to declare whether or not they accept such terms at the time of their recruitment.

According to the Labor Standards Act, there is also a probationary period of three months for Korean employees. This is also often applied to non-Koreans unless prohibited under the legislation of the host country. Where, during the probationary period, an employee is found to be unsuitable for the job, the employer has the right to terminate the contract and repatriate the worker without notice. The cost of the return airfare is to be borne by the employee.

While the job description is determined at the time of recruitment, the employer has the right to make subsequent changes as required. According to the Ministry of Labor (1992, pp. 31-32), the reassigning of employees to jobs that are different from those for which they were originally hired often causes problems. One of the reasons for this, may be the lack of adequate training for carrying out the newly assigned duties. In those cases in which workers refuse to do the job, they may be required to wait, without pay, before being assigned to another. In some cases, workers may face dismissal if they are considered to have complained "excessively".

Workers may be relocated to job sites or countries other than those to which they were originally assigned. The Korean Government recommends that employers obtain written consent from employees if transfer to another site is necessary. However, the employee is normally constrained to comply with the employer's order for a transfer. Some contracts contain clauses that explicitly require the employee to accept orders for transfers. The transfer of a Korean employee to another country must be reported to the Korean embassy/consulate in the country concerned.

The national labour standards apply to all workers, including those in construction firms. None the less, there have been incidents, particularly in the early years, when the contractors

[5] In 1990, the value of overseas contracts increased to US$6.8 billion because the contract for work on the second stage of the Man-Made River Project was awarded to a Korean contractor. It must be borne in mind that that was a "one-off" event.

[6] Many projects in South-East Asia required relatively low-grade technology.

were working in the Middle East. Many Koreans were reportedly mistreated by their employers. Some were also treated unfairly by employment agencies, which in the beginning played a major role in recruiting workers for overseas projects (Asan Foundation, 1988, pp. 493-498). During the 1970s, the Government accorded more importance to the promotion of construction enterprises in foreign markets than it did to the question of protecting Korean workers abroad.[7]

Firms are expected to apply the standards prescribed by the Labor Standards Act. In addition, the Government has developed a number of complementary measures to protect Koreans employed by local firms operating overseas. A standard employment contract, to be used by all Korean employment agencies and construction firms was introduced in the late 1970s. However, it was abolished in 1983 as part of the policy for liberalizing the export of labour.

In April 1977, minimum standards were laid down and they have been subject to periodic reviews. They provide for the presence of medical staff and the maintenance of adequate facilities, such as dining area, toilets, bathrooms, recreational facilities and sports equipment. Labor inspectors carry out regular checks to ensure that these requirements are fulfilled. For example, any establishment with a minimum of 500 workers should have at least one suitably qualified person responsible for occupational safety. Living space per worker must be at least 2.5 m².

The Workman's Compensation Insurance Scheme provides benefits for Korean workers employed by local construction firms. Under the Scheme, unless there are other provisions or requirements by host countries, all Korean construction firms based abroad are required to have occupational safety insurance for their Korean workers. The level of the benefits should be no less than that which is laid down by the Labor Standards Act and/or the Industrial Accident Compensation Insurance Act which apply to all firms whether they are based in the home country or overseas.

Since the Government began encouraging the recruitment of nationals to work on overseas projects, labour officers have been sent to monitor their conditions of work and provide guidance as required. In 1965, the first labour officers were sent to West Germany. In 1991, there were 16 stationed worldwide, in places such as Saudi Arabia, Germany, Japan and the United States. Eight of them were based in places where there was a high degree of activity by Korean constructors — i.e. Riyadh and Jeddah in Saudi Arabia; Teheran, Iran; Tripoli, Libya; Guam; Abu Dhabi in the United Arab Emirates; Jakarta, Indonesia and Singapore. In countries where there are no labour officers, staff at the embassies assume similar duties and responsibilities.

According to Labor Minister Order 284 which came into effect in April 1978, the duties of a labour officer include the following: studying conditions in the labour market of host countries; promoting the social protection of Korean workers; encouraging the employment of Korean workers, and fostering good relations with governments and employers in the host countries.[8] Monthly or weekly reports must be prepared and submitted to the Ministry of Labor.

According to the 1992 Guidelines issued by the competent authorities, labour officers are to ensure, inter alia, that the statutory minimum 44-hour working week is respected and that excessive overtime work is avoided. They are also to see to it that workers are paid a 50 per cent premium allowance for having worked more than 44 hours per week, and that working

[7] The Government adopted a number of policy measures to promote local enterprises in foreign markets. Those measures included the payment of different minimum wages to Koreans working in those enterprises (see Y. Park (1990) for details).

[8] That Order was issued by the Government after the Jubail labour dispute in 1977. Since it first came into effect in 1978, it has been revised several times. However, most of its provisions have remained unchanged.

conditions in all firms in a given area are comparable and, if necessary, upgraded to the highest prevailing standard in any of the enterprise in said area. Adequate dispute settlement machinery is to be instituted and maintained, while regular (at least once per month) labour-management consultations are to be promoted. The officers are responsible for making sure that a safety and health management plan is put in place before projects commence. The observance of the legal requirements with regard to the payment of wages and entitlements must also be assured.

In 1989, the Government liberalized the procedure for recruiting nationals to work abroad and the system governing the granting of approval for group migration was abolished. Since then, a migrant worker only needs to show a letter of invitation and go through normal immigration procedures. For group overseas migration, an employment agency only needs to report to a Provincial Labor Office which encourages it to recruit persons whose names are on the list drawn up by the Central Placement Office.

Even under these new procedures, the Government can still make sure that the terms and conditions of employment offered by a Korean construction firm comply with the standards set by the authorities. An employment agency or construction firm must provide the Government with information on the terms of employment, the job site, the period of employment proposed and other related information. If the terms of employment are found to be contrary to the prescribed standards, they must be revised and upgraded. If that is not done, the employee will not be allowed to go to the overseas construction site.

Pay and working conditions have improved because of changes in industrial relations practices coupled with the shortage of labour. Since 1987, union membership in Korea has almost doubled, and real wages in manufacturing have increased by 71.5 per cent between 1987 and 1990. Since the mid-1980s, the unemployment rate has been under 3 per cent (Park and Lee, 1993, p. 15). Monthly wages in the construction industry in Korea increased 188 per cent between 1987 and 1990 as opposed to 26.6 per cent from 1981 to 1986 (Korea Research Institute for Human Settlements, 1990).

In the past, Korean workers employed on overseas building projects did not have the possibility to exercise their right to organize and bargain collectively, or the right to strike. Workers involved in collective disputes were repatriated immediately, with the authorization of the Korean ambassador in the host countries concerned. That has since changed. A labour-management council is set up at each construction site in order to promote dialogue between the social partners. That system was introduced after the Jubail Dispute in 1977. Counsellors (one per 500 workers) are also appointed. Between 1977 and 1987, the Ministry of Labor held annual symposia on industrial relations for Korean construction firms. They were held in different construction sites and all Korean companies were required to send representatives to discuss common problems.

4. Pay and conditions of work of Korean and foreign workers

Korean construction firms began to hire workers from other developing countries as early as the 1970s. Government restrictions on the recruitment of foreigners by local contractors were lifted in order to enable employers to procure cheap foreign labour to work on construction sites abroad.

The share of foreigners employed in Korean construction firms rose from 7.1 per cent in 1979 to 49.7 per cent in 1987 and 79.7 per cent in the first quarter of 1992 (table 1). A number of programmes sponsored by companies and the Overseas Construction Association of Korea have been developed to reduce stress at the workplace and to provide support services for workers and their families living in an alien context. Entertainment opportunities (i.e. movies, reading material, musical and other broadcasting programmes) have been enhanced. Awards

have been granted to "exemplary" workers and their children. Between 1980 and 1990, recipients of public awards numbered 3,752. Moreover, since the early 1980s, the Government has been providing migrant workers and their families with the services of consultants who are to help them to adjust to the environment of the host countries in which they are based. Up to 1990, advisers had handled about 1.9 million cases.

Table 1. Foreign labour in Korean construction firms, 1979-92

	Total no. of workers (A)	Foreign workers (B)			Percentage of foreign workers in total workforce
		Total	Local	Others	
1979	113 762	8 066	–	–	7.1
1980	147 183	16 046	–	–	10.9
1981	203 178	40 090	–	–	19.7
1982	226 633	55 463	–	–	24.5
1983	222 316	60 229	–	–	27.1
1984	180 398	49 398	–	–	27.4
1985	138 231	40 303	–	–	29.2
1986	96 169	34 717	10 075	23 642	36.1
1987	88 151	43 811	11 654	32 157	49.7
1988	73 019	41 840	14 868	26 972	57.3
1989	62 049	43 026	16 483	26 543	69.3
1990	43 910	31 814	12 208	19 606	72.5
1991	42 644	32 520	15 238	17 282	76.2
1992 (Ist quarter)	41 884	33 366	15 677	17 689	79.7

Note: Data for 1979-85 are based on quarterly averages and those for the period 1986-91 on annual figures.
Source: Overseas Construction Association of Korea (unpublished data).

As table 2 shows, most of the foreign workers are non-professional staff recruited from Asian countries. Thailand, Malaysia, Bangladesh and India are the four main countries of origin. Other sources of low-cost labour are Indonesia, Iran, Sri Lanka, Nepal and the Philippines. Low wages constitute only one factor that explains the high proportion of foreigners on construction projects, another is the "local content" requirement which is imposed by some countries. For example, the Government of Iran obliges all foreign firms to ensure that nationals make up at least 80 per cent of the workforce on projects in that country.

When it comes to occupations, there are marked differences between Koreans and workers of other nationalities (table 2). Managers and engineers constitute more than one third of the Korean group, while foreign workers generally hold occupations requiring little or no skills. According to the Ministry of Labor (1992, p. 51), in 1990 the cost of labour from south-east Asian countries was one-third that of Korean labour, while the level of productivity was between 50 and 70 per cent that of Korean labour.

A number of Korean firms have begun to subcontract substantial portions of work to local contractors in host countries, who have acquired a capability to manage projects that do not require the use of advanced technologies.

Table 2. Occupation and nationality of workers employed by Korean construction firms (first quarter of 1992) (in percentages)

	Managerial staff	Engineer	Medical staff	Other workers	Total
Republic of Korea	17.43	20.98	0.49	61.09	100
Philippines	1.68	10.18	0	88.14	100
Malaysia	0.84	0	0	99.15	100
Indonesia	1.62	0.32	0	98.06	100
Thailand	0.36	0.05	0.01	99.58	100
Nepal	2.31	5.09	0.28	92.31	100
India	0.30	1.07	0	98.63	100
Sri Lanka	2.69	0.61	0	96.70	100
Bangladesh	0.71	0.43	0.05	98.81	100
Iran	1.16	1.77	0.14	96.93	100

Note: Only foreign countries for which the number of workers exceed 500 are included.
Source: Overseas Construction Association of Korea (unpublished data).

4.1. Pay and hours of work

Under the Foreign Exchange Act, all employers, including those in foreign-based construction firms, must remit more than 80 per cent of a Korean employee's monthly pay to the main branch of the Korea Exchange Bank. The sum remitted is deposited in the employee's account.

Until the mid-1980s, there was a statutory minimum wage for Korean nationals employed in both Korean and foreign construction companies. The average monthly wages of all Korean nationals employed in Korean construction firms in the first quarter of 1992 was US$578 (table 3). The wages of Korean workers registered moderate increases since the mid-1980s. The sharp wage hikes since 1988 attest to a serious labour shortage which is the result of the boom in domestic construction and the spread of trade union activity.

Table 3. Monthly wages of Korean nationals employed in Korean construction firms operating abroad (1985-92) (in US$)

	Korean workers	Foreign workers
1985	671.22	312.66
1986	671.82	275.88
1987	736.52	449.54
1988	818.85	450.97
1989	871.35	335.03
1990	1 096.01	282.21
1992 (1st quarter)	1 578.40	305.32

Note: Data for Koreans refer only to non-office workers while those for foreigners take into account all occupational categories.
Source: Overseas Construction Association of Korea (unpublished data).

Up until the mid-1980s, the average wage of foreign workers employed in Korean construction firms was 50 per cent less than that of Korean workers (table 3). By 1987, it had risen to 61 per cent. There has since been a decline. A growing number of low-paid jobs in

Korean construction firms are being filled by foreigners. There are also significant disparities in wages paid to workers of different nationalities and different occupational categories. Workers from the Philippines, Malaysia and Thailand are usually paid better than those of other nationalities because they are generally highly skilled (see tables 4 and 5).

Table 4. Monthly wages in Korean construction firms by nationality and occupation (1992, 1st quarter) (in US$)

		Average	Maximum	Minimum
Korea	Total	2 012.2 (100%)	3 561.7 (100%)	793.7 (100%)
	Managerial staff	2 688.6	–	–
	Engineers	2 710.3	–	–
	Medical staff	2 228.3	–	–
	Others	1 578.4	–	–
Foreign	Total	305.3 (15.2)	–	–
	Philippines	502.0 (24.9)	1 580.1 (44.4)	151.0 (19.0)
	Malaysia	536.3 (26.7)	880.3 (24.7)	28.1 (3.5)
	Indonesia	81.8 (4.1)	357.3 (10.0)	30.0 (3.8)
	Thailand	440.2 (21.9)	1 025.3 (28.8)	137.0 (17.3)
	Nepal	71.0 (3.5)	110.0 (3.1)	55.0 (6.9)
	India	293.4 (14.6)	1 000.0 (28.1)	162.3 (20.5)
	Sri Lanka	37.6 (1.9)	899.7 (25.3)	21.9 (2.8)
	Bangladesh	202.0 (10.0)	578.0 (16.2)	17.0 (2.1)
	Iran	347.1 (17.3)	2 260.0 (63.5)	97.3 (12.3)

Notes: (1) Numbers in parentheses show the percentage in relation to wages paid to Koreans. (2) Only foreign countries from which more than 500 workers originate are included.
Source: Overseas Construction Association of Korea (unpublished data).

According to the regulations, standard working hours and overtime payments are prescribed by the labour laws of the host country. The standard working week for a regular foreign employee is 48 hours (eight hours per day), while for a Korean employee, the basic working week is 44 hours in accordance with the amended Labor Standards Act of 1990. It is likely that, in the long run, the reduction of the standard working hours for Koreans will affect the working hours of foreigners.

Working hours may be extended upon request by the employer. Overtime payment is made in accordance with local labour laws and in the case of Korean workers, the provisions of the Labor Standard Act apply.

Table 5. Wages of workers in Korean construction firms by selected occupations and by nationality (in US$)

	Korea	Philippines	Malaysia	Thailand	Nepal	India	Sri Lanka	Bangladesh	Iran
Frame carpenter	1 582	378	168	355	80	254	35	285	176
	(100.0)	(23.9)	(10.6)	(22.5)	(5.1)	(16.1)	(2.3)	(18.0)	(11.2)
Steel reinforcing worker	1 698	357	–	376	81	262	32	261	171
	(100.0)	(21.0)		(22.1)	(4.8)	(15.5)	(1.9)	(15.4)	(10.0)
Cement worker	1 535	380	–	281	80	181	27	189	415
	(100.0)	(24.7)		(18.3)	(5.2)	(11.8)	(1.8)	(12.3)	(27.0)
Plasterer	1 494	415	–	368	80	248	–	269	171
	(100.0)	(27.8)		(24.7)	(5.4)	(16.6)		(18.0)	(11.5)
Ordinary welder	1 279	516	715	577	70	321	–	254	674
	(100.0)	(40.3)	(55.9)	(45.1)	(5.5)	(25.1)		(19.9)	(52.7)
Electrician	1 511	458	499	393	70	282	–	281	241
	(100.0)	(30.4)	(33.1)	(26.0)	(4.6)	(18.7)		(18.7)	(16.0)

Note: Numbers in parentheses show the percentage in relation to wages paid to Koreans.
Source: Overseas Construction Association of Korea (unpublished data).

Many Korean employees have a tacit agreement with their employers that a minimum monthly wage will be paid to them regardless of the working hours. If their actual monthly wages, including overtime pay, are below the minimum, they are usually given a special "extra overtime bonus" for which they are not expected to work.

The hours of work of Korean and foreign workers generally exceed those prescribed by laws. They are, in practice, ten hours per day and six days per week. Moreover, paid working hours in Korean overseas construction firms are far above the statutory maximum because allowances, incentives bonuses and overtime payments are all recorded as "overtime payments". The bonus system also helps to explain the long hours of paid work, in the case of Korean nationals.

These extra payments which are given to compensate for shortfalls in the agreed monthly wage sometimes cause discontent among Korean workers. Those who actually worked overtime may get the same pay as workers who receive such payments. Wages may also differ depending on construction sites, reflecting the profitability of different projects. This also often causes problems, particularly when the transfer of a worker results in the receipt of a lower wage in line with those paid at the new site (Asan Foundation, 1988, pp. 237-247; Ministry of Labor, 1992, pp. 29-31).

4.2. Bonus payments

For each year of service completed, employees receive an annual bonus equivalent to one month's salary. Those whose contract of employment does not provide for the receipt of such a bonus, but who have worked for more than one year, also get a bonus calculated on the same basis as those given to their colleagues. In the interest of ensuring equality of treatment, foreign employees are also paid a bonus.

4.3. Paid leave and holidays

Paid leave entitlements are prescribed by the labour laws of the host countries and the Labor Standards Act of the Republic of Korea. They range from one day for those who work a six-day week to eight days for those who have a one-year contract. Payment in lieu of leave is also provided for. An employee who works six days per week is allowed one day of paid leave.

Korean workers whose period of employment exceeds one year are entitled to paid annual leave. Those on overseas sites are also entitled to paid air travel or a sum equivalent to the cost of the airfare, should they not travel. Recently, some companies have adopted a policy of giving

managerial staff paid home leave every six months. Unless otherwise required by the local legislation, foreign workers are given the same paid annual leave as that of Korean workers. The leave entitlements increase with the length of service.

Paid public holidays of the host country are granted to construction workers who may also get additional paid public holidays. Unless otherwise stipulated by the local labour laws, overtime pay at the rate of one and a half times the basic hourly wage is given to those who work on public holidays or at night. An employee is entitled to paid sick leave (minimum of one working day per calendar month worked) when certified by a competent medical doctor.

4.4. Termination of contract and severance payments

A contract may be terminated by an employee by giving 30 days' written notice to the employer. The non-local employee's return airfare is paid by the employer when it is the employer who terminates the contract. The labour laws of both the home and host countries usually require that 30 days' prior notice be given. Where no prior notice has been given in writing, the payment of a sum corresponding to the amount of salary for "a reasonable number of days" may be substituted for it.

Employees are entitled to severance payments. In the case of a temporary suspension of business by the employer or in the event of an injury sustained while on duty, 60 per cent of the monthly wage is paid to Korean employees, in accordance with the Labor Standards Act (Republic of Korea).

Should an employee not respect the terms of the employment contract, the employer may, without prior notice, terminate it and repatriate the employee. In such cases, the employee would bear the cost of the airfare. Those who have been sent back to the home country because of misconduct or permanent mental and physical disability are not recruited again to work on overseas construction sites.

Between 1977 and 1988, 607 Korean workers were repatriated because of misconduct. According to the Asan Foundation, there were, particularly during the late 1970s and early 1980s, some cases of workers who were sent back without just cause. There are no data on the number of foreign workers who were sent back to their home countries because of alleged misconduct.

4.5. Housing and other amenities

Employers usually provide non-local employees with food and accommodation, unless there are other special arrangements. They also provide emergency medical services and recreational facilities free of charge. The minimum standards for these services are laid down by the Government of the Republic of Korea. However, up until the early 1980s, reports submitted by the labour officers and members of fact-finding missions showed that the standards, particularly those concerning the provision of medical care and food, were not being observed in many workplaces (Asan Foundation, 1988, pp. 247-250, pp. 276-278). Given the drastic reduction in the number of Koreans working on overseas construction sites, few complaints about welfare facilities have been reported in recent years.

When workers of a given nationality exceed a certain number, they are provided with separate dining facilities and accommodation. However, interviews with labour officers and Korean employers reveal that less priority is given to the quality of welfare facilities for foreign workers from third countries as opposed to that of services and facilities provided for Korean workers.

Workers are responsible for paying income taxes, social insurance contributions and any other taxes imposed by governments of the host and home countries. Employers make the necessary deductions from the wages. However, in certain cases, they have also been known to assume

those costs, as the following example illustrates. Between 1970 and 1983, employers of Korean construction firms in Saudi Arabia paid to the local authorities social insurance contributions on behalf of their Korean employees. [9]

4.6. Occupational safety and health

All Korean employees must be covered by Workman's Compensation Insurance. The benefits for those employed in construction firms operating abroad are the same as those to which locally employed persons are entitled. Korean nationals working abroad are also covered for non-work-related accidents. However, the benefits are less than those given for injuries sustained at the workplace.

Korean employers must provide medical treatment and insurance coverage for non-nationals working on the construction project, in accordance with the labour laws of the host country. Compensation to victims of industrial accidents of a third country is paid as required by the local labour laws and regulations. Workers are also generally covered by insurance schemes in their country of origin. Special arrangements are often made for the payment of compensation to foreign employees brought from a third country. Those arrangements usually involve the government of the third country. None the less, it must be noted that there are some cases in which the employment contracts of foreign workers specify that benefits may be reduced if the injury or disease is found to have resulted from negligence or a deliberate act by the worker(s) concerned.

Deaths, illnesses and injuries, including non-occupational accidents among Korean workers employed in Korean construction firms increased sharply between 1977 and 1985. That was due to inadequate investment in occupational safety and long working hours (Asan Foundation, pp. 251-255 and pp. 278-281).

In 1990, total compensation paid to workers amounted to 7.5 billion won. The main causes of accidents included falls (11.6 per cent), the mishandling of tools (10.5 per cent) and the use of power equipment (10.9 per cent). One of the major complaints filed with the Ministry of Labor concerns the inadequacy of insurance schemes for paying compensation to victims of industrial accidents. Workers argue that, in some cases, occupational accidents are treated as though they were not work-related.

5. Training

Koreans recruited to work on construction sites abroad were generally skilled and had solid work experience. A 1985 survey by the Ministry of Labor showed that 67 per cent had more than five years of experience in their occupation and only 4 per cent had less than one year. There is no separate training scheme for upgrading the skills of Korean construction workers since training programmes for such workers are an integral part of the national vocational training system. [10] Under this system there are state-run, in-plant and authorized private training centres. [11] Under the amended Act (1976), a private firm with a certain number of

[9] The refund of social insurance contributions paid to the Government of Saudi Arabia by Korean employers (from 1976 to 1983) and employees (from 1984 to 1986) is a matter that is still to be settled.

[10] In 1967, the Government passed the Vocational Training Act (VTA) under which it was responsible mainly for training workers to meet the manpower needs of industry. In 1975, in-plant training was made compulsory in establishments with more than 499 employees. In 1982, the programme was expanded to include enterprises with 299 or more employees. In 1982, the Korean Vocational Training and Management Agency was set up to coordinate more effectively the activities of all public vocational training institutions.

[11] Expenses for training are fully covered by the Government. There is a minimum fee for accommodation and food expenses, which may be waived depending on the family income of the trainee. More than 90 per cent of the graduates of public training institutes usually find jobs.

employees is subject to a levy that was used to finance public vocational training programmes. Between 1967 and 1990, when the public vocational training system was instituted, the number of trainees in fields pertaining to the construction industry reached 348,000.

In the second half of the 1980s, the number of trainees decreased substantially even though there was an acute shortage of labour in the domestic construction industry. That decline may be explained in part by the ineffectiveness of the levy system for inducing firms to invest in training. As of 1991, only seven per cent of all construction firms provided in-plant vocational training.

In the Korean construction industry, there are contractors who supply most of the skilled, semi-skilled and unskilled workers, while the construction firms usually handle the recruitment of managerial staff and engineers. Skilled workers are paid on a monthly basis while the semi-skilled and unskilled workers are paid daily (Yoon and Ahn, 1992, pp. 10-28).

Unskilled and semi-skilled workers generally learn by observing their skilled colleagues carry out certain tasks and the mastery of different skills usually takes between one and three years. Many Korean workers who went overseas were already skilled and had the experience required to work on construction projects. According to a 1985 survey by the Ministry of Labor, only 4 per cent of the construction workers who were questioned said that they had acquired skills as a result of having worked on projects in other countries.

When Korean firms began to employ foreigners on their construction sites in the early 1980s, training was provided to some of those workers. Certain companies offered extensive training in order to maintain the quality of their workforce. Training in certain highly specialized fields is still provided to some foreign workers.

However, on the whole, firms are now less inclined to invest in training except in the case of Chinese workers for whom the labour costs are still quite low, even when those related to training are included. Employers now only hire workers who meet the skill requirements. Also, since some firms have been using foreign labour for more than ten years, they have a list of suitable workers from which to make their selection. Some companies even retain the same staff, moving them from one job site to another, as required.

6. Industrial relations

Korean workers employed by a Korean construction firm do not have the right to organize or join trade unions unless this right is guaranteed by the labour laws of the host country. Since the legislation of some of the countries in which Korean construction firms operate does not provide for the exercise of such rights, the enterprises experience no problems in this regard. A worker who participates in collective industrial action is repatriated immediately in accordance with the regulations of the Republic of Korea. Of the 607 workers that were sent back to the home country between 1977 and 1988, because of alleged misconduct, 333 had been involved in such action.

Labour-management councils are set up with the aim of promoting dialogue between the social partners, and counselling services must be provided at the workplace. It has been reported to the Ministry of Labor that some labour-management councils do not operate effectively (Asan Foundation, 1988, p. 255). The changes that have been introduced in the climate of industrial relations since 1987, have resulted in the establishment of councils at *all* overseas construction sites. The councils have assumed the role and functions of trade unions which are still not allowed in Korean construction firms. Moreover, it is of interest to note that most Koreans working on construction sites abroad have "quasi-managerial" roles since they hold supervisory and professional positions.

Between 1977 and 1990, there were 59 labour disputes on overseas construction sites reported by labour officers.[12] Wage-related issues constituted the main source of contention. Of the 59 disputes, 11 were over delays in the payment of wages, ten over wage increases, eight over the payment of wages that were lower than those expected and three concerned wage disparities. Conflicts between Koreans and foreign workers often also led to industrial disputes (Asan Foundation, 1988, p. 282).

Non-Korean workers from third countries also do not have the right to join trade unions and involvement in collective labour disputes could result in their repatriation. As regards local employees, their rights are prescribed by the labour laws of the host country.

There are no dispute settlement arrangements (e.g. labour-management councils) and staff counselling services to deal with social and labour problems affecting foreign workers. Persons of the same nationality as the foreign workers are appointed to settle disputes.

7. Concluding remarks

Korean contractors captured more than 10 per cent of the total value of international contracts awarded in the boom years of the early 1980s. The outlook for the construction industry does not seem too bleak despite the poor performance in recent years. A growing number of contracts for work in the Asian region are being won by local contractors as this market rapidly replaces that of the Middle East in importance. In the past, success in international contracting was mainly due to the availability of a large supply of skilled, low-cost labour. Over the years, however, the workforce on overseas contracting projects became increasingly foreign, with the share of non-Koreans in construction projects soaring from 7.1 per cent of the workforce in 1979 to 79.7 per cent in the first quarter of 1992.

The terms of employment for Korean construction workers are defined by the provisions of the legislation and national regulations, as long as they are consonant with those of the host country.

Minimum labour standards have been established by the Government to protect Korean workers employed in locally owned construction firms. However, up until the mid-1970s, those standards were neither properly applied nor enforced. That situation has changed. Labour standards are now enforced, recruitment agencies are required to furnish ample information about the terms and conditions of employment of migrant workers, and labour officers are sent to deal with problems arising on overseas construction sites.

In principle, freedom of association and the right to organize are no longer restricted. None the less, there is still dissatisfaction over the role and functions of the labour-management councils which are supposed to deal with industrial relations.

As regards the provision of medical care and amenities, it has been found that some employers have not adequately met the legally prescribed requirements.

The terms and conditions of employment of non-Korean workers are governed by the labour legislation of the host country. Wage disparities among workers of different nationalities and between them as a group vis-à-vis Korean workers are a reflection of the differences in skill levels and occupational categories, rather than the result of discriminatory policies.

As regards training, the evidence is that Korean construction firms have reduced their expenditure, preferring instead to subcontract certain labour-intensive tasks, recruit from a pool of workers who have already been employed by the firm, and focus on enhancing the expertise of a relatively small number of skilled staff. Perhaps the thorniest problem that Korean

[12] That number concerned only disputes reported to the Ministry of Labor by labour officers. The actual number of industrial disputes might have exceeded that figure.

employers have had to face concerns the conflicts among workers of different nationalities and particularly between Koreans and non-Korean personnel.

All indications are that overseas projects involving construction firms from the Republic of Korea will continue to have a sizeable workforce consisting of increasing numbers of foreign workers. If the emergence and in some cases, the aggravation of social and labour problems are to be avoided, then it is imperative that international labour standards and national labour legislation be respected by the home and host country governments as well as the employers and workers concerned.

Bibliography

Amjak, R.: *To the Gulf and back: Studies on the economic impact of Asian labour migration* (New Delhi, UN and ILO, 1989).

Asan Foundation: *Overseas employment of Korea*, 1989 (in Korean).

Choi, J.: "International contracting market and Korean overseas construction firms", *Overseas Construction Review*, Sep. 1991 (in Korean).

Kim, Soo-yong: "Economic effects of overseas migration of Korean workers", *Economic Papers* (Seogang University, 1983) (in Korean).

Kim, Soo-kon: "Manpower development and economic policy", in *Labour economy: 40 years of history* (Seoul, Korea Employers' Federation, 1989).

---; Choi, D.: *Analysis of the economic effects of overseas migration* (Seoul, Korea Development Institute, 1985) (in Korean).

Korea Research Institute for Human Settlements: *Uruguay Round and construction industry* (Seoul, KRIHS, 1990) (in Korean).

---: *Study on the unit labour cost of government construction projects*, (Seoul, KRIHS, 1990b) (in Korean).

Ministry of Construction, Republic of Korea: *Yearbook of Construction Industry* (Seoul, Ministry of Construction, 1988 and 1990).

Ministry of Labor, Republic of Korea: "Korean workers in selected foreign countries" (1990, mimeographed) (in Korean).

---: "Urgent policy issues in overseas labour management" (1992, mimeographed) (in Korean).

Ohn, Chang-sup: "International construction market and prospects for Korea's contract awards", *Overseas Construction Review*, Jan. 1990 (in Korean).

Overseas Construction Association of Korea: *Private white paper on overseas construction* (Seoul, OCAK, 1983 and 1989) (in Korean).

Park, Y.: *International labour migration and the Uruguay Round* (Seoul, Korea Labor Institute, 1990) (in Korean).

---: "International labour migration and labour market developments: Past patterns and emerging issues in Korea", Paper presented at the Expert Group Meeting on "Cross-national labour migration in Asia: Implications for local and regional development" held at Nagoya, Japan from 5-8 November 1990.

---: *Korea's overseas construction industry: Development, business strategy and government policy*, Asian Regional Programme on International Labour Migration: UNDP-ILO Project (RAS/88/029) (Bangkok, ILO, 1992).

---: "Turning point in international migration and economic development in Korea", Paper presented in the international workshop on "Turning points in international labour migration" held at Seoul, Korea from 5-6 April 1993.

---; Lee, B.: *Economic development, globalization and practices in industrial relations and human resources management in Korea* (1993, mimeographed).

Piore, M.: *Birds of passage: Migrant labour and industrial societies* (Cambridge, Cambridge University Press, 1979).

Strassman, W.; Wells, J.: *The global construction industry* (London, Unwin Hyman, 1988).

Yoon, Y.; Ahn, J.: *Study on the labour shortage in the construction industry* (Seoul, Korea Research Institute for Human Settlements, 1992) (in Korean).

A study of the United Kingdom multinational enterprises in the construction industry

Roger Flanagan,
Department of Construction
Management and Engineering,
University of Reading (United Kingdom)

Introduction

The study has been divided into four parts. The first examines the United Kingdom multinational construction companies in relation to the global construction market. The second focuses on the way in which those multinational companies fit into their domestic market. In the third part the top ten United Kingdom multinational construction companies were selected for analysis, on the basis that they all had an annual turnover exceeding £1 billion, and, more importantly, they all operated in a wide range of overseas markets. The annual reports of the various companies were analysed. Finally, in part 4, the results of a questionnaire and personal interviews are shown in the context of various issues relating to employment, training policies, safety and health and the use of contract labour.

In detail, the following issues are dealt with in this report:

Part 1
- A review of the changing characteristics of engineering and construction services in the global market over the past two decades as they have affected United Kingdom multinational construction enterprises.
- What are the future trends for United Kingdom multinational construction companies? Will overseas markets become more important?

Part 2
- A brief review of the United Kingdom construction industry and its workings, in order to put the United Kingdom multinational construction enterprises into perspective.

Part 3
- Which are the United Kingdom multinational construction enterprises? To what extent do these companies have a global perspective to their business?

Part 4
- What is the business strategy of United Kingdom multinational construction enterprises with respect to overseas work? What are their competitive advantages?
- How do United Kingdom multinational construction enterprises operate overseas? What are the managerial structures and the employment and training policies used by United Kingdom multinational construction companies when operating overseas? What is the policy towards technology transfer? What form does technology transfer take?
- What are the standards of safety and health? What are the career prospects for local employees?
- What is the relationship with local enterprises in the host countries?

Definitions

Construction

The general term "construction" includes repair, maintenance, alteration, refurbishment, demolition and the building of domestic, commercial, institutional and industrial premises. It also includes civil engineering and industrial engineering embracing structural repair, alteration, maintenance, and construction of docks, roads, harbours, bridges, river and sea defence works, inland waterways, airports, tunnels, bridges, viaducts, dams, drainage and sewerage works, oil and gas pipelines and refineries. Construction does not include the manufacture or prefabrication of components or materials.

Construction Industry

The term "construction industry" includes all the firms engaged in construction including architectural and engineering design consultants.

List of abbreviations

GDP	Gross domestic product
Triad	A block of three trading areas
BOT	Build-operate-transfer
BOOT	Build-own-operate-transfer
BOO	Build-own-operate
BOLT	Build-operate-lease-transfer
NIC	Newly industrialized country

1. The global engineering and construction market

The engineering and construction industry is one of the most important industries in the world. The world stock of construction assets can be estimated at some US$50 trillion. About 66 million are employed in the industry (see table 1.1). These figures have been calculated using the statistics published by the UN. They must be treated with caution as there is likely to be underreporting in the data collected by some countries. Industry experts have forecast that the number of people engaged in the construction industry worldwide may be underreported by up to 20 per cent.

Table 1.1 Estimates of the engineering and construction industry

World stock of construction assets (approximately 65% of the total expenditure is in Europe, North America, and Asia Pacific)	US$50 trillion
Number of people who work in the construction industry (UN statistics and best guess) (about 2.5% of the world's working population)	66 million

Source: Modified from R. Bon, *The World Building Market*, Proceedings of CIB W65, Building Economics and Construction Management.

The world market in 1992 was dominated by the "triad market" of North America (395 billion ECU expenditure = US$436 billion), Europe including Scandinavia and Finland (658 billion ECU) and Japan (520 billion ECU). These three regions account for about 65 per cent of the total annual construction expenditure in the world. The North American market has recently been overtaken by the European market which has expanded in size over the past five years. The Japanese domestic market has also grown over the past decade. The concentration of tremendous resources in this privileged area leads the world's contractors and consultants to ever fiercer competition to get into these markets. They are also the regions where most of the world's multinational construction enterprises are based.

Europe differs greatly from its two triad associates because it competes on two levels. Externally with the nations of the world and internally amongst the various European countries. North America and Japan have a homogeneous culture and language and there is a unified market in which companies compete.

European nations have followed different routes with their ideas of social policy, money success, housing and cultural values. The European mosaic is marked by the disparity between the GDP of Greece and Portugal at around US$5,000 per capita compared with that of Switzerland at over US$29,000 per capita. The diversity of construction output for the European countries is shown in table 1.2.

Table 1.2. Construction industry gross output in Europe
(billion ECU at 1991 constant prices)

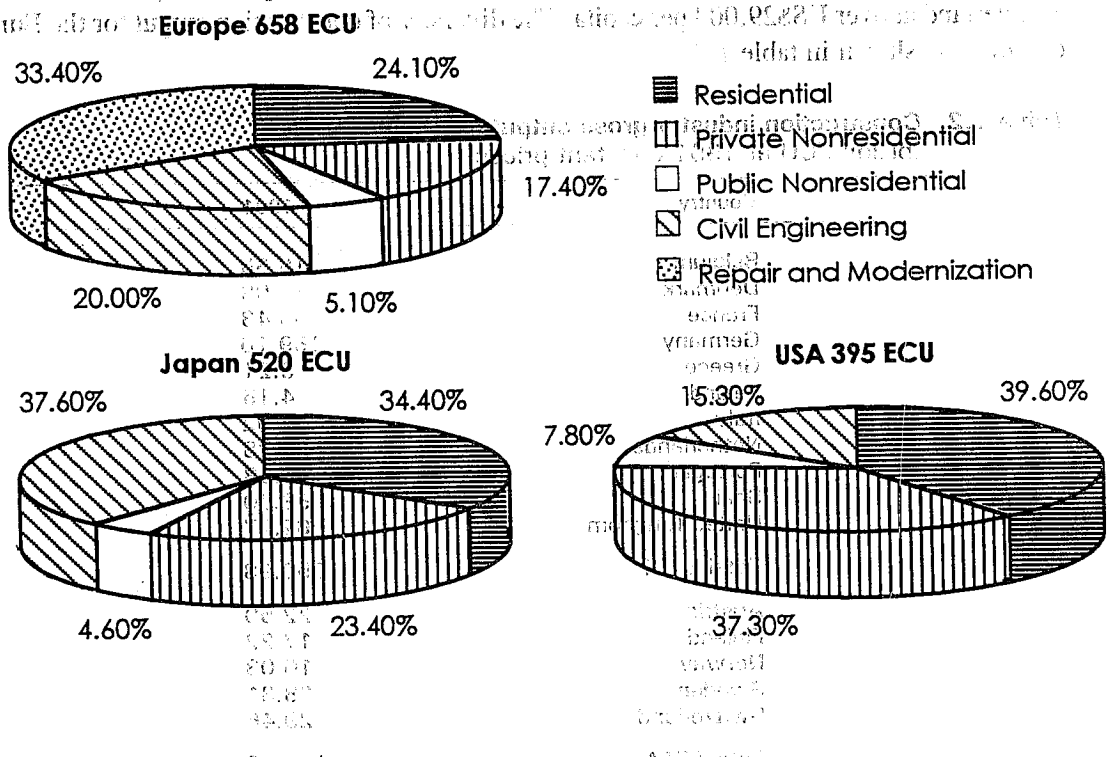
Country	1991
Belgium	19.35
Denmark	11.99
France	95.43
Germany	159.10
Greece	3.21
Ireland	4.15
Italy	104.92
Netherlands	25.28
Portugal	6.58
Spain	58.70
United Kingdom	62.27
Total EC11	550.98
Austria	22.50
Finland	17.22
Norway	10.03
Sweden	28.31
Switzerland	29.46
Total EFTA	107.52

Source: Euroconstruct.

The structure of the three triad markets is fundamentally different. This has influenced the structure and type of construction organizations that have emerged. The Japanese market is vast with 7.9 per cent of GDP being spent on construction (this figure has been taken from OECD). There are a variety of ways the percentage is expressed — the official Japanese figure is 18.4 per cent, but this includes off-site manufacturing which is not included in many developed nation's figures. There is a large expenditure on infrastructure projects such as roads, drainage schemes and railways. Europe spends, on average, 5.4 per cent of GDP on construction while the United States spends 4.9 per cent of GDP on construction. The structure of the three markets is shown in figure 1.1. For example, the United States residential sector is its largest, whereas in Japan it is the civil engineering sector.

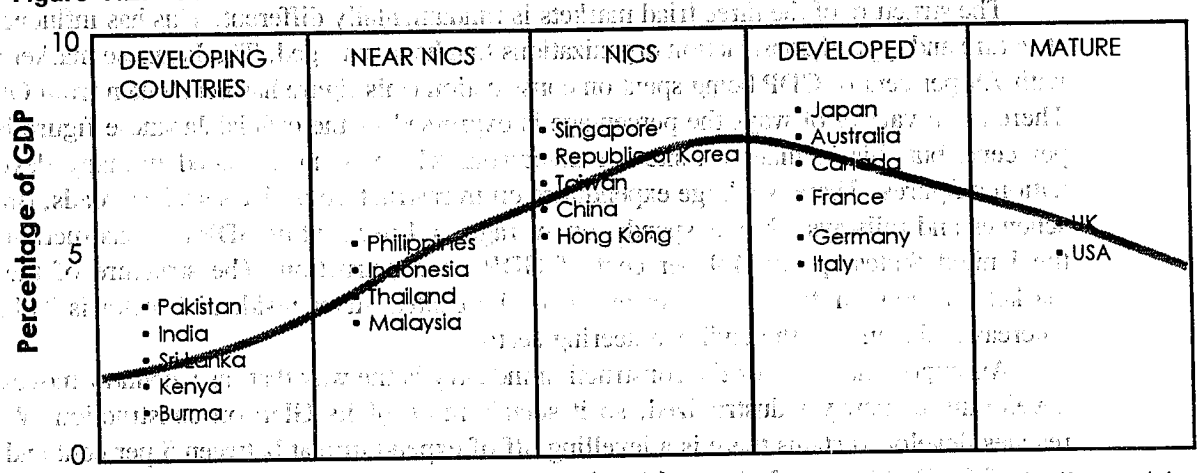
An important trend for the construction industry is the way that, as a country moves from developing to newly industrialized, so it spends more of its GDP on construction. When it reaches developed status there is a levelling off of expenditure at between 5 per cent and 6 per cent of GDP. Figure 1.2 shows this with a sample of countries from around the world. The developing countries lack the cash to invest in their capital projects. When a country has achieved near newly and newly industrialized status, it spends on capital projects to keep pace with rapid industrial expansion. When it reaches developed status a country tends to spend between 5 per cent and 8 per cent of its GDP on construction works. The mature economies, such as the United Kingdom and the United States where the infrastructure and building work has been well developed, spend less on their construction work as a percentage of GDP.

Figure 1.1. Construction markets, 1991
(billion ECU)



Sources: Construction Review (United States), Ministry of Construction (Japan), Euroconstruct.

Figure 1.2. Construction/GDP

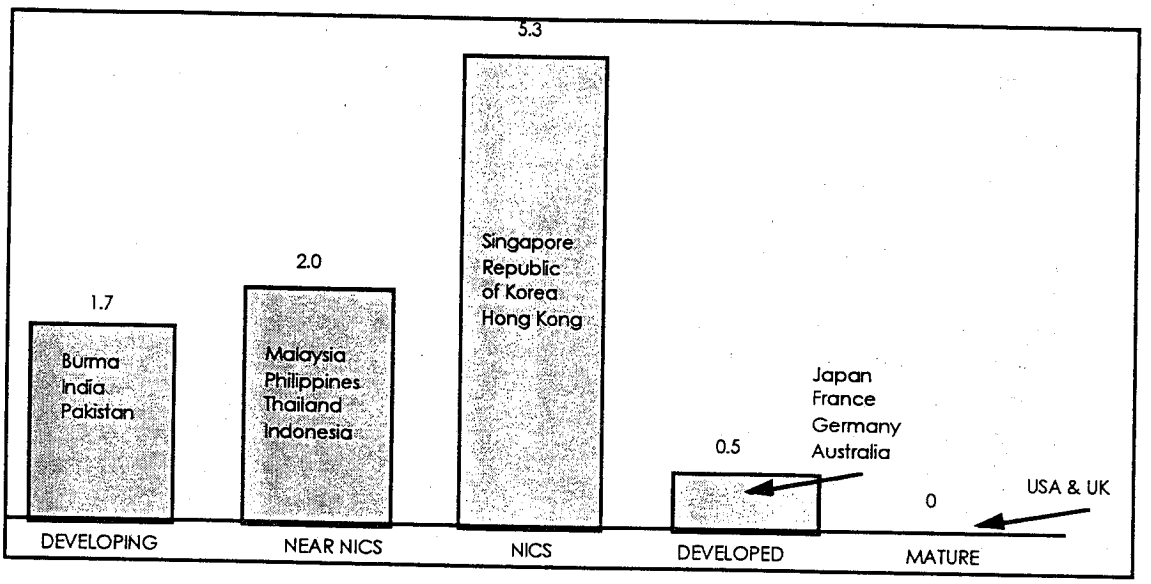


(Illustrative only)

Source: The author.

Figure 1.3 illustrates this point. The expenditure on construction between 1950 and 1985 has been measured on the basis of the percentage change in GDP spent on construction. The mature economies of the United Kingdom and United States showed no growth during that period.

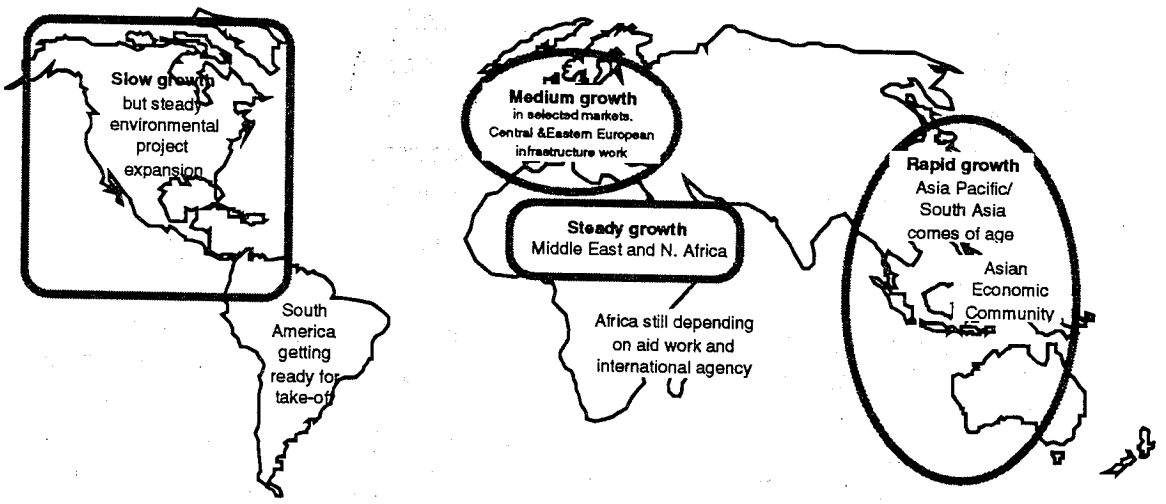
Figure 1.3. Incremental construction activity (% GDP 1985 minus 1950)



Source: The author.

All the world's major construction organizations have to forecast where the new expanding markets are going to emerge. The term "fattening the triad" is used to describe where the new markets are likely to be. Figure 1.4 illustrates how the three markets are likely to change up to the year 2000.

Figure 1.4. Fattening the triad (70 per cent of all work will still be in the triad)



Source: The author.

The North American market will expand in two ways. Firstly, the increase in expenditure on environmentally related projects and secondly, the substantial increase in expenditure in Mexico with many new industrial plants being built to take advantage of the low-wage economy. It has been forecast that by the year 2000 up to 30 per cent of the total annual construction expenditure will be in the clean-up and environment-related projects.

The European market will expand in Central and Eastern Europe with many major infrastructure projects being needed. Political stability will be a critical factor. It will be a long process to improve the infrastructure and standard of housing and living conditions for these countries. There is a vast amount of construction work to be undertaken and no hard currency to pay for it. Many countries, Poland for example, have a foreign debt comparable to the most indebted Latin American countries. Similarly, Hungary has exhausted its borrowing options.

The Japanese market will expand with the economic growth of Asia Pacific. The term Asia Pacific defines a loose relationship of sovereign States that is bounded by the Republic of Korea and Japan to the north, the People's Republic of China to the east, Indonesia to the south and the vastness of the Pacific Ocean in the south. The region will see expansion in infrastructure, commercial and industrial projects. Two key issues emerge. Firstly, the massive growth in population in the Asia Pacific region. Secondly, the growth in the proportion of young people in the Asian region. These people will have a basic expectation for shelter, health care, power supply, clean water, waste water treatment and adequate transportation systems.

China plays an important part in this growth with its move from a centrally planned economy to a socialist market economy. However, China will not open its doors to multinational construction firms unless there is a need for the finance, specialist management skills, or special technology.

The Middle East and North Africa will have some small growth, mainly based upon oil- and gas-related work. Latin America will show a small growth rate, while Africa will continue to struggle and be dependent upon international aid-related work.

1.1. Construction multinationals operating in the global market

The main countries which have major multinational construction enterprises are:

- United States
- Japan
- France
- Germany
- Italy
- United Kingdom
- Republic of Korea
- Holland
- Turkey
- Canada
- Finland
- Sweden
- Denmark
- Australia
- Spain

There is no definitive list that ranks the countries in any given order. This list gives an indication of the ranking based upon the volume of new orders won in 1992. Each country collects information on the proportion of overseas turnover of its construction industry.

The United States enterprises have the largest share of the global market because of the influence of the United States giants such as Bechtel, Fluor Corporation and Foster Wheeler. These companies have developed from being merely engineering contractors to having an expertise in design, procurement and construction in the oil, gas, power and petrochemical sectors. They have also diversified into general construction works. From this base, they moved into major industrial engineering and defence-related projects. Their competitive advantage has been in design and technical skills coupled with the ability to manage effectively and to arrange competitive financing arrangements. A much used description is that the United States giants moved from providing the hardware (construction) to the software (brain power).

Japanese contractors have grown because of the country's need to export goods and services to pay for the raw materials imports. The Japanese Government has been very supportive of its major construction firms when they have operated overseas. Much Japanese

overseas activity is based upon Japanese government aid-related work, Japanese clients who have invested in buildings overseas and who have used a Japanese construction firm, and investment in property by Japanese construction companies. Despite the size of the Japanese contractors only a small percentage of their total turnover is abroad. For example, Shimizu Corporation, the largest, had a 1991 turnover of US$19.2 billion. Only 4 per cent of the workload was overseas. Kumagai is the only exception with 35 per cent of its work overseas, much of it in property investment and development.

Companies from the Republic of Korea came to the fore with the growth of oil-related work in the late 1960s and the 1970s. They succeeded in winning many projects based upon low prices and the availability of skilled labour that was prepared to travel and work in harsh conditions. The "bubble burst" for the Korean multinationals in the early 1980s, caused by a low pricing strategy, resulted in heavy financial losses on many overseas projects. It is only in the past five years that Korean companies have been emerging again, mainly in south-east Asia and the Middle East.

The European companies have long-standing associations with their home country's former colonies. Spanish contractors are the exception to that rule. The French, Italian and German international construction companies all grew by having cultural and language ties to overseas markets, as well as home government aid-related overseas work. Finnish and Swedish contractors are active in the CIS because of their previous links with the Soviet Union and Eastern Europe. Spanish contractors are active in Spanish-speaking countries in South America.

The British contractors have a long history of working in the Commonwealth countries. Britain exported its construction system with the use of design consultants, quantity surveyors and bills of quantities. Over the past 50 years, United Kingdom contractors have been working in such countries as Malaysia, Australia, Hong Kong, Kenya and Canada and many Commonwealth countries still use the British system of procurement. A strong influence was the use of British architectural and engineering consultants who undertook the design of major harbours, bridges, power stations, roads and institutional and commercial work, allied to the use of British Standards and Codes of Practice. Inevitably British contractors followed the British consultants and were able to secure work.

In 1992, British multinational construction enterprises obtained overseas contracts worth £2.9 billion, some 29 per cent more than in 1991. About a third of all new contracts in 1992 were in North America, with half of new contracts being from OECD countries. About 90 per cent of the work is carried out by the top 12 companies.

British multinational construction firms have also seen an increase in work since 1991 in the developing world, reflecting an increase in south-east Asia. This region is seen by all the United Kingdom multinational firms as being very important in the next decade. The main constraint on the companies is the ECGD (Export Credit Guarantee) cover available, which is a form of insurance.

Many large development projects in the developing world continue to be funded by tied bilateral aid from governments. Britain's aid programme is lower than many other countries and this can be a serious handicap for United Kingdom multinational construction enterprises.

1.2. The United Kingdom sequence

Listed below is the sequence that United Kingdom multinational construction companies followed:

1960s
- Boom in oil-related and commercial work in the Middle East.
- Steady workload in Commonwealth countries, some coming from United Kingdom government overseas aid-related work.
- Strong focus on work for British consultants operating overseas.

1970s
- Oil-related work in the Middle East following a cyclical pattern influenced by the oil crisis.
- More competition in the Middle East from Japanese and Korean contractors.
- More competition in the Commonwealth countries as local contractors gain the expertise to undertake major projects.
- Many United States major engineering and construction companies set up in the United Kingdom to service North Sea oil and petrochemical work.
- Overseas work seen as vital for long-term growth of the company following depression in the domestic market.

1980s
- Domestic market in a boom-bust cycle.
- New focus on the European market.
- Focus on the United States construction market by acquiring stakes in United States companies.
- Fear of the threat from Japanese contractors penetrating the United Kingdom market.
- Fear of other European contractors (particularly French and German) establishing a foothold in the United Kingdom by acquiring stakes in United Kingdom construction firms.
- Commonwealth-linked work becoming increasingly difficult to win.
- Emphasis changes from growth to survival.

1990s
- The rise of the Asia Pacific market.
- Reduction of the threat in the United Kingdom from Japanese contractors as the Japanese scale down their activities because of the slump in the property market.
- The emergence in overseas markets of contractors from newly industrialized countries.
- The emergence of four factors as the key to winning contracts: finance, specialization, design, and appropriate technology including technology transfer. Being the lowest bidder on a project no longer guarantees winning the bid.
- The domestic construction market is in the deepest recession for 60 years. Recovery will be slow and fragile.
- European market seen as being critical to long-term survival.
- Design and build and build-operate-transfer projects seen as being more important in overseas market.

1.3. Forces that have driven the past and the future

Listed below are the forces that have driven engineering and construction markets worldwide in the past five years and are likely to continue to influence developments in the next ten years.

Past five years

- Quality
- Productivity
- Safety and liability
- Labour relations
- Information systems

- Mergers and acquisitions
- Political pressures
- Closeness to customers

Next ten years

- Speed in production innovation and delivery
- Flexibility in delivery mix
- Environmental consciousness
- People development and deployment
- Automation and information management
- Joint ventures and alliances
- Global scenarios
- Closeness to customer and user markets
- Partnering/enduring alliances
- Sustainability/recyclability of products
- Financial engineering and the ability to arrange finance
- Safety and liability
- High quality with guarantees for after-sales care

The world engineering market is changing. In the past, construction firms could rely upon winning projects by having the lowest price combined with high-quality management skills and technological advantage. In the next ten years that will not be sufficient. Many new players have entered the global market from countries such as Turkey. They have a low wage base and can offer competitive prices. Companies have to devise strategies to cope with the changing needs of clients and with the new competition.

Many companies have recognized the need to develop their staff and more is being spent on the education and training of all grades of personnel from top management downwards.

The international market has become a global market and companies have had to develop global scenarios which are flexible and responsive. For example, the United States market has sustained growth in the environmental construction market, particularly in terms of recyclability and the disposal of hazardous and solid waste. The subject of pollution abatement and environmental assessment has also grown.

As firms, governments, the public, and clients gain a better understanding of the scope and urgency of environmental concerns, new ways to mitigate or avoid ecological damage are emerging. Already, the United States concern has spread to Europe and enterprises need to have a global perspective on these issues.

1.4. Growing and shrinking markets in the global engineering and construction industry

Growing markets

- Rail transport
- Road systems, urban transportation
- Airports
- Environmental pollution control
- Hospitals and health care
- Water supply and sewerage treatment

- Waste management
- Privately financed infrastructure and building projects
- Primary energy supply and energy conservation
- Repair, maintenance and refurbishment work
- Urban regeneration projects (housing that takes design seriously)
- Alternative energy (wind and wave power)
- Underground storage and plants
- Design and build projects
- Work in Asia Pacific

Shrinking markets

- Nuclear power-related work
- Professional services (they have become too expensive - the cost/benefit has changed)
- Petroleum products
- Coal mining
- Commercial office development (until 1996)

2. A brief review of the United Kingdom construction industry

The construction industry is a large and important sector of the United Kingdom economy. It accounts, both directly and indirectly, for over 10 per cent of the value of goods and services produced in the United Kingdom. It is also directly and indirectly responsible for at least 12 per cent of total employment.

The construction industry produces, in the main, investment goods rather than consumer goods. As a consequence, it is subject to all of the uncertainties that characterize investment decisions.

This implies that the construction industry, almost by definition, operates in an unstable environment. It has in the past been subject to wider swings of activity than are faced by most industries and is unable to operate an inventory policy to even out the extremes. By the same token, any general upswing in economic activity is reflected in, and usually preceded by, an upswing in the level of construction industry demand.

2.1. Construction output and employment

The year 1982 saw construction output in the United Kingdom at an historic low. It rose steadily in the following few years jumping up 13 per cent in the 1988-90 boom years. However, by the end of 1992 it was £1 billion less than in 1987. Figure 2.1 shows the construction output for the 1982-92 period.

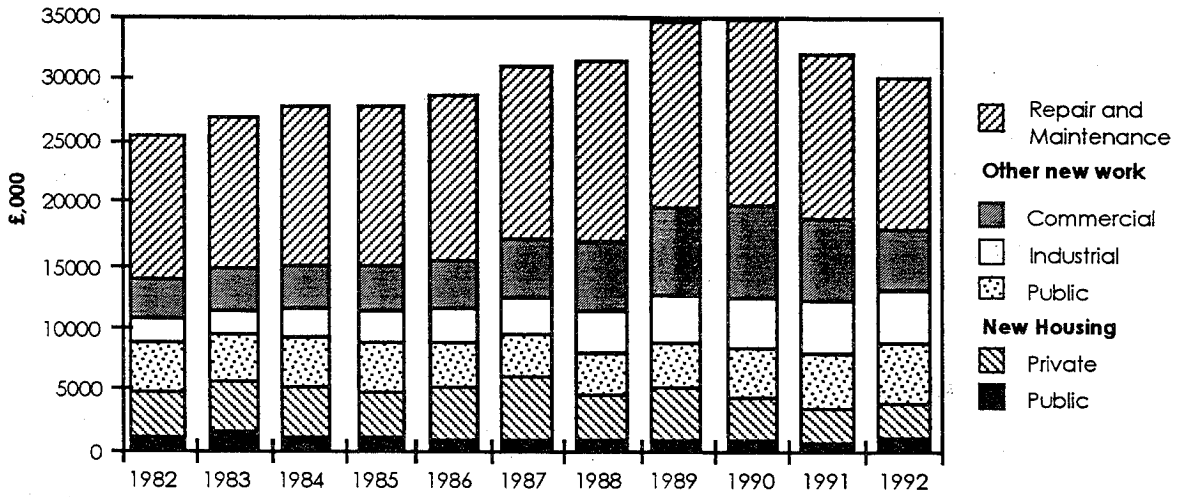
Private house building experienced the same erratic pattern between 1982 and 1992. There was 53 per cent growth between 1982 and 1988, yet ten years later it slumped to below its 1982 level.

Private commercial work peaked in 1990 as the City of London underwent reconstruction. Between 1982 and 1990 commercial building rose dramatically by 145 per cent. By the end of 1992 this sector was 35 per cent below its 1989 peak but was still 58 per cent above the 1982 figure.

Construction activity in the public sector has been far more stable. The privatization by the Government of the utilities boosted the industrial segment of construction which doubled in size between 1982 and 1992.

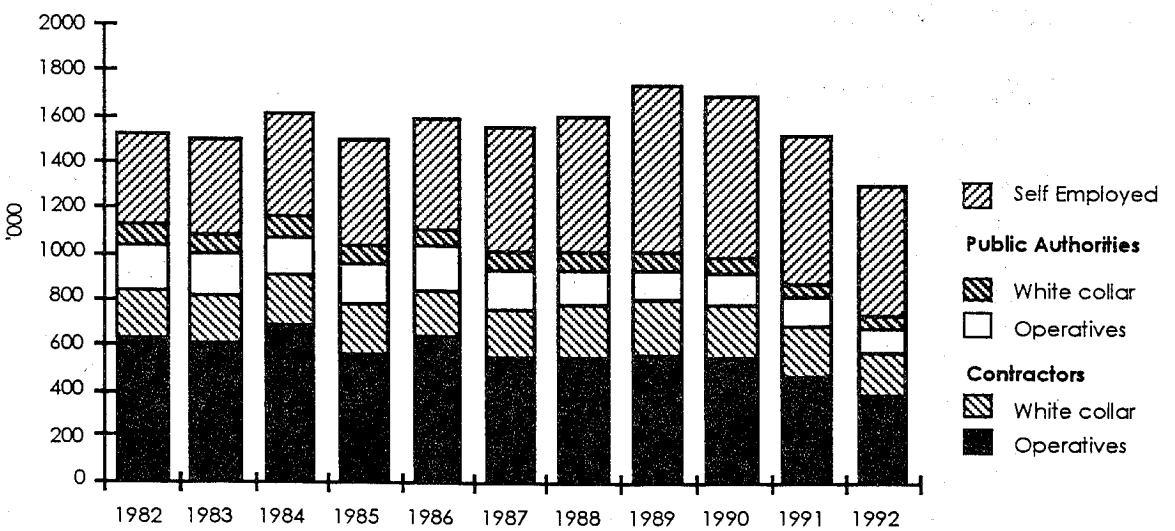
Repair and maintenance has followed the ebb and flow of the United Kingdom economy. In 1992 this sector was 5 per cent ahead of its 1982 level.

Figure 2.1. Construction output in the United Kingdom, 1982-92
(constant 1985 prices seasonally adjusted)



Source: DOE Housing and Construction Statistics.

Figure 2.2. United Kingdom construction employment, 1982-92
(thousands of people)



Source: DOE Housing and Construction Statistics.

Figure 2.2 shows employment in the United Kingdom construction sector. An increase in the numbers of the self-employed in the construction industry was the main reason for the peak of 1.7 million in 1989. Direct employment remained relatively static at around 1 million

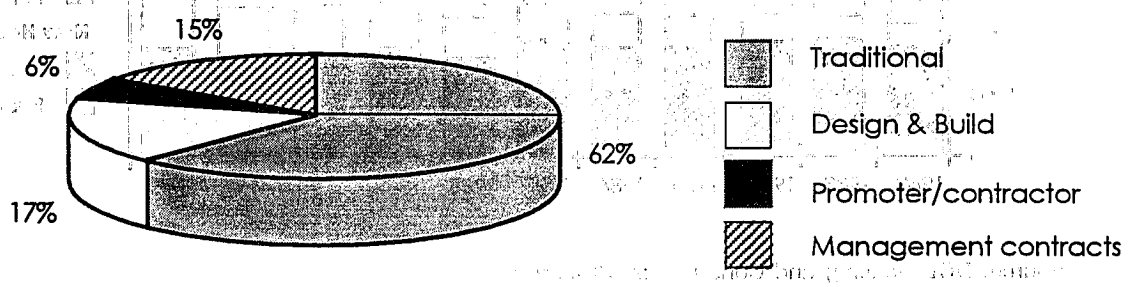
employees between 1982 and 1992. Thereafter, there was a loss of 279,000 jobs and 1992 saw total construction employment down to 1.3 million.

The annual average fall of 1 per cent during the 1970s gave rise to an output per head of 3.1 per cent between 1982 and 1992. Productivity fell during the 1979-81 recession, but gains between 1982 and 1988 were particularly impressive. Between 1990 and 1992 productivity continued to rise because employment fell by more than the 14 per cent fall in output.

2.2. United Kingdom construction MNEs' procurement methods

Various studies have observed the revolution in building procurement methods over the past decade. Figure 2.3 shows the various procurement methods. The "design and build approach" has had the most impact. From virtual obscurity in the early 1980s it accounted for 4 per cent of the market in 1986. By 1992 it had a 17 per cent share of the market.

Figure 2.3. Construction by procurement methods



Source: Centre for Construction Market Information.

Management contracting has also had an impressive success: £890 million in 1984; it rose dramatically to £5.3 billion in 1989.

2.3. Large and small firms

Instabilities in demand, the site-based nature of construction work and the complexity of the construction process itself — involving as it does a host of different skills and trades, lead to a complex industry structure with the separation of design and construction and the multiple layers of skills involved in the construction process. Throughout the industrialized countries, the construction industry is characterized by a particular oligopolistic form. Typically, the industry is composed of a small number of relatively large firms and a very large number of quite small, often one-person, enterprises. In the United Kingdom, for example, the construction industry consists of more than 205,000 firms of which 163,000 employ less than eight people. Only about 100 firms employ 600 or more people. They account for almost 20 per cent of the industry's output.

The smaller firms tend to concentrate on repair and maintenance work. In the third quarter of 1992, firms employing fewer than eight people accounted for 27 per cent of total construction output but 44 per cent of all repairs and maintenance work.

Larger firms tend to concentrate on new projects. In the same period, firms employing 600 or more people were responsible for 28 per cent of new construction work, but only 8 per cent of repairs and maintenance.

Similar structures are found in most other countries. In Japan, for example, there are more than 500,000 licensed construction enterprises, of which nearly 50 per cent employ only one person and 95 per cent employ fewer than 30 people.

At its best, the United Kingdom industry achieved standards of performance equal to any in the world. However, a 1993 comparison of the performance of the UK industry with that of the US showed that its results were less impressive than expected.

2.4. Two decades of change

The construction industry has to cope with rapid changes in the overall level of economic activity. In the last two decades, it has also had to deal with significant changes in the workload. The changes have taken place in every aspect of its operations. There has been a major switch in the sourcing of demand from public to private sector. In 1970, over 51 per cent of new work was publicly funded. By 1992, this had declined to 33 per cent. A number of other trends can be discerned.

- Public housing declined from over 12 per cent of construction output in 1970, to less than 3 per cent in 1980. Private housing continues to account for 12-14 per cent of output.
- Repair and maintenance is a substantial proportion of the industry's workload at 41 per cent of the total output in 1992.
- The boom in the private commercial sector in the 1980s resulted in an increase of construction output from 11 per cent in 1970 to just under 17 per cent in 1986, with a fall back to 10 per cent in 1992.
- The economic recession, which started in 1990, has shaken the construction industry to the core. Most of the United Kingdom multinational construction enterprises have scaled down their operations.

There has been an equally dramatic change in the private sector itself, whether looked at by its distribution by ownership, industrial sector or geographic region. The United Kingdom has traditionally been host to multinational enterprises wishing to establish a foothold in Europe. Entry to the European Union, relaxation of exchange controls and increased Japanese foreign direct investment have all enhanced the United Kingdom's role as host to these large companies. This has brought to the United Kingdom industry a set of clients with different experiences, priorities and cultures. It has also given a foothold in the United Kingdom to contractors, subcontractors and professionals from other nations.

There are few barriers to entry to the United Kingdom construction market for foreign multinational construction firms. There is no mandatory industry registration system for companies or workmen in Britain, unlike many other countries.

The sectoral shift in economic activity has seen the emergence of commercial and leisure industries as major employers and wealth generators. There has been an attendant change in the types of buildings demanded: offices, leisure complexes and "service" buildings such as hotels and restaurants rather than manufacturing plants. The buildings demanded by every sector of economic activity have become more complex. High technology is entering into all aspects of life, whether work or play. Buildings must now be able to accommodate this high technology and be flexible enough to cater for the rapid technological progress that characterizes an information society.

2.5. The impact of the Government

The construction industry is significantly affected by government both directly and indirectly. Directly, the Government is a major client of the industry. Also of importance is the indirect effect of the Government's overall economic policy. Interest rates are particularly critical as they are a major determinant of construction workload. Any government policy on wages is also important, particularly for the private housing sector, where research has shown a close correlation between the trends in incomes and those in house prices.

Government policy also affects the general investment climate in the country. It has already been stated that construction output is largely an investment good, essentially constituting an intermediate input to manufacturing or commercial activities. Investment is, by definition, a long-term decision, fraught with uncertainty and sensitive to underlying confidence in the economy. Policies affecting business confidence will, therefore, have a more dramatic impact on the workload of the construction industry than that of many other sectors.

2.6. Clients' requirements

The clients of the construction industry are particularly diverse. So too are their requirements.

Private sector clients can be divided into three groups:

- owners
- investors
- property dealers

Of these, the property dealers have been especially active in forcing change on the industry. However, the largest group, both by number and value of work, are the owners group. Their demands can range from a house to a major new department store or sewage treatment facility.

The public sector, with its needs for public accountability, has in the past opted for the most risk-averse and non-innovative approaches to design and construction. However, recently, a more commercial outlook has prevailed. The public sector has shown itself to be more prepared to innovate with design and build, management fee arrangements and incentive payments based upon performance.

The single overriding feature that characterizes the modern client of the industry is increased sophistication. This has changed and clarified clients' requirements. These can be classified under three broad headings: time; cost and quality. More specifically, clients want:

- No surprises — certainty of performance in cost, time and quality.
- Design durability, reliability and maintainability of buildings.
- Realistic and affordable running costs and no latent defects.
- Quick rectification and without recourse to litigation.
- Value for money — public clients also want accountability.
- Minimal exposure to risk.
- Clear allocation of responsibilities.
- Harmonious and trusting business relationships with the contractor.
- Clear information on any future contractual claims.
- Guarantees and after-sales service.
- Minimal interference from external pressures such as planning and building control/restrictions.
- Early start on construction work.
- Design and firm price indicated as early as possible.
- Adequate safety precautions on all projects.

2.7. Past and present fortunes

The changes of the past two decades noted above have provoked significant changes in the structure and attitude of firms, particularly contracting firms in the United Kingdom construction industry. Three distinct phases can be identified:

- 1973-80 — a period of recession
- 1980-89 — a post-recession period of adjustment, recovery and boom
- 1989-93 — a period of recession and depression

1973-80

In contrast to the 1960s, the 1970s were characterized by spectacular changes. These were both unexpected, unprecedented and required some hard thinking about that which companies wanted to achieve and the ways in which they intended to achieve it.

Companies had to be prepared to serve a wider range of markets in order to ride out the uncertainties and declines in demand in particular markets.

Overseas markets had also changed. The Government was no longer optimistic about the value of aid programmes and was less able to afford them. However, the effects of the decline of such projects were more than offset by the Middle East construction boom. With their experience of overseas contracting, United Kingdom firms were well placed to compete with United States and European contractors.

1980-89

Changes which took place during that decade were the result of long-term shifts in the structure of the industry, such as the emergence of labour-only subcontracting, the changing role of the quantity surveyor and the client's changing perceptions.

The changes had their roots in, for example, changed patterns of demand, a decline in opportunities overseas, a reduction in the availability of skilled labour as well as new attitudes of clients especially in relation to forms of contract and project financing, and lack of public finance.

1989-93

That period was marked by uncertainty and change for everyone in the construction industry. Multinational construction firms cut staff and there was a move to increased subcontracting and specialist trade contracting. Much of the work that was previously undertaken on site was transferred to factories manufacturing pre-fabricated components.

The construction industry in the United Kingdom proved remarkably resilient in dealing with changes in its economic environment. There was a noticeable increase in the industry's productivity. New types of construction firms emerged. They were more sensitive to client needs and able to provide a broad range of sophisticated managerial services. The industry embraced new technologies in design and construction, and recognized the need for flexible relationships between site-based and factory-based activities. New forms of contract and contractual relationships developed in response to the new experiences and demands of clients.

In conclusion, it can be said that there remains an uncomfortable fragmentation in the industry between professionals, contractors and subcontractors. The move to increased subcontracting and specialized subcontracting with the "traditional" contractor now filling a higher-level managerial role, is a sensible response to changed economic, social and technological demands on the industry. However, it has led to a situation where no individual or group sees the entire process of construction as its responsibility.

3. Who are the United Kingdom multinational construction enterprises?

3.1. Top Ten United Kingdom multinational construction enterprises

1. Trafalgar House Construction plc
2. Tarmac plc
3. AMEC plc
4. Balfour Beatty (BICC) plc
5. George Wimpey plc
6. John Laing plc
7. Bovis Construction (P&O Group)
8. Taylor Woodrow plc
9. John Mowlem Construction plc
10. Costain Group plc

The top ten multinational construction companies all have an annual turnover in excess of £1 billion. For the purposes of this study, the top ten companies were contacted. All the companies had extensive operations overseas and they all provided information on their areas of expertise and the geographical spread of their activities.

	Turnover %		Pre-tax profit/loss £m
	1989	1990	1992
Trafalgar House Construction			
Property investment	23.0	13.0	
Construction & engineering	56.5	66.0	
Shipping & hotels	20.5	21.0	
Oil & gas	0.0	0.0	
Interest & finance charges	0.0	0.0	
	100.0	100.0	
	100.0	100.0	–£30.3
Tarmac plc			
Quarry products	17.0	17.0	19.1
Housing	23.0	23.0	–33.4
Construction	33.5	32.0	14.5
Building materials	3.5	3.5	–2.9
Industrial products	9.5	14.0	–9.0
Tarmac America	6.5	1.5	–7.0
Businesses sold or terminated	7.0	9.0	–2.1
Net interest	0.0	0.0	–58.8
Exceptional items	0.0	0.0	–264.5
Central costs	0.0	0.0	–6.2
	100.0	100.0	–£350.3
AMEC plc			
Building & civil engineering	33.0	32.0	22.8
Mechanical & electrical engineering	60.0	64.0	18.6
Property development and housing	8.0	5.0	–17.1
Internal trading	–1.0	–1.0	–
Exceptional item	0.0	0.0	–114.6
Interest	0.0	0.0	2.8
	100.0	100.0	–£87.5

	Turnover %		Pre-tax profit/loss £m
	1989	1990	1992
Balfour Beatty Ltd. [2]			
Civil engineering	–	–	–
Building	–	–	–
Mechanical and electrical	–	–	–
Property development	–	–	–
Homes	–	–	–
	–	–	**£40.0**
George Wimpey plc			
Homes	33.5	29.0	9.7
Construction	45.0	42.5	8.0
Minerals	18.5	18.0	4.3
Property	2.5	11.0	1.2
Other	0.5	0.5	-2.4
Exceptional items	0.0	0.0	-113.8
Interest	0.0	0.0	-19.4
	100.0	**100.0**	**-£112.4**
Bovis Construction Ltd. [3]			
Building contracting	**100.0**	**100.0**	**-£39.8**
Taylor Woodrow plc			
Contracting	74.0	71.0	-32.5
Property development and investment	7.5	8.0	17.2
Housing	11.0	12.5	6.6
Trading and financial	7.5	8.5	9.0
Exceptional item	0.0	0.0	-66.4
	100.0	**100.0**	**-£66.1**
John Laing plc			
Construction	89.5	85.0	25.1
Homes	9.5	14.0	4.8
Property development	–	–	–
Investments and other activities	1.0	1.0	0.2
Exceptional items	0.0	0.0	-21.4
	100.0	**100.0**	**£8.7**
John Mowlem and Co. plc			
Contracting	76.0	72.5	6.9
Property development	0.5	0.5	1.6
Homes	3.0	4.0	-1.4
Scaffolding and access service	19.0	22.0	5.0
Equipment hire	4.5	5.0	1.8
Aviation activities	0.5	0.5	-4.8
Intra Group	-3.5	-4.5	0.0
Investment income	0.0	0.0	0.2
Exceptional items	0.0	0.0	-20.2
Net interest	0.0	0.0	-10.8
Unallocated costs	0.0	0.0	-5.5
	100.0	**100.0**	**-£27.2**
Costain Group plc			
Engineering and construction	74.5	75.0	-5.3
Mining	24.5	24.5	25.6
Commercial and residential property	3.5	3.0	-7.1
Associated undertakings	-2.5	-2.5	0.0
Inter-company interest	0.0	0.0	-10.3
Interest (net)	0.0	0.0	-18.2
Exceptional items	0.0	0.0	-133.3
	100.0	**100.0**	**-£148.6**

Notes: [1] Trafalgar House plc is a conglomerate that has interests in passenger shipping (Cunard), hotels, commercial and residential property, industrial engineering (Davy Corporation) and construction. It has diversified since its inception in 1957. [2] Balfour Beatty is part of the BICC plc Group. BICC has four divisions, Balfour Beatty is an international engineering and construction group and there are three divisions responsible for manufacturing cables and metals. The company accounts do not give the breakdown of the construction activities in the form required. [3] Bovis Construction Ltd. is part of the Peninsular and Oriental Steam Navigation Company, one of the world's largest shipping companies. The group is involved in passenger shipping, container and bulk shipping, house building, development, and construction. The turnover shown is for Bovis Construction, not the P&O Group.

The construction enterprises have diversified into property investment and development and homes. The construction aspect of the business tends to provide the lowest profit percentage, because construction is a very high risk activity with low profit margins. The low margin is a function of the fierce competition in the market and the highly cyclical nature of the workload.

The multinational companies have been listed alphabetically across the top row of table 3.1. The areas of activity for all the companies were analysed. It is significant how similar the areas of expertise are, with very few blank spaces in the table. Bovis is the only company which prefers to focus on building works as opposed to civil and industrial engineering work.

Table 3.1. An analysis of the areas of activity of the top ten United Kingdom multinational construction enterprises

Skills and expertise of the UK construction multinationals	AMEC	Balfour Beatty	Bovis	Costain Group	John Laing	John Mowlem	Tarmac	Taylor Woodrow	Trafalgar House	George Wimpey
Main contractor	•	•		•	•	•	•	•	•	•
Management contractor	•	•	•	•	•	•	•	•	•	•
Construction manager	•	•	•	•	•	•	•	•	•	•
Design and build contractor	•	•	•	•	•	•	•	•	•	•
Building services contractor	•	•				•	•	•	•	
Housing	•	•	•	•	•	•	•	•	•	•
Factories/warehouses	•	•	•	•	•	•	•	•	•	•
Offices	•	•	•	•	•	•	•	•	•	•
Shops	•	•	•	•	•	•	•	•	•	•
Entertainment/leisure	•	•	•	•	•	•	•	•	•	•
Garages	•	•		•	•	•	•	•	•	•
Schools/colleges	•	•	•	•	•	•	•	•	•	•
Transport terminals	•	•	•	•	•	•	•	•	•	•
Health/hospitals	•	•	•	•	•	•	•	•	•	•
Airports	•	•	•	•	•	•	•	•	•	•
Dams	•	•		•	•	•			•	•
Reservoirs	•	•		•	•	•	•	•		•
Earthworks	•	•	•	•	•	•	•	•		•
Piling	•	•	•	•	•	•	•	•	•	
Foundations	•	•	•	•	•	•	•	•	•	•
Underpinning	•		•	•	•	•	•		•	
Geotechnical processes	•			•	•	•	•	•	•	•
Site investigation	•	•		•	•	•	•	•	•	•
Environmental engineering	•	•	•	•	•	•	•	•		•
Tunnelling	•	•	•	•	•	•	•	•	•	•
Railways	•	•	•		•	•	•	•		
Roads	•	•	•	•	•	•	•	•	•	•
Motorways	•	•		•	•	•	•	•	•	•
Motorway reconstruction	•	•		•	•	•	•		•	•
Bridge under 100 m span	•	•	•	•	•	•	•	•	•	•
Bridge over 100 m span		•		•	•	•	•	•	•	
Water and treatment	•	•		•	•	•	•	•	•	•
Drainage and sewerage	•	•		•	•	•	•	•		•

Skills and expertise of the UK construction multinationals	AMEC	Balfour Beatty	Bovis	Costain Group	John Laing	John Mowlem	Tarmac	Taylor Woodrow	Trafalgar House	George Wimpey
Sewage treatment	•	•		•	•	•	•	•	•	•
Water disposal	•	•		•	•	•	•	•		•
Harbours and docks	•	•		•	•	•	•	•	•	•
Coastal protection	•	•		•	•	•	•			•
Waterways	•	•		•	•	•	•			•
Irrigation		•		•			•	•		
Offshore engineering	•	•		•	•			•		•
Power stations	•	•		•	•	•	•	•		•
Pipelines	•	•		•	•	•	•	•		
Services distribution	•	•			•	•	•	•		•

Source: Annual reports.

The geographical spread of activities has been analysed in table 3.2. The United States, the Netherlands, and the Channel Islands are the areas where all the contractors were active.

Table 3.2. The geographical spread of the activities of the top ten companies

Country/territory	Bovis	Laing	Tarmac	Costain	Wimpey	Taylor Woodrow	Mowlem	Trafalgar	BICC	AMEC
OECD countries										
Australia	•		•	•	•	•	•	•	•	•
Belgium			•	•		•		•	•	•
Canada		•	•	•	•	•		•	•	
Denmark						•	•			
France	•		•		•		•	•	•	•
Germany	•					•	•	•	•	•
Greece				•						
Italy								•	•	
Ireland	•	•	•					•	•	
Netherlands	•	•	•	•	•	•	•	•	•	•
New Zealand						•		•	•	•
Norway					•		•	•	•	•
Portugal	•					•	•	•	•	
Spain	•	•		•	•	•		•	•	
Sweden				•			•	•	•	
Switzerland			•						•	•
Turkey	•									
United States	•	•	•	•	•	•	•	•	•	•
Non-OECD countries										
Africa										
Angola									•	
Botswana				•					•	
Cameroon						•				
Egypt					•					
Ghana						•		•	•	•
Kenya							•	•		
Lesotho					•					
Liberia	•									
Malawi								•	•	
Mozambique									•	
Namibia									•	

Country/territory	Bovis	Laing	Tarmac	Costain	Wimpey	Taylor Woodrow	Mowlem	Trafalgar	BICC	AMEC
Nigeria		•		•	•	•		•	•	•
South Africa					•			•		
Tanzania								•		
Uganda										
Zambia								•		
Zimbabwe				•				•		•
Asia										
Brunei						•		•		
Fiji									•	
Hong Kong	•		•	•	•	•	•	•	•	
India				•				•		
Indonesia								•	•	
Japan								•		
Malaysia	•	•	•	•	•	•		•	•	•
Pakistan	•								•	
Papua New Guinea				•					•	
Republic of Korea								•		
Singapore				•				•	•	•
Sri Lanka									•	
Thailand	•							•	•	
Europe										
Czechoslovakia	•									
Gibraltar						•		•		
Guernsey	•	•	•				•	•		
Isle of Man								•		
Jersey	•	•	•	•	•	•	•	•	•	•
Malta						•				
Middle East										
Abu Dhabi		•			•			•		
Bahrain				•					•	•
Dubai			•	•	•				•	
Iran					•			•		
Kuwait								•		
Oman		•		•	•	•		•	•	
Saudi Arabia		•	•	•	•	•		•	•	
United Arab Emirates		•	•				•	•		
Latin America and the Caribbean										
Antigua	•									
Argentina								•	•	
Bahamas		•			•	•			•	
Barbados									•	
Bermuda	•							•		
Brazil								•	•	•
Cayman Islands	•					•		•		
Chile								•		
Mexico								•		
Panama			•	•	•			•		
St. Lucia								•		
Trinidad and Tobago					•					
Venezuela		•		•				•		

Source: Annual reports.

The United Kingdom multinational construction enterprises have focused their activities in Europe and the United States over the past five years. Work in developing countries has been mainly for international aid agencies, United Kingdom government aid-related agencies or United Kingdom companies investing overseas. Countries such as India and Pakistan were regarded as difficult markets to penetrate because of the low wage base of the indigenous companies.

Figure 1 (see Appendix) shows the overseas work as a percentage of total turnover for the companies. All emphasized that as the recession began to have a major impact on the home market, there was a search for work overseas. An analysis has also been made of staff operating in the United Kingdom and overseas (see Appendix Figure 2).

With a deep economic recession in the United Kingdom from 1990 to 1993, most of the United Kingdom multinational firms reduced the number of staff. In order to compensate for the downturn in domestic activity, the firms sought work overseas. Some acquisitions of foreign construction firms were made in the United States and mainland Europe. Acquisitions were not sought in developing countries as the risks were considered to be too high.

3.2. Some perspectives on the companies' views of the overseas market

AMEC plc

Making progress in south-east Asia remains a priority for the group. There are special opportunities for the construction sector in the major infrastructural development now taking place in Hong Kong. The main opportunities will be in the process and energy sector, based on the growing need of local economies to develop their oil and gas resources. AMEC say that they are well advanced in the development of partnerships in South-East Asia.

The Australian businesses have been restructured and there is a shift in emphasis from the still depressed commercial sector to specialist and industrial work.

In the United States, they have continued to rationalize their business and to develop areas where growth potential is apparent.

AMEC's overseas strategy is based upon the selection of markets to enable them to use their skills to establish profitable long-term positions. They aim to expand through partnerships with established local companies. They are also disposing of some smaller peripheral businesses overseas which are unprofitable and now inconsistent with their longer term objectives.

Taylor Woodrow plc

During 1992, Taylor Woodrow's international contracting operations continued to face an intensely competitive market, which affected their profitability. Their strategy is to focus on regions where they have developed an established and profitable presence — the Far East, West Africa, the Gulf and the former Soviet Union.

In the Far East, they continued to secure key projects during 1992, including a joint venture award to develop a master plan for the construction of a new combat training centre for the Malaysian Government.

In Australia, their strategy is to focus on residential land development opportunities which are seen to offer greater profit potential.

The group's North American housing companies performed well, despite a difficult market, and emerged from 1992 with good results.

John Laing plc

They are continuing with their strategy of expanding in selected markets throughout the world. They were awarded a contract to build an airport terminal building at Ashgabat, the

capital of Turkmenistan. It is the company's first project in recent times in the former Soviet Union.

The year 1992 also marked the return of Laing to Abu Dhabi with the award of two building projects.

A strategically important initiative was the formation of a Brussels-based European company called Société Européenne de Construction (SEC). It was formed, with other companies, to pursue major infrastructure projects within, or funded by the EU.

In 1993, John Laing was awarded a project to build and operate an airport in Vietnam.

George Wimpey plc

George Wimpey plc embarked on a strategic review of their worldwide operations in 1992. They considered all aspects of the company's activities with a view to improving long-term efficiency and profitability.

In the United States housing market, their Florida operations benefited from a redesign of their product range — sales almost doubled. In Ontario, sales and completions fell as a result of a shortage of prepared sites. It was felt that new sites should increase sales.

In France, the high interest rates caused sales and completions to fall by 30 per cent.

George Wimpey plc intend to expand their multidisciplinary capabilities and broaden significantly the geographical scope of their overseas construction activities. Their workload has risen substantially in the Middle East and there has been a revival of activity in Trinidad and Tobago.

Costain Group plc

In engineering and construction, the drive to expand Costain's international interests has been extremely successful. They have been awarded the Tsing Ma suspension bridge and airport platform contracts in Hong Kong and have developed new markets in both the Middle and Far East.

The company's international expertise in specialist directional drilling led to a number of contracts in the United States, Europe and Indonesia, where they opened a new office to take advantage of the growing market.

The Oil, Gas and Process Division of the company has identified substantial new opportunities overseas and is now concentrating on South America and the Middle and Far East.

International operations are managed through Costain offices in Hong Kong, Bahrain, Abu Dhabi, Dubai, Cairo, Oman, Al Khobar, Kuala Lumpur, Jakarta and Caracas.

Tarmac plc

As the United Kingdom develops closer ties with continental Europe, Tarmac see this market as holding a great deal of potential for them. They are currently operating on a relatively small scale from 30 locations in five countries. They are building a sound commercial understanding, together with strong relationships from which to undertake selective expansion when the time is right. One such opportunity is their option on a major coastal hardstone deposit in southern Norway, secured for a nominal sum, which could become a major quarry investment in the latter half of the decade, serving aggregate markets across Northern Europe.

In the United States, the volume of construction activity is forecast to rise significantly.

John Mowlem and Co. plc

In Australia the company continues to win and complete a wide range of construction projects from rail engineering, materials handling, civil engineering and building.

The company's European division had an encouraging start to its existence and further opportunities in the eastern part of the unified Germany are being sought.

Balfour Beatty Ltd.

The group continued to penetrate overseas markets by winning major power and transportation projects in both south-east Asia and the United States. The company is seeking to build on its strong presence in these areas.

In Asia Pacific, the group is active in China, Hong Kong, Malaysia, Indonesia and Thailand. It is involved mainly in power generation and transmission projects, and also in the design, engineering and construction work for airports and rail systems.

The United States is seen as an important market-place with its vast infrastructure investment programme.

The Middle East is a reviving market and the company has major road and power projects in Dubai.

In Africa, Balfour Beatty is involved in a massive power and irrigation project in Lesotho. They are also present in the Caribbean and Europe.

Trafalgar House Construction

More emphasis is being placed on obtaining contracts in the Middle and Far East. Opportunities are being developed through joint ventures with the division's Hong Kong associate company, Gammon, in Hong Kong, Malaysia and Taiwan.

In Mexico, a 50 per cent share has been purchased in a construction business. An office has been opened in Berlin, with another to follow in Düsseldorf, to develop opportunities in Germany and Eastern Europe.

In the United States, the business will benefit from economic improvement with additional emphasis being placed on the Pittsburgh office.

A greater emphasis is being placed on targeting difficult major international infrastructure projects.

Bovis Construction Ltd.

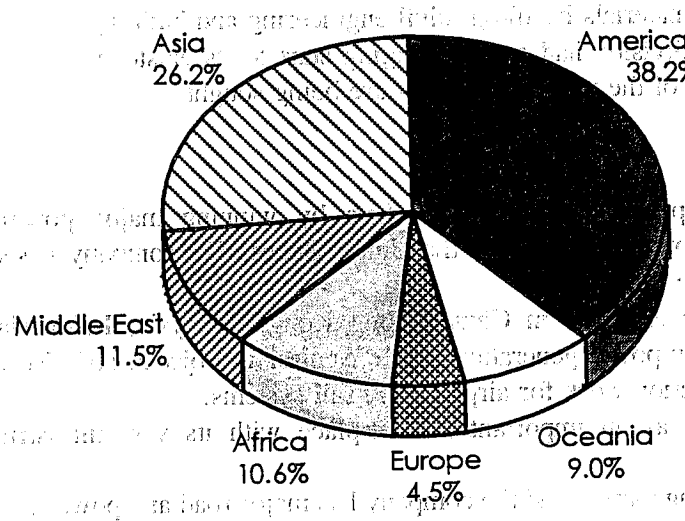
The company has wholly owned subsidiaries and joint venture companies throughout Europe, south-east Asia and Australia.

International projects range from the redevelopment of the Kuala Lumpur city centre to a £100 million expansion of Spain's Palma de Mallorca airport. It is also involved in a 1 million square foot retail development in Oberhausen, Germany.

The company operates extensively in the United States and have a number of projects in Japan.

The pie chart in figure 3.1 was produced by the Export Group for the Construction Industries. It shows the region where the United Kingdom contractors won contracts in 1991/92. The most successful region was North America with 38.2 per cent of total orders followed by Asia with 26.2 per cent of total orders. These figures confirm those relating to the sample of ten contractors used in the study (see Appendix Figure 3). These figures will include work done by overseas companies which are either partly or wholly owned by United Kingdom multinationals.

Figure 3.1. United Kingdom multinational contractors' overseas contracts won in 1991-92, by region



Source: DOE Housing and Construction Statistics.

3.3. A global perspective

All the top ten United Kingdom multinational companies have a global perspective to their business. An important question is why these companies have followed this policy of internationalization. The companies indicated that they pursued that strategy for the following reasons:

1. reduce the reliance upon the domestic market with its inherent boom-bust cycles;
2. spread the risk of being reliant upon one market;
3. enhance the profitability of the company;
4. give an international perspective to the business.

4. What is the business strategy of the United Kingdom multinational construction enterprises with respect to overseas work?

This section is based on the results of a survey of the top ten United Kingdom multinational contractors. In each case a questionnaire was distributed (see the Annex) and interviews were conducted. The contractors asked not to be identified. Listed below is a summary of the key points on a question-by-question basis.

1. What are the most important markets?

There is an increasing amount of construction work being done in the OECD countries. While work for OPEC countries is slowly returning, the competition is very fierce. The United States is seen as a safe and secure market, notwithstanding the strong competition and low profit margins.

Projects in developing countries are in decline and the competition from contractors from low-wage economies and newly industrialized countries is becoming fiercer. One contractor noted that, in 1982, some 72 per cent of work undertaken by British contractors was in developing countries. By 1991 the figure had fallen to 41 per cent. The United Kingdom

Government has not helped, by insisting on high premiums for Export Credit Guarantee Insurance. The underlying reason is that the ECGD have been made self-financing.

European countries are an important market but entry has to be by partial acquisition, strategic alliance or joint venture. Germany is identified as the key to future European work because of its access to the Central and Eastern European markets.

Asia Pacific is seen as being the major growth area but competition will be fierce and the main method of entering the market will be by concluding attractive financing arrangements. China is regarded as being important for the long term, but mainly as a market where finance or very advanced technology will be the key.

None of the companies saw much prospect in the medium and long terms for operating in Africa or Latin America other than on international aid-related projects.

2. *What are the three most important factors that contribute to winning overseas work?*

The most important mentioned were:

- competitive price and value for money, a working knowledge of the region or collaboration with a local partner
- ability to arrange a financing package
- technology — special knowledge
- management skills
- ability to provide both design and construction services and to offer satisfactory long-term guarantees.
- reputation for quality and reliability
- knowledge of aid-related projects

3. *The business strategies used to penetrate international markets*

All the companies used different strategies for different regions depending on the risks and the clients. In developing countries, a joint venture with a "substantial" local company was seen as the most appropriate. In developed countries, a strategic alliance with a national company in the region was seen as more important.

There was a general view that acquisitions had not proved to be successful in the past. There is a three- to six-month period within which to bring about changes in an acquired company. After that there is a tendency to be an "absentee landlord" or for the management to go native and be involved with the same culture of the acquired company. In many cases, despite background research, the acquiring company discovered many hidden problems.

In very few instances would a United Kingdom multinational construction firm set up a new business overseas unless there was a clear competitive advantage.

4. *How has the international market-place changed in the last five years?*

The international market-place has become much more competitive with the contractors from NIEs now competing successfully for work. In the 1960s and 1970s, the United Kingdom contractors could obtain work based on their management skills and reputation. However, the global market has changed and indigenous companies have become more competent. There is a growing demand for:

- higher quality
- higher safety standards
- greater recognition of environmental issues

- the debt problems of many countries has meant that financial engineering is increasingly important and more ingenious
- the need to address protectionism where invisible barriers to entry into a market are being erected
- privatization of infrastructure and building projects is enabling United Kingdom multinational construction firms to be involved in the operation phase of projects under the BOT, BOOT, BOO, BLT arrangements

5. Where you have entered into joint venture, how has your partner been identified?

- through approaches made by indigenous contractors seeking specialist expertise not available within their organization
- as a result of previous links which have been successful
- by identifying a local organization that is able to provide a competent workforce but does not have the financial resources to undertake specialist projects or the ability to handle the risk
- through intermediaries

6. What type of organizational structure would you expect to adopt on an average joint venture project?

A management board is formed from each participant organization. The project manager is appointed by the joint venture management board, together with a deputy project manager. In integrated joint venture consortia, there is a roughly equal balance of each organization's representation according to the percentage share holding in the joint venture. Engineering specialists will normally be appointed by, and be responsible to, the joint venture board. Subject to the engineering and management skills being available, it is often better to have a local project manager who can relate to the workforce much more easily. The deputy project manager would be from the United Kingdom and be responsible for the commercial aspects of the project. The key to success is to build an integrated team.

In international partnerships in which managers and workers from two or more companies work closely together, managers must ensure that people-oriented issues receive adequate attention. Major issues that arise when there is significant sustained interaction among employees of collaborating firms include:

- the mixture of the cultures and management styles
- recruiting and staffing strategies
- performance appraisal
- compensation and benefits
- labour management relations

7. What percentage of the management team would you expect to be local and what percentage from the United Kingdom?

The percentage depends on the type of job and the geographic region. In Africa it would be expected to have 25-30 per cent of the management being British, whereas in Malaysia, only 5 per cent would be from the United Kingdom. It is usual to have only senior management from the United Kingdom. Wherever possible, local skills are used.

8. How are subcontractors identified? How does their selection differ according to the domestic market?

In many regions, subcontracting packages are following the pattern of the United Kingdom, with a substantial proportion of the work being subcontracted. The direct employment of labour is becoming less usual. Unless the work is highly specialized and very technical, the local firms will win the work on price. International specialists will only win if they have a technical or financing ability.

In the developing countries, achieving the desired quality is the biggest difficulty, coupled with the problems of management. Much closer supervision is required to ensure that quality is maintained. Most of the companies use standard international conditions of contract. In all cases the advice of the local partner is sought in work practices. It is important to respect the sovereign rights and national laws and regulations. International standards must be balanced with local practices in a realistic manner.

It was often felt by the local subcontractors that the conditions laid down by the foreign partner were too stringent. However, once the local companies realized the standards expected of them, they priced the projects accordingly.

9. What is the position on technology transfer?

- Technology transfer is now increasingly being written into the contracts, particularly in developing countries. Many of the multinational construction enterprises recognize that there is a competitive advantage to be gained in offering a technology transfer package as part of the bid.

  Countries differ in their ability to absorb technology. This depends on several factors. The most important is the educational level of the population. Educational programmes geared to vocational and technical training are the basic requirements for acquiring the ability to absorb technology.
- Technology transfer includes design, management, materials technology, and other skills relating to the construction industry. In every instance, appropriate technology must be used bearing in mind the needs of the host country. Another issue is that technologies have to be balanced with the need to provide local employment.
- Technology transfer should be aimed at all levels and at all parties, including the client.
- Training is obviously the key to effective technology transfer. Training schools on-site and off-site education centres are methods frequently used. Construction is different from many other industries because it is project-based. Once the project is completed the team is disbanded. This is sometimes attenuated through the conclusion of ongoing maintenance contracts. All the multinational construction firms felt that in the long run training saved money.
- Technology transfer costs are always built into the contract price.

10. Is it becoming more common in developing countries to have a training component in the contract conditions?

The training of local trainers is usually the method adopted. Training is now considered as a "product" by many companies. The aim is always to encourage skill formation for the local workforce.

11. Is the direct employment of local operations declining on overseas projects?

On building and civil engineering works, direct employment is declining. The exception is on energy and power projects where control over quality is paramount and there is still the need for direct employment.

It has to be borne in mind that the labour force is often made up of migrant workers, young workers, seasonal workers and sometimes women. Many of these groups prefer employment on a casual basis. The companies always observe local practice with respect to employment law.

12. Is the developing world moving towards greater security of employment in construction?

Wages and conditions of work on multinational enterprise sites are usually more favourable than those provided on locally run projects. The best possible wages are paid but there is still little security of employment. Local labour expects better wages and conditions to be provided by multinational construction enterprises. On average, the daily wage paid by United Kingdom companies to site workers is much higher than the national minimum wage.

In some countries "labour contracting" is becoming common. For example, in Malaysia, "Kepalas" employ teams of workers on a daily-rate or piece-rate basis. Similarly, in Indonesia labour contractors are used.

Women do experience difficulties in acquiring skills and having security of employment on construction sites. Opportunities for practical training in construction work are limited and they are the jealously guarded preserve of male employees.

Legislative intervention often protects the interests of workers in the areas of labour and employment relations. Because each nation has an interest in regulating workplaces, the national labour and employment laws will usually apply to foreign citizens employed and working within its territory. This interest leads to an emphasis on the application of national law and practice by the foreign employer. In the developing world, law enforcement is often weak. In reality there is still insufficient security of employment.

13. The importance of safety and health

Safety and health have to be the most important priorities. Safety plans are always prepared for all projects and all risks and special hazards are evaluated. The reputation for safety of a multinational contractor is a strong selling point and that reputation must be maintained.

The workforce is made aware of the standards of safety expected of it. It is difficult to force workers to take protective measures because they feel local practice should prevail.

Safety equipment such as helmets, safety boots, gloves, goggles and other prescribed gear are always made available. However, many workers lack an awareness of the value of safety equipment. One comment was that workers said that such gear interferes with their movements. The United Kingdom companies always issue safety equipment, with instructions for their use written in the local language.

14. What kinds of industrial relations problems do you encounter?

None of the multinational contractors had experienced any difficulty with industrial relations in developing countries. One view was that labour unions were not strong or well organized in the construction industry due to the casual nature of employment. The companies felt they were more advanced than domestic enterprises in their adoption of methods to gain the loyalty and commitment of employees.

15. Do you have a company policy on the employment of women in the construction industry?

In Asia there are many female construction workers. Rather than following the cultural traditions that subordinate women, United Kingdom construction MNEs can and should demonstrate leadership in recognizing the contribution of women and in ensuring equality of opportunity.

16. How do you handle the use of skilled and unskilled migrant workers on projects?

Every attempt is made to ensure that migrant workers are given equal opportunities. In reality it is difficult to keep track of the illegal migrant workers where subcontractors are involved.

17. Do you adopt any special policies with regard to managing and motivating staff on overseas projects?

There are no special policies other than creating a corporate culture that reflects a Western management style yet is comfortable with the local culture. Ways to help workers adjust to the new value system include integrating training into daily operations and stressing the need for accountability. In some countries, such as India, there is a mismatch between the Indian and Western culture and value system.

18. Any other points?

Some contractors felt that understanding local culture was a very important ingredient for success and that its importance was often underestimated.

Summary

1. British multinational construction firms have a long history of working overseas. The United Kingdom exported its construction system with the use of design consultants, quantity surveyors and bills of quantities. Over the past 50 years, United Kingdom contractors have been working in such places as Malaysia, Australia, Hong Kong, Kenya and Canada and many Commonwealth countries still use the British system of procurement. A strong influence was the use of British architectural engineering consultants who undertook the design and building of major segments of bridges, power stations, roads and other facilities using British Standards and British Codes of Practice.

2. In 1992 British multinational construction enterprises obtained overseas contracts worth £2.9 billion, some 29 per cent more than in 1991. About one-third of all new contracts in 1992 were in North America. An important emerging market for United Kingdom multinational construction firms is Asia Pacific.

3. About 90 per cent of the work done overseas in 1992 was carried out by the top 12 multinational construction companies.

4. The key challenges which United Kingdom multinational construction firms will have to face in the next decade are:

- The emergence of overseas competition from contractors in newly industrialized countries.
- The emergence of four critical factors for winning contracts:

  (a) finance

  (b) specialization

  (c) design capability

  (d) the application of appropriate technology (including technology transfer)

Being the lowest bidder on a project no longer guarantees winning the tender. The United Kingdom domestic market is in the deepest recession for 60 years and recovery will be slow and fragile. The lack of work in the United Kingdom will force multinational contractors to look overseas for work. Europe, North America, and Asia Pacific are seen as the three key areas on which their long-term strategy is based.

5. The international market has become global and multinational construction companies have had to develop strategies which are both flexible and responsive. There is no long term stability any more in the world market and the boom-bust cycles are becoming longer and deeper. The multinational companies have needed to devise strategies to cope with this changing situation.

6. The business strategies used to penetrate international markets vary. In developing countries a joint venture with a "substantial" local company was seen as the most appropriate. In developed countries, a strategic alliance with a national company was seen as being more important. The United Kingdom multinational companies were of the view that acquisitions had not proved to be successful in the past.

7. Over the past five years, the international market for construction work has changed significantly. There is greater protectionism with invisible barriers to entry. Companies are now becoming involved in the financing of projects as well as the construction phase. There is an increase in privatization of infrastructure and building projects using build-operate-transfer, and other similar arrangements. On international projects, where there are partnership arrangements with managers and workers from two or more companies working closely together, management has to ensure that people-oriented issues receive adequate attention. In particular, the differences in cultures and management styles as well as recruiting and staffing strategies raise issues that have to be addressed. Performance appraisal and compensation and benefits are also important matters.

8. Technology transfer is now increasingly being written into contracts, particularly in developing countries. Many enterprises recognize that there is a competitive advantage to be gained by offering a technology package as part of the bid. Countries do differ in their ability to absorb technology. The most important is the educational level of the population. Vocational and technical training programmes are useful basic requirements for developing any ability to absorb technology. The United Kingdom companies recognize that technologies have to be balanced with a need to provide local employment.

9. Training is the key to effective technology transfer. Training schools on-site and off-site education centres are both methods used by United Kingdom contractors to improve training. Construction is different to many other industries because it is project-based; once a project is completed the team is disbanded. This is tackled by seeking ongoing maintenance contracts. All the United Kingdom multinational construction firms felt that, in the long run, training saves money. Training is now considered as a "product" by many companies.

10. As regards building and civil engineering works, direct employment is declining with the exception of energy and power projects where control over quality is paramount and there is still a need for direct employment.

11. Wages and conditions of work on multinational enterprise sites are usually more favourable than those offered by local contractors. The best possible wages are paid but there is little security of employment. Local labour has an expectation of higher wages and better working conditions from multinational construction enterprises.

12. Women do experience difficulties in acquiring skills and having security of employment on construction sites. Opportunities for practical training in construction work are limited and they are jealously guarded by male employees.

13. Safety and health have the highest priority. The reputation for safety of a United Kingdom multinational contractor is a strong selling point and that reputation must be protected.

14. None of the multinational contractors have experienced any major difficulty with industrial relations in developing countries. Labour unions are not strong or well organized in the construction industry due to the casual nature of construction workers.

15. The United Kingdom multinational contractors have a very clear strategy. They want to provide the best opportunity for the local workforce and to develop and train labour. Companies are conscious of their responsibilities as regards technology transfer and on the

whole, the United Kingdom construction organizations set very high standards for the world's construction industry.

Bibliography

Bon, R: *The world building market*, Proceedings of CIB W65, Sydney, University of Technology, 1990.

Department of the Environment (United Kingdom): *Housing and construction statistics 1982-92*, London, HMSO, 1993.

The Economist: *One hundred years of economic statistics*, The Economist Books (United Kingdom), 1991.

---: *Vital world statistics*, The Economist Books (United Kingdom), 1991.

Engineering News Record: *The top international contractors*, New York, McGraw Hill, Aug. 1993.

Euroconstruct: *Proceedings of the Euroconstruct Conference*, United Kingdom, 1993.

Export Group for the Construction Industries: *The international construction markets*, London, 1992.

Ministry of Construction: *Construction statistics*, Japan.

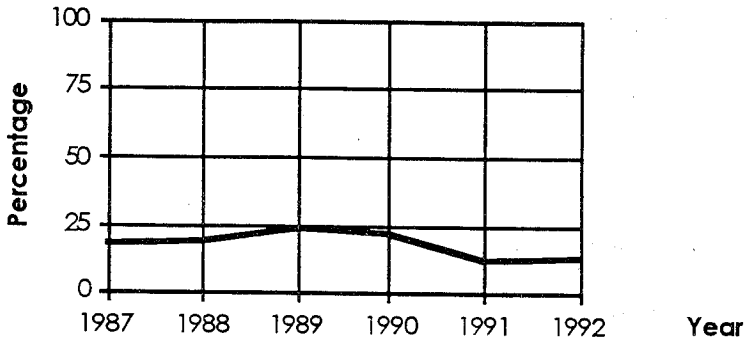
United Nations: *Trends in population policy*, New York, United Nations, 1990.

US Department of Commerce: *Construction Review*, Second Quarter, 1993, Washington, DC, 1993.

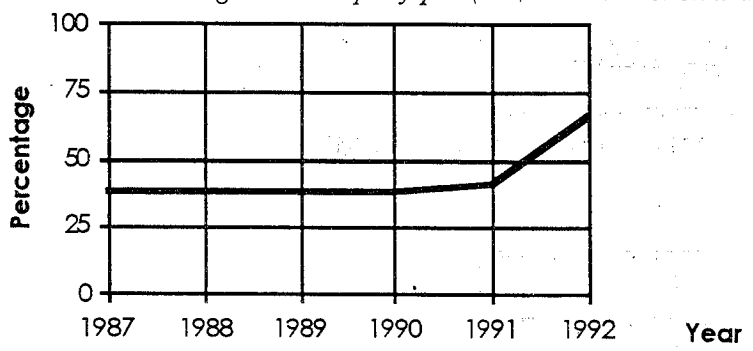
Appendix

Figure 1. Overseas work of the top ten United Kingdom construction MNEs as a percentage of total turnover

AMEC plc

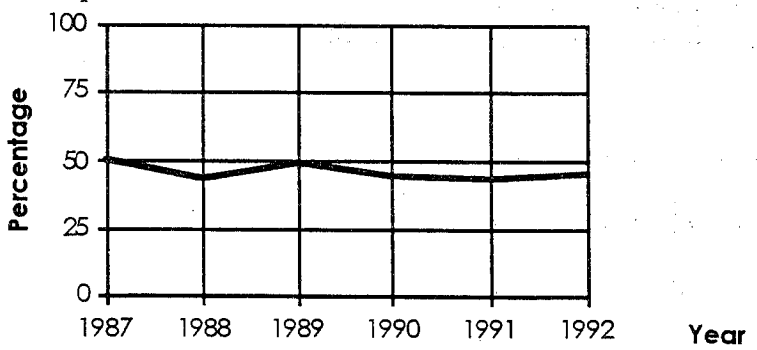


P&O Steam Navigation Company plc (Bovis Construction Ltd.)



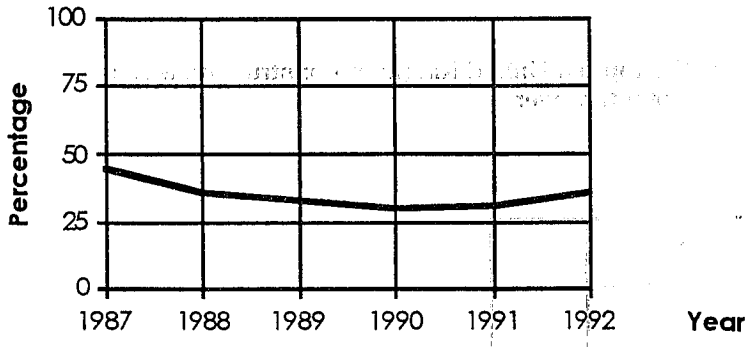
Note: These figures are for the P&O group. Bovis Construction is not shown separately for overseas operations.

BICC plc

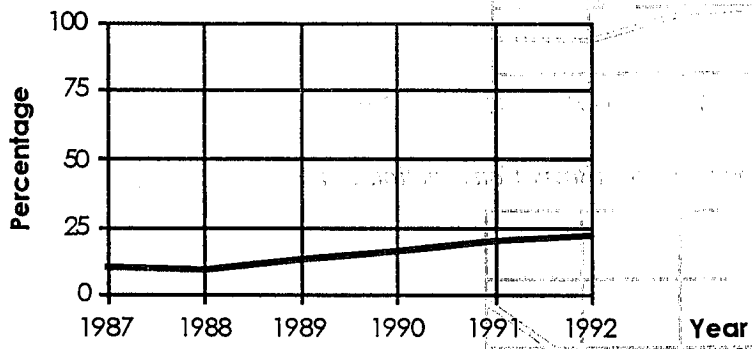


Note: These figures are for the BICC plc. Balfour Beatty is not shown separately.

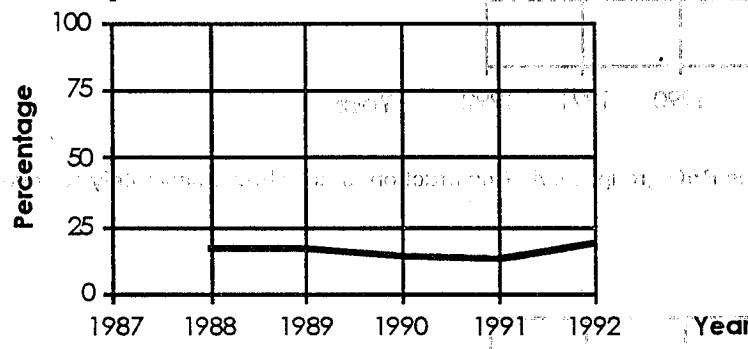
Costain Group plc



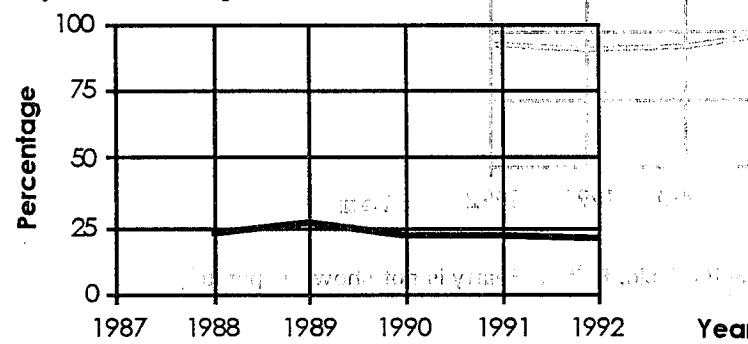
John Mowlem & Co. plc



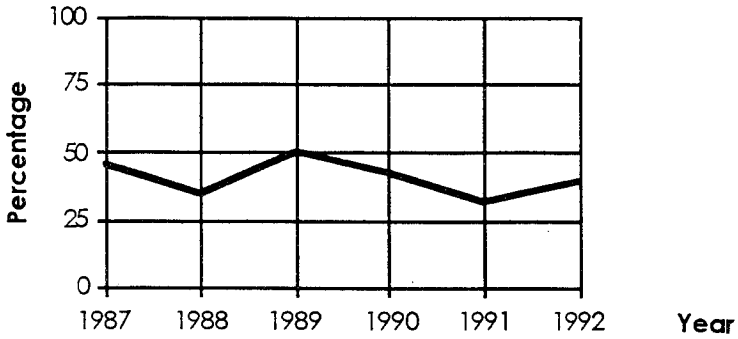
Tarmac plc



Taylor Woodrow plc



Trafalgar House plc



Note: These figures relate to Trafalgar House plc group companies, not just construction.

George Wimpey plc

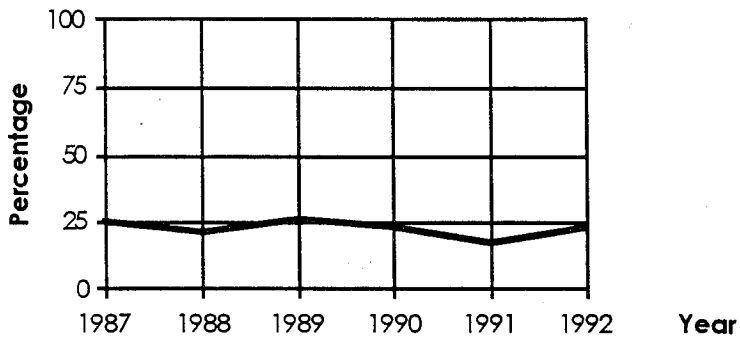
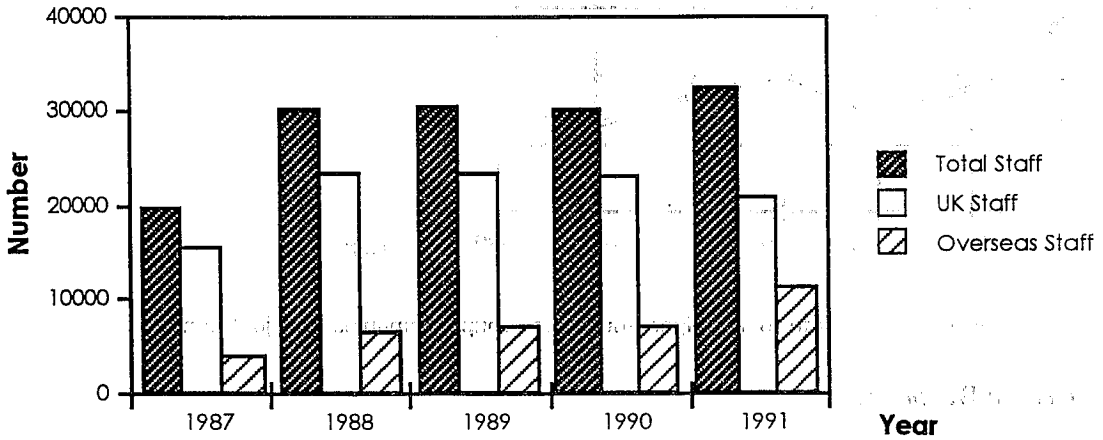
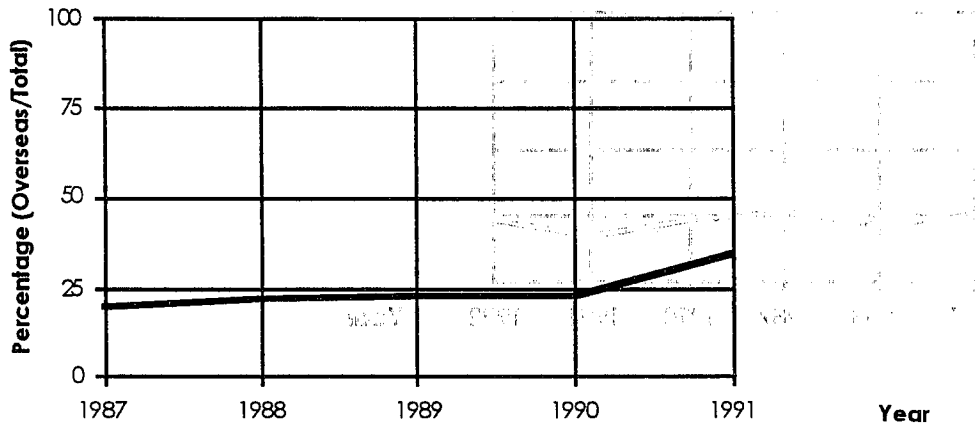


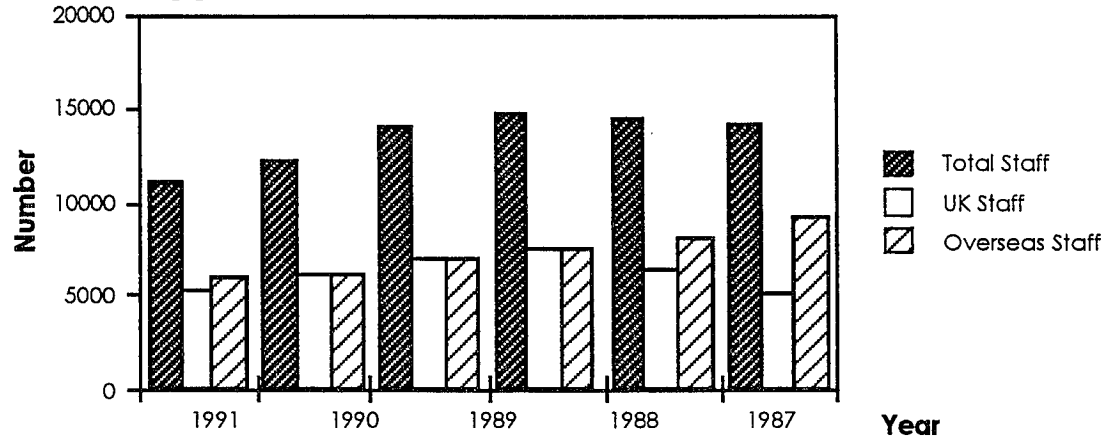
Figure 2. United Kingdom multinational staffing levels

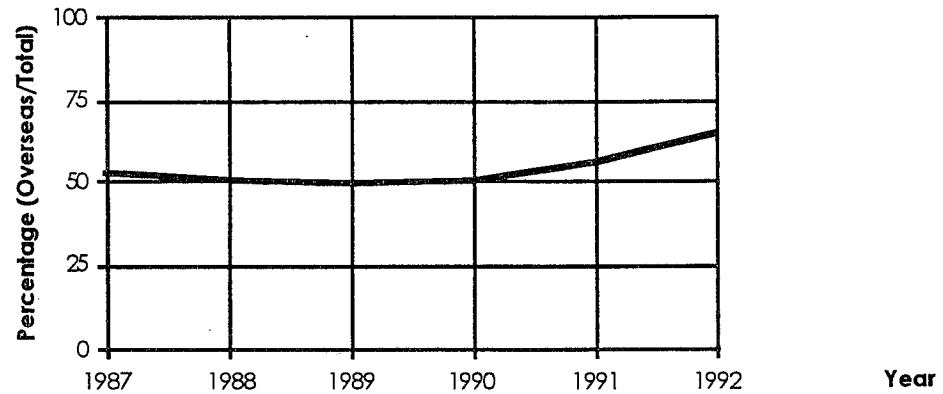
AMEC plc



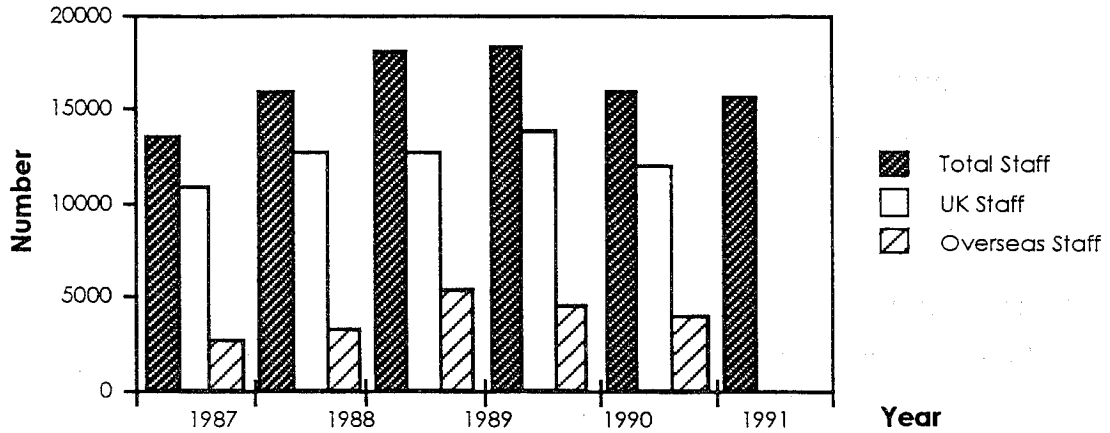


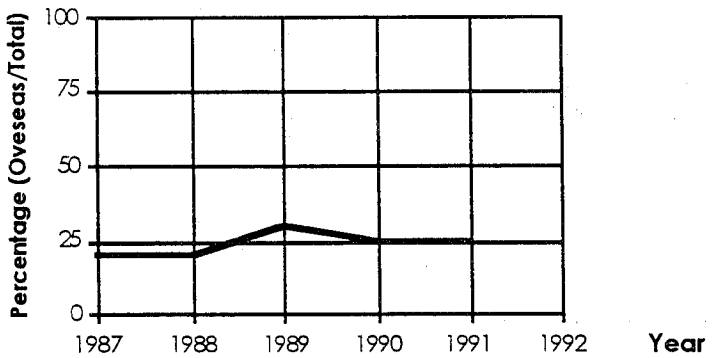
Costain Group plc



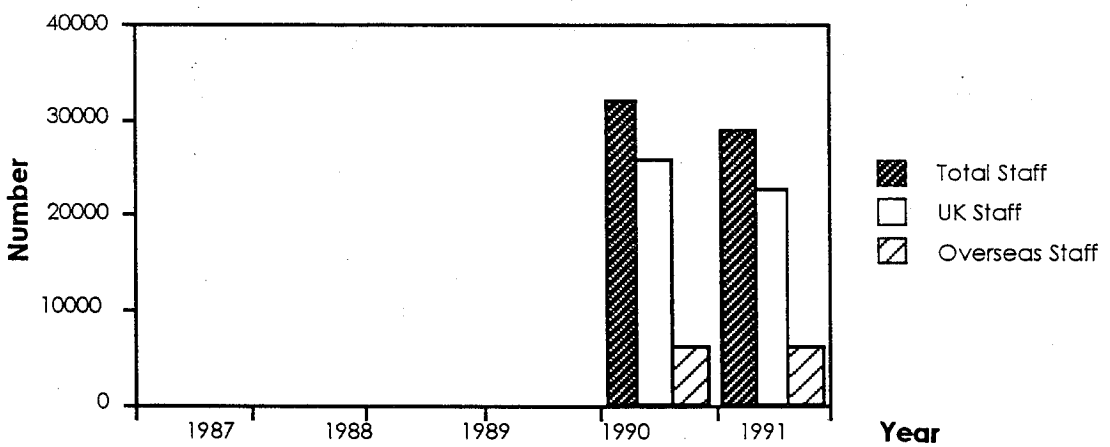


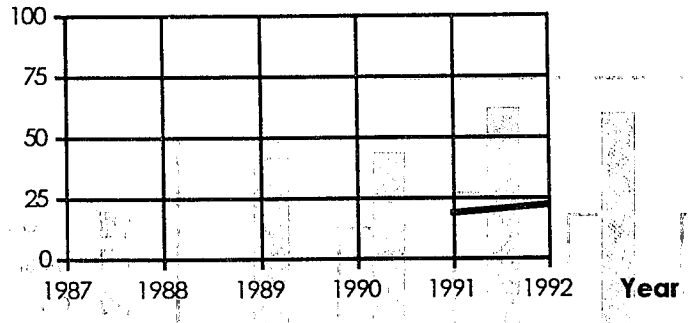
John Mowlem plc



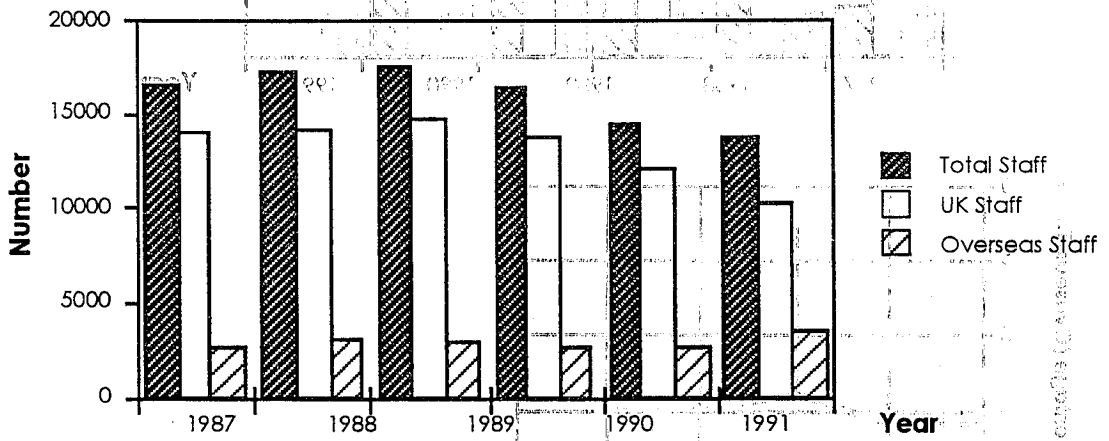


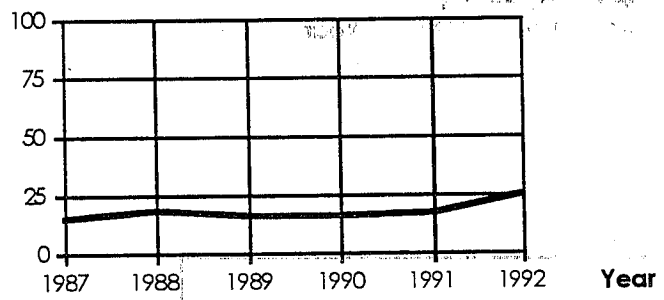
Tarmac plc



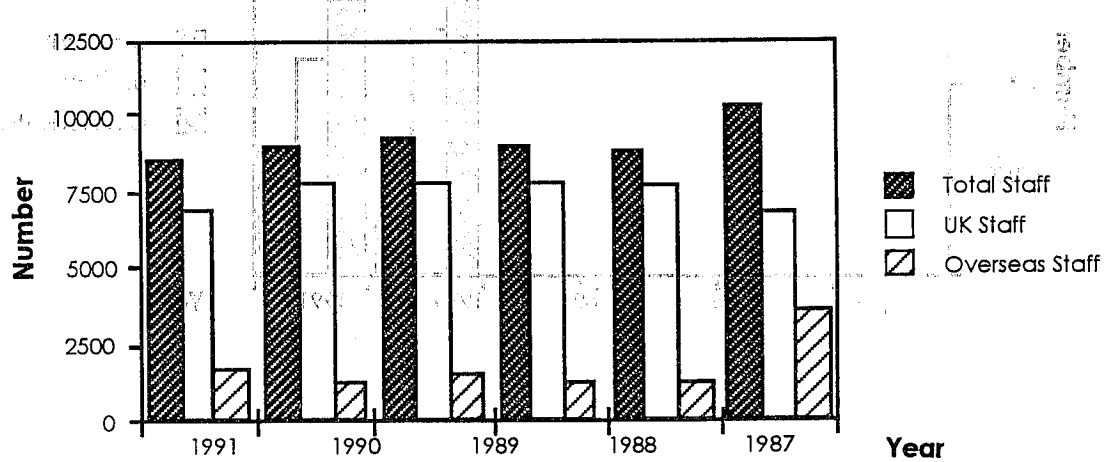


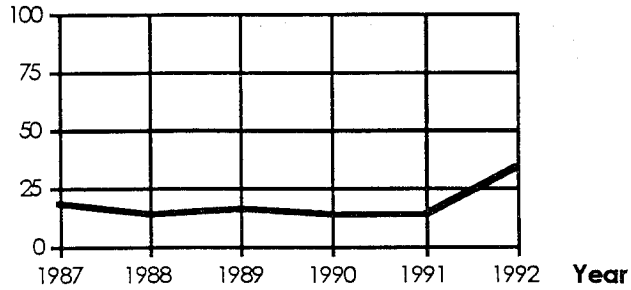
George Wimpey plc



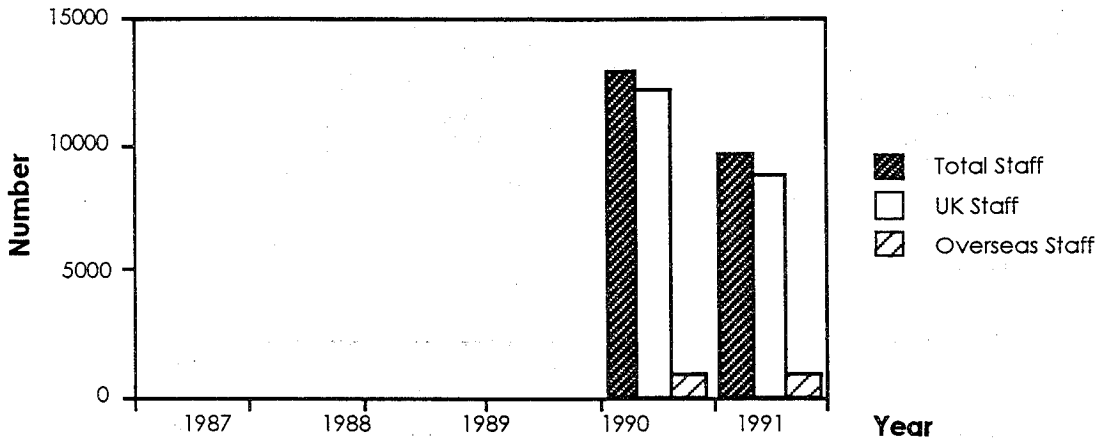


Taylor Woodrow plc





John Laing plc



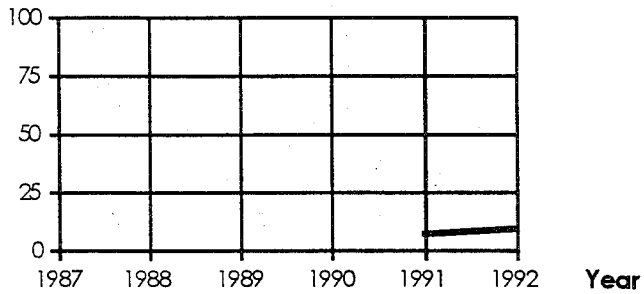
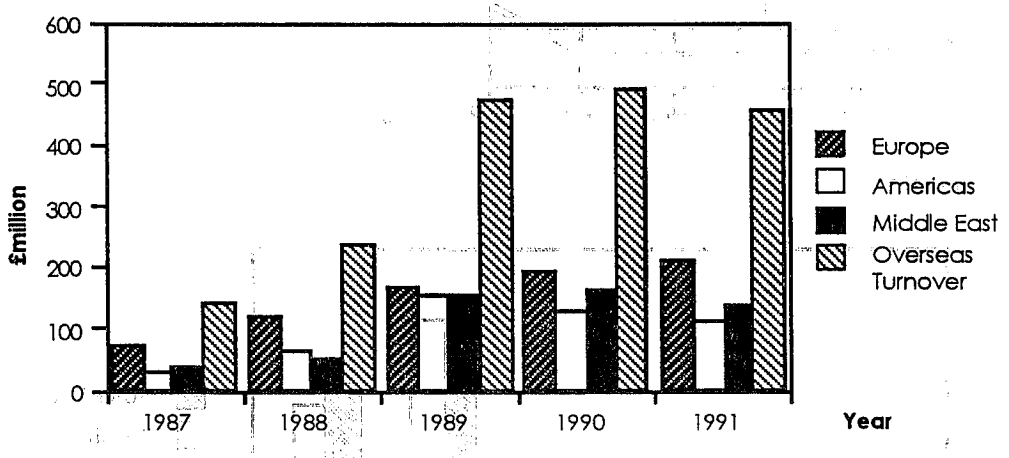
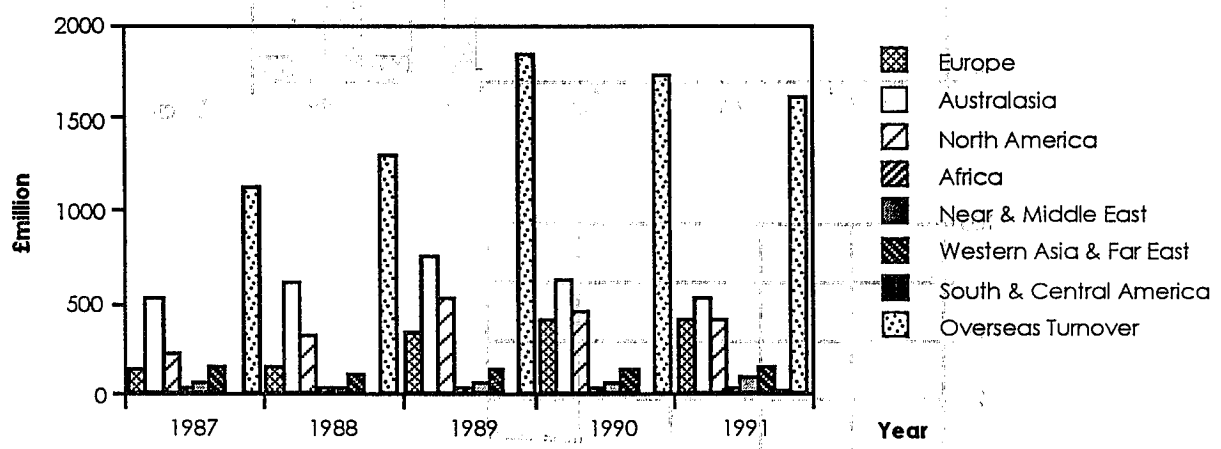


Figure 3. Overseas turnover of the top ten United Kingdom construction MNEs by geographical region

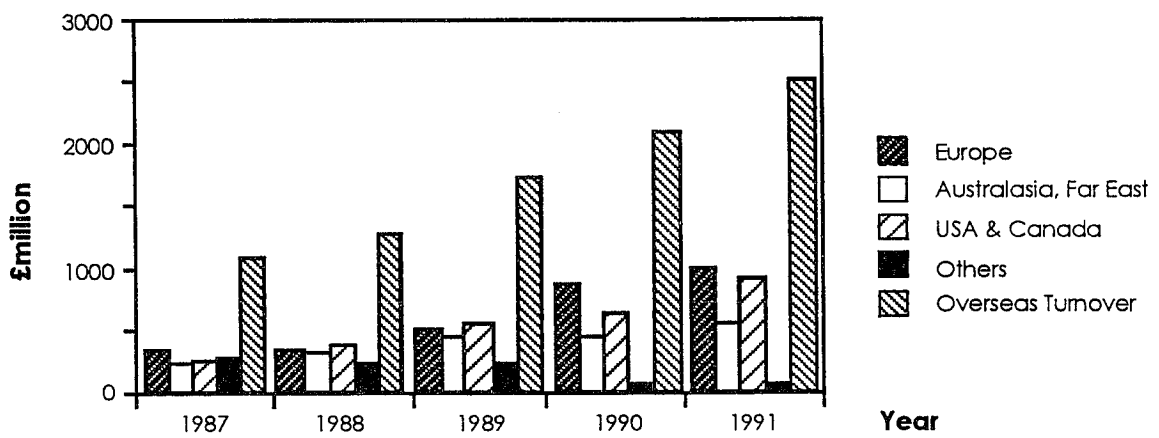
AMEC plc



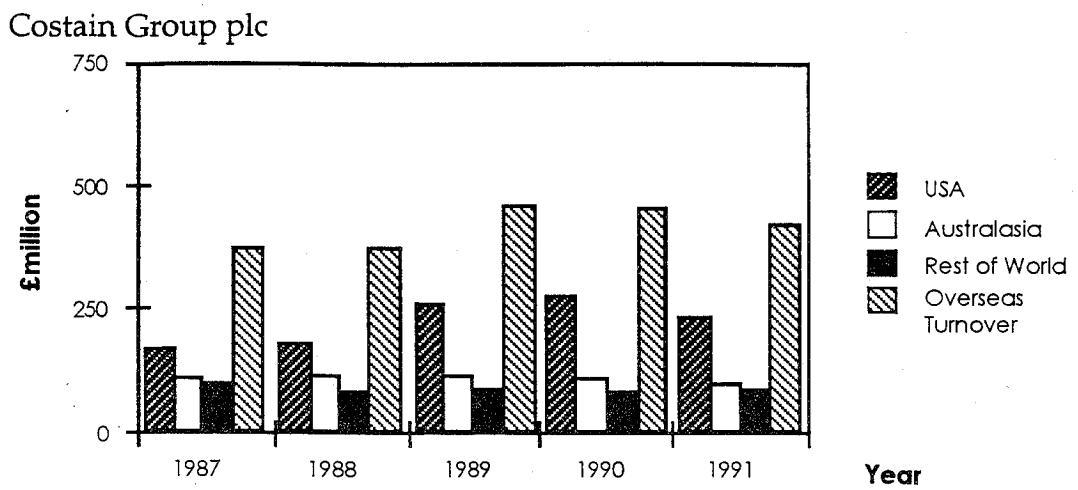
BICC plc



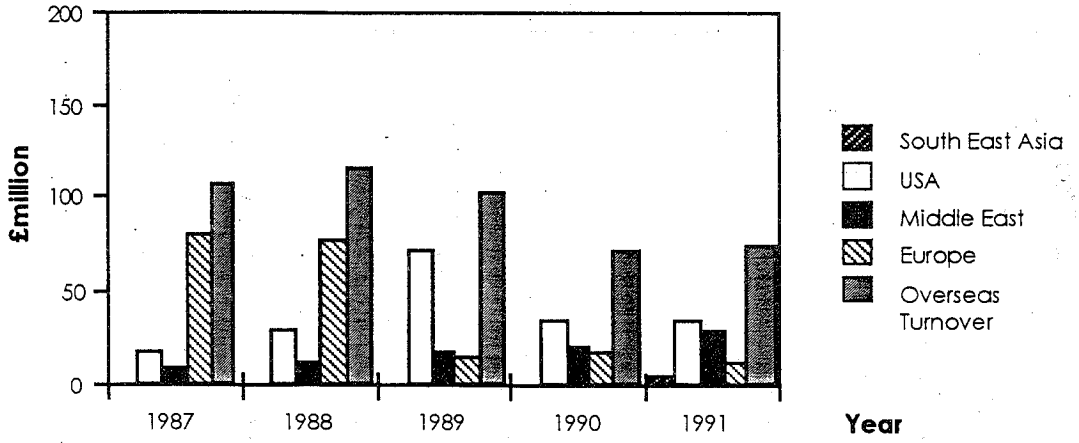
Bovis Ltd.



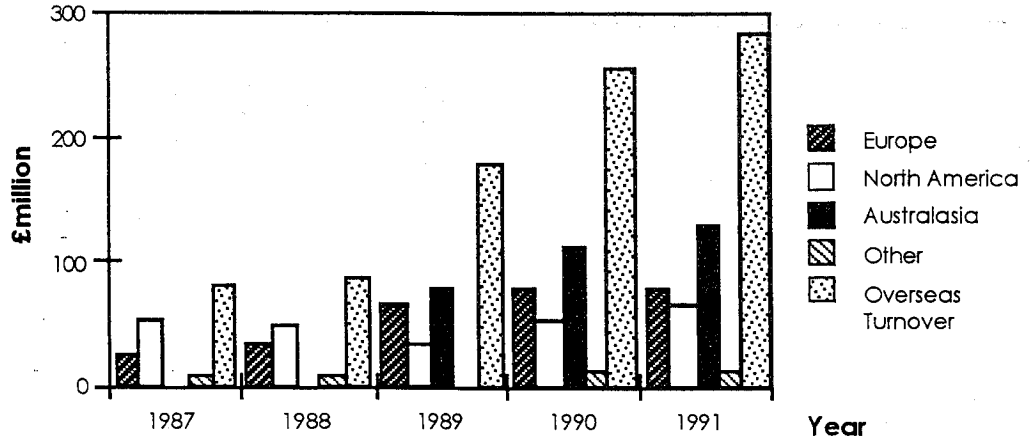
Costain Group plc



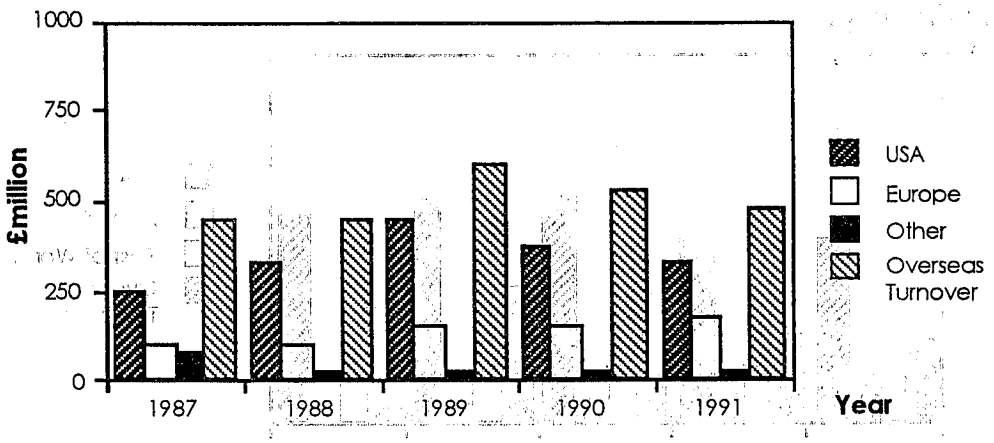
John Laing



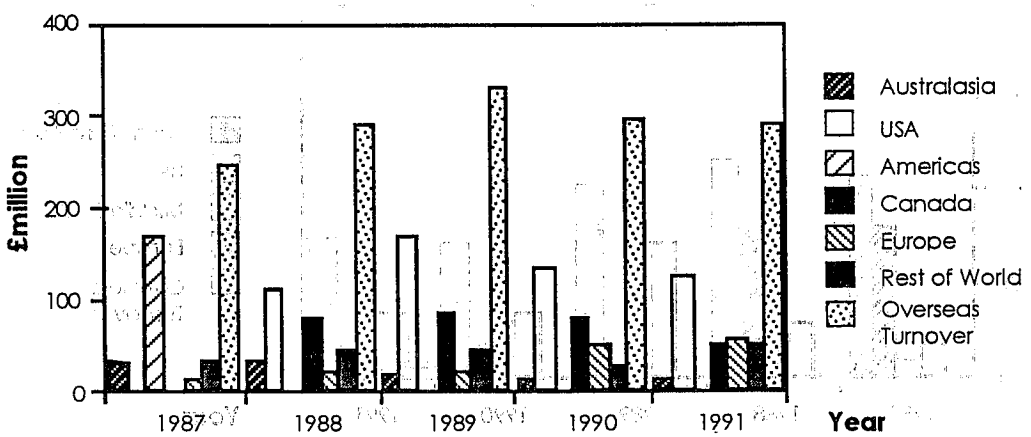
John Mowlem plc



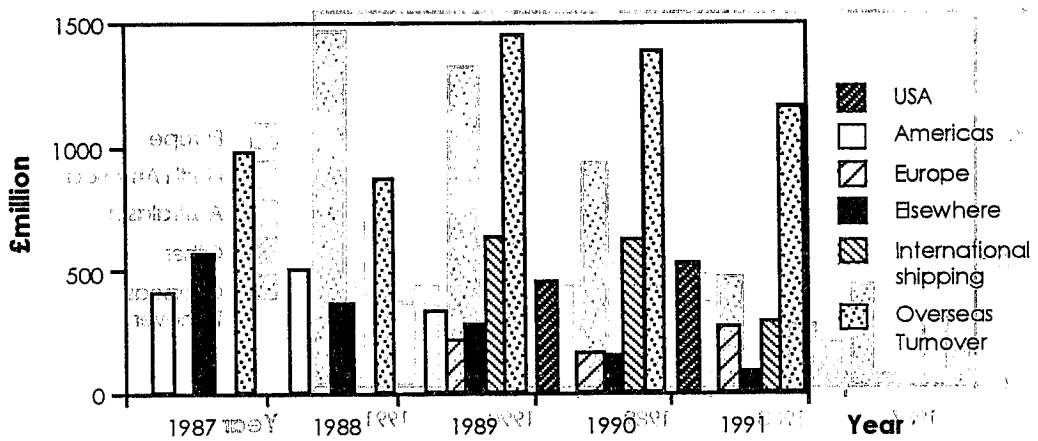
Tarmac plc



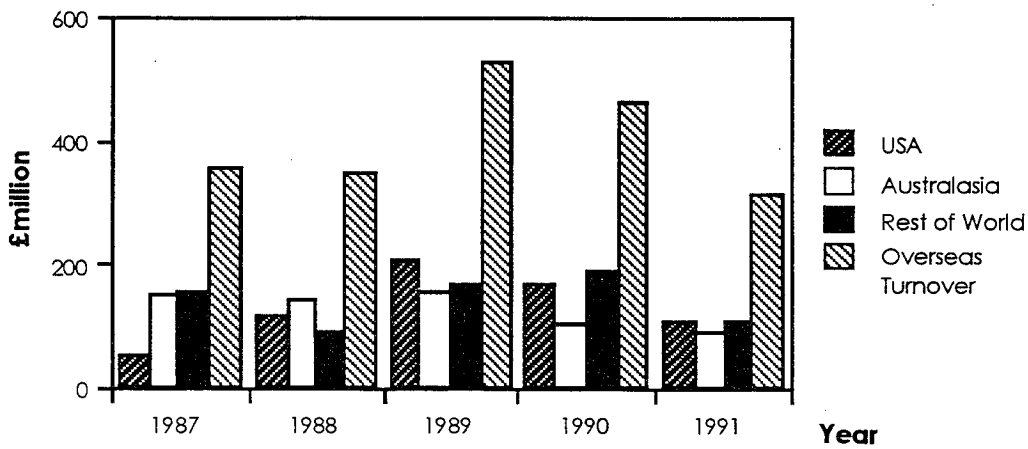
Taylor Woodrow plc

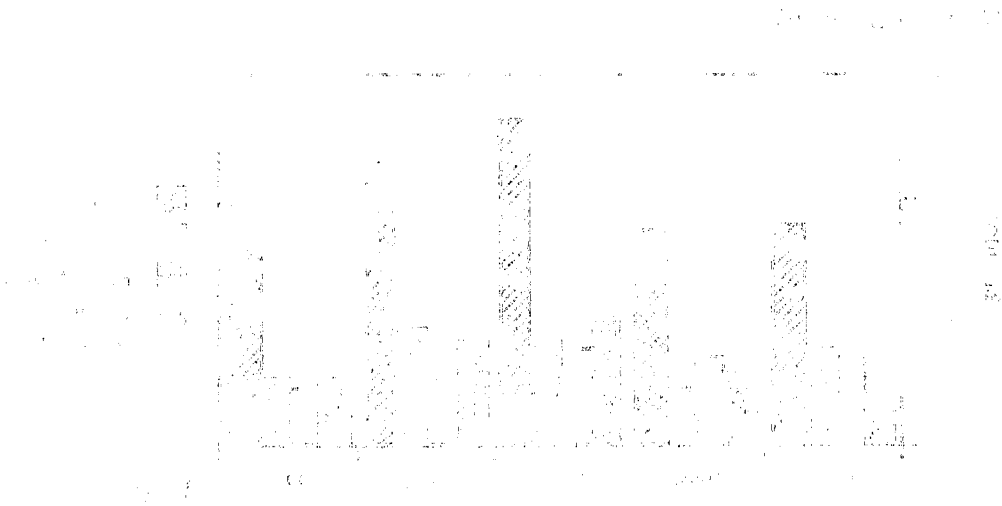


Trafalgar House plc



George Wimpey plc





Annex

Questionnaire - ILO project

The following questions should be answered with respect to a typical overseas contract.

A. The competitive environment

1. What are your most important overseas markets for construction?
2. Please indicate the three most important factors that contribute to your winning overseas projects.

   Notes: Typical factors might be, for example, price, technology, management skills, reputation, experience of project type, working knowledge of the area.
3. There are various business strategies you might employ to penetrate international markets. Typical strategies are: joint venture with an international partner; joint venture with a local partner; strategic alliance; establishment of an overseas affiliate; acquisition of a local firm.
   (a) Please indicate which of these you have chosen.
   (b) Does your preferred strategy vary from country to country or from region to region? If so, why is this the case (e.g. political pressures, the need to gain access to local knowledge)?
4. In what ways do you feel the international market-place has changed over the last five years?

B. Organizational issues

5. Where you have entered into joint venture, how has your partner been identified?
6. Please detail the type of organizational structure you would expect to adopt on an overseas joint venture. This should include factors such as: nationality of project manager and deputy project manager; inputs by visiting specialists; engineering teams and their responsibilities — is there an attempt to build integrated teams?
7. On a typical project what percentage of the management team would you expect to be local and what percentage from the United Kingdom?
8. How are subcontractors identified? Who has the responsibility for their appointment and supervision? To what extent and in what ways do subcontracting arrangements on international projects differ from those on projects in the domestic market?

C. Technology transfer and labour-related issues

9. The International Labour Office is particularly interested in examples of technology transfer by international construction firms. Can you give examples of technology transfer?

   Notes: "Technology" should be widely interpreted to include "soft" technologies such as the design and management processes as well as "hard" technologies such as installation and demonstration.
   (a) Is technology transfer a condition of you being awarded international contracts?
   (b) What types of technology have been transferred?
   (c) To whom is technology transferred, e.g. joint venture, subcontractors?
   (d) How is the technology transfer effected?
   (e) Is there an allowance in contract price for the costs of technology transfer?
10. Is it becoming more common to have a training component in the contract conditions? If so, what form does the training take? How is the training budget financed?
11. In your experience, is the direct employment by your company of local operatives on overseas projects declining? If so, what mechanisms are replacing direct employment?
12. In your opinion, is the developing world moving towards greater security of employment for construction operatives?

13. Bearing in mind work practices in developing countries, are safety and health a major concern? How is responsibility for safety and health allocated among joint ventures partners?
14. What kinds of industrial relations problems do you experience on your overseas projects?
15. Do you have a company policy on the employment of women in the construction process?
16. How do you handle the use of skilled and unskilled migrant workers on projects?
17. Do you adopt any special policies with regard to managing and motivating staff on overseas projects?
18. Any other important aspects that we have overlooked, especially 10-14?