



# Study on the Future Opportunities and Challenges of EU-China Trade and Investment Relations

## Study 9: Construction

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## EXECUTIVE SUMMARY

Over the last decade, trade and investment relations with China have been of increasing importance to European construction industry operators. China, as an emerging market, offers growth potential due to the rising demand for infrastructure and buildings as a result of its economic growth. The study covers the sub-sectors construction design and engineering as well as construction implementation and coordination. Construction enterprises usually operate within both sub-sectors covering different services in the life-cycle of a building or infrastructure.

China's construction industry share of national GDP rose from 6.7% in 1998 to 7.0% in 2003. This increase together with an average annual growth rate of 8.3% between 2000 and 2005, and an estimated annual growth rate of 7.5% in the implementation period of the 11th Five Year Programme (FYP) (2006-2010), testify to the significance of this sector in China.<sup>1</sup> The current urban population of 500 million is officially forecast to reach 800 million by 2020. The need to construct more than 10 million new apartment units every year has been stable for the past 20 years. China is thus the world's largest building and construction market consuming huge amounts of building materials and energy for heating and cooling. European industry has adopted cutting-edge technologies in sustainable building systems with high fire resistant qualities and sustainable solutions.

### Competitive Strengths and Market Opportunities

For the European construction industry, China should be seen more as an opportunity than a challenge due to its growth potential. Most Chinese construction companies operate in the less sophisticated segments of construction characterised by high volume low margin activities. Chinese companies in general are cheap and relatively efficient but they lack the expertise and management skills to handle large projects. In particular the construction implementation and coordination sector has seen a significant reform of state-owned enterprises (SOEs).

European companies can continue to retain their competitive advantage in the high value segment of project design and management and areas of niche specialisation. It is in this area where European companies have a significant advantage. They do however feel the pressure to improve their cost structure due to Chinese competitors moving up the value chain.

European construction companies should take advantage of the opportunity to actively participate in construction development in rural areas considering issues such as biodiversity conservation of the natural habitat and endangered species through eco-friendly projects. The experience of European companies in the development and implementation of environmentally friendly construction techniques should offer significant advantages over Chinese competitors.

European companies should explore opportunities to offer services throughout the entire life-cycle of a building or construction project, which generally consists of the following phases: design, construction, use/reuse and deconstruction. These are usually integrated and especially during the phase of use or reuse, product and facility management, present an opportunity for European enterprises to enlarge their business activities by offering integrated services.

### Obstacles to Trade and Investment

European companies operating in the construction sector rate the obstacles from China-specific operating practices for their business as very high, thus these practices exert a big influence on competition in the Chinese market. This situation is not expected to improve and foreign invested enterprises (FIEs) will continue facing obstacles and market access barriers favouring Chinese competitors. Expectations to establish a fair and legal business environment with WTO have not been met so far. Construction enterprises are still subject to a number of regulations, i.e. they must operate both in accordance with general company laws but also in accordance with sub-sector specific regulations. In addition specific decrees have been released since China's WTO accession. A discriminatory national qualification system places them at a disadvantage compared to local contractors. This includes minimal registered capital and assets, minimum yearly turnover, minimum permanent personnel and the requirement that only qualifications obtained inside of China are accepted as references. As for merger and acquisition transactions, the grade qualification of the local company is being re-assessed, leaving the foreign partner without reassurance towards the feasibility of the new partnership. Further, the Chinese legal system is characterised as inconsistent and creates an unpredictable market in the construction sector.

A quantitative analysis reveals that due to these market access obstacles the, European construction companies lose up to \$5.2 billion per annum in lost business opportunities.

### **Policy Recommendations**

China has failed on several points to act according to its commitments made in the WTO's General Agreement on Trade in Services; mainly, by making it more restrictive for FIEs to enter the construction market than was the case at the time of its accession to the WTO. The efforts of the European Union, as well as the Chinese government, should focus on providing a less restrictive business environment in the construction sector to trigger global competition between construction, engineering and design companies in order to allow cost advantages, know-how and technology transfer, and overall improvement in quality. European contractors recommend the following actions and improvements to be made:

- Allow 'registered foreign contractors' to provide construction related services, as was the case under Decree 32 prior to China's accession to the WTO.
- Allow construction companies working in a consortium to undertake work at a level defined by the combined strengths of the entities' qualification grades
- In cases of mergers and acquisition the qualification of the Chinese company should be maintained.
- Flexibility in the application of capital and asset requirements
- Lobby for similar concessions granted under Circular 159 for foreign-invested construction companies to be re-established and extended to the design regime under Decree 114
- Facilitate China's ratification of the WTO Government Procurement Agreement (GPA)

### **Recommendations for Competitiveness**

- Development of niche markets especially possibilities from the 11<sup>th</sup> five year programme
- Target superior service and quality and maintaining high standards in construction
- Enlarge scope of construction services to ensure fully integrated services
- Foster innovation, research and development to stay competitive in value added areas
- Assessment of know-how and service market potential and risk in China
- Assessment of potentials and risks of new types of cooperation or localisation
- Assessment of alternative investment locations to broaden portfolio.

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## ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
BFAI	Bundesagentur für Außenwirtschaft
CAGR	Compound Annual Growth Rate
CEPA	Closer Economic Partnership Arrangement
CNY	Chinese Yuan
EU15	European Union comprising 15 member states, before the accession of Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia on 1 May 2005
EU25	European Union comprising 25 member states: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, United Kingdom
EIC	European International Contractors
EUCCC	European Chamber of Commerce in China
FIEC	European Construction Industry Federation
FDI	Foreign Direct Investment
FIE	Foreign Invested Enterprise
FE	Foreign Enterprise
FYP	Five Year Programme
GDP	Gross Domestic Product
IP	Intellectual Property
IPR	Intellectual Property Rights
JV	Joint Venture
MOC	Ministry of Construction
MOFCOM	Ministry of Commerce of the People's Republic of China
NDRC	National Development and Reform Commission
OECD	Organisation for Economic Co-operation and Development
PPP	Public Private Partnership
PRC	Peoples Republic of China
RMB	Chinese Yuan
SME	Small and Medium Sized Enterprise
SOE	State-owned Enterprise
SQC	Skill Qualification Classification
US	United States of America
US\$	United States of America Dollar
WFOE	Wholly Foreign-owned Enterprise
WTO	World Trade Organisation

## 1. INTRODUCTION

### 1.1 General Information on the Construction Industry

The construction sector is one of the most significant and important sectors for the European Union, as well as to China. It is estimated that the construction industry makes up 5.5% of European gross added value and 7% of China's gross domestic product (GDP). For the purpose of this study, the construction industry is defined as that part of the economy which deals with the design, construction, maintenance and utilisation, as well as with the modification and demolition or deconstruction, of buildings and civil infrastructure. The construction industry therefore is comprised of two key sub-sectors:

1. Construction design and engineering
2. Construction implementation and coordination

Construction design and engineering includes design services and engineering services both of which require specific know-how of design techniques and civil engineering. The sub-sector of construction implementation and coordination is concerned with project planning, management and control, as well as the employment of trades, workers, and equipment to carry out the physical work on a building site, i.e. erecting buildings, bridges, streets, industrial plants, harbours etc. Construction enterprises usually operate within both sub-sectors covering different services in the life-cycle of a building or infrastructure.

Other parts of the construction industry such as the building materials industry and the real-estate sector are excluded from this report as they do not reflect the core business of the construction industry and rather belong to the manufacturing and service sector.

### 1.2 Economic Significance of the Construction Industry

The importance of the construction industry for the European economy is further underlined by its share of 4% to 9% of GDP in the EU member states, and 4% to 10% of total employment.<sup>2</sup> In 2004, there were an estimated 2.4 million construction companies in the EU member states. However, it is noteworthy that many of these companies are small and medium sized enterprises, 97% of which have less than 20 employees and 93% have less than 10, according to the European Construction Industry Federation (FIEC).

The economic recovery of the European Union has already positively influenced construction activity which experienced growth of 1.5% during 2004, spurred mainly by the new

housing sector (+5.5%). The stable growth of the Chinese economy in recent years has offered additional opportunities for European construction enterprises to expand their business. The construction industry has been a main contributor to the average annual growth rate of the Chinese economy between 2000 and 2005 which was 8.30%. The construction industry's share in China's GDP rose from 6.7% in 1998 to 7% in 2004, and its contribution to total employment increased from 4.7% in 1998 to 5.3% in 2002. It forms an important part of the planned growth in the period of the 11<sup>th</sup> five year programme (FYP) (2006-2010), where it is expected to grow by 7.50%. In the first quarter of 2006, the Chinese construction sector had an output value of 551.2 billion RMB, a 22.3% increase over the first quarter of 2005. Also in the same time period, Chinese construction companies have completed projects with a value of 226.3 billion RMB, which reflects an increase of 25.3% over the first quarter in 2005.<sup>3</sup>

Therefore, as one of the major developing countries in the world, China offers great opportunities for Chinese and foreign companies alike to enlarge their scope of business activities by entering the Chinese construction market in segments such as design, engineering, project and also facility management. Additionally, China's accession to the WTO in 2001 actively enforced its opening to the world trading system and stimulated further foreign trade investment with China. In the process of its accession to the WTO, the Chinese government issued its Law on Government Procurement, which covers purchasing by state organs and public social institutions (but not state-owned enterprises). The construction sector was identified among those encouraged industries which would benefit from less-restrictive regulations concerning investment and implementation of construction projects.<sup>4</sup>

### 1.3 Structure of the Research Study

This report takes a forward looking perspective to review the evolution of the construction industry and market in China. We will then review how this is likely to affect the competitive positioning of European construction companies in China and third markets. The findings presented in this study are based on research and analysis of sources, including statistics from the WTO, Chinese and European industrial associations which has complemented as well as research in relevant industry studies and literature. Interviews with several European construction companies, as well as with Chinese experts, give industry insights and information on recent developments and trends in the Chinese construction industry.

This report is structured as follows: **Section 2** presents a market overview of the Chinese and European sector. In **section 3**, opportunities and advantages for European construction companies with respect to China are discussed and investment potential in China is indicated. **Section 4** outlines market access barriers, such as legal conditions, as well as barriers originating from companies' perceptions of market access obstacles. Trends of the construction industry and two forward looking development scenarios are the focus of **section 5**. In **section 6**, recommendations on competitiveness for European construction companies as well as on trade policy to ease market access obstacles are identified. Conclusions are drawn in **section 7**.

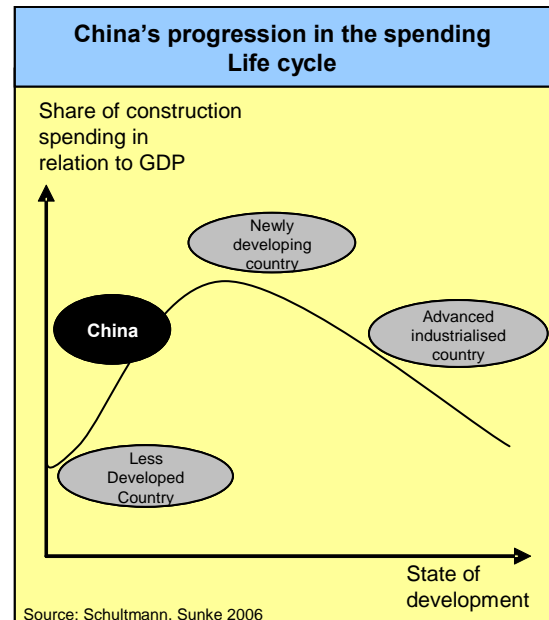
## 2. CHINESE AND EUROPEAN CONSTRUCTION MARKET OVERVIEW

### 2.1 Chinese Construction Market

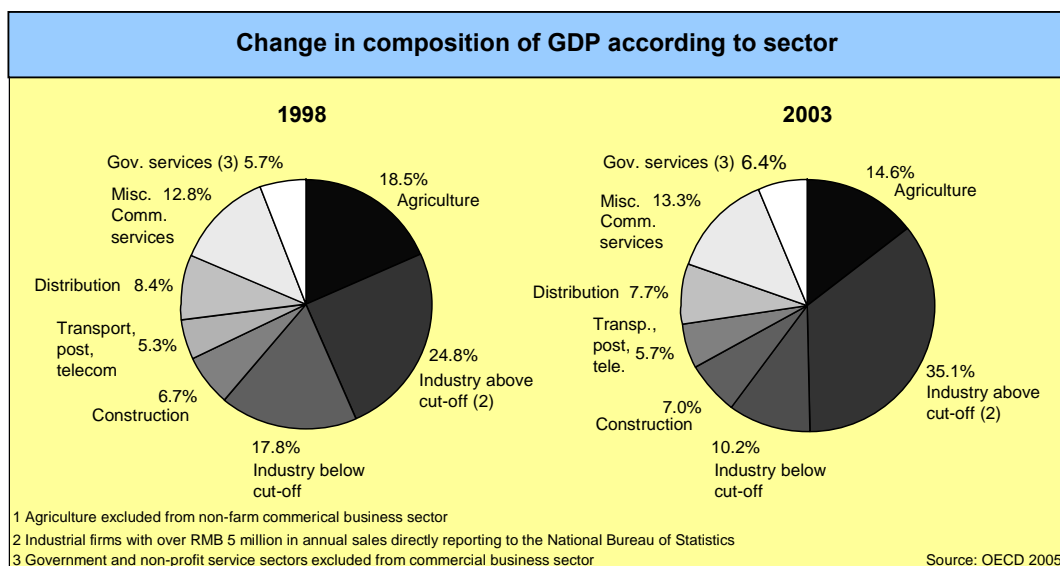
#### 2.1.1 Economic determinants of the Construction Sector in China

In this section, the economic conditions for the construction sector and its sub-sectors as defined in section one are highlighted. Generally, activity in the construction sector (accumulated for construction design and engineering as well as construction implementation and coordination) of a country is closely related to economic growth and development. The economic developments associated with the transformation of a less developed country to

an advanced developed and industrialised country lead to a change in the role of construction in that country.<sup>5</sup> As shown in **Figure 2**, the share of the construction industry in China as a share of national GDP rose from 6.7% in 1998 to 7.0% in 2003. **Figure 1** shows, in the style of a life-cycle-concept, that China is progressing from a less developed to a newly developing country.

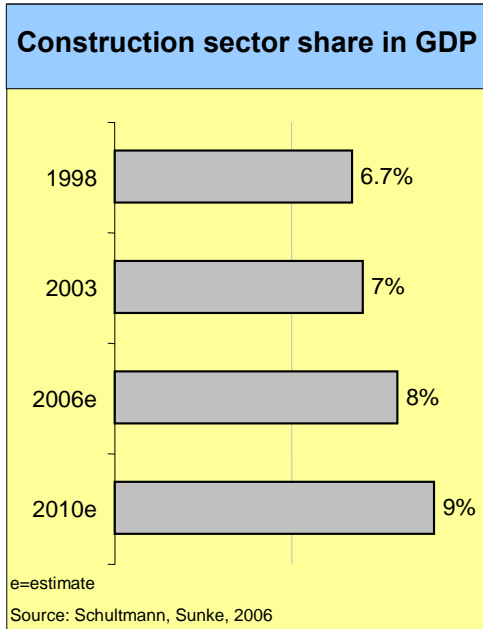


**Figure 1: China's progression in the spending life cycle**



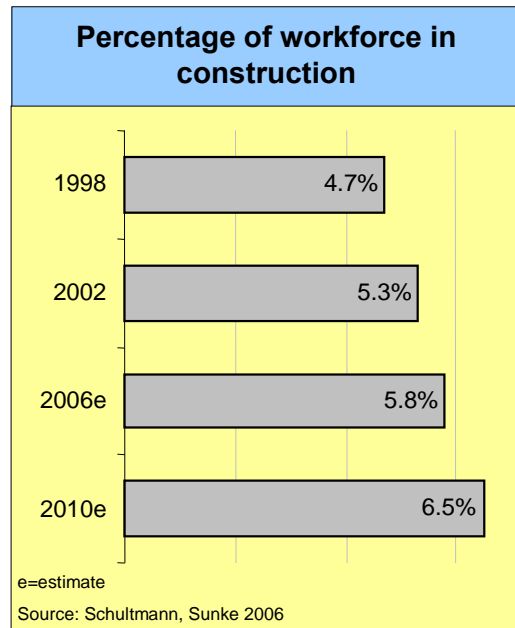
**Figure 2: Change in composition of GDP according to sector - 1998 and 2003**

China is among those countries with high growth rates in the construction sector and a high long term growth potential. The construction sector's share of China's GDP is depicted in **Figure 3**, where projections assume that this growth potential will remain stable for the next five years.



**Figure 3: Construction sector share in GDP 1998-2010**

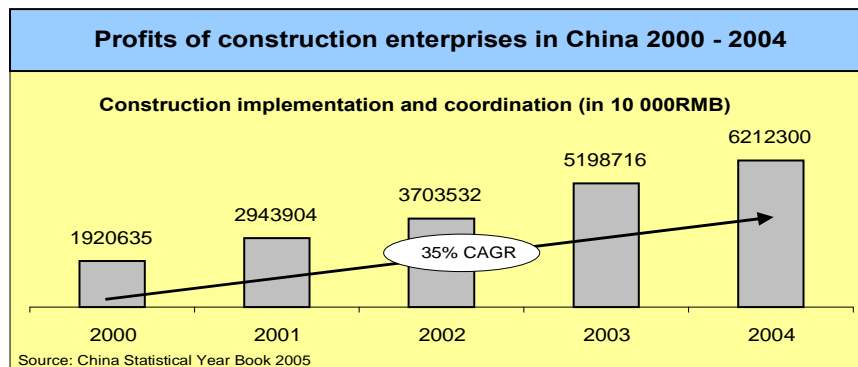
Taking into account factors such as the increasing demand for industrial infrastructure and the ambitious objectives of the Chinese government in their 11th FYP, China's share in construction spending in relation to GDP is expected to further increase in a mid-term perspective. Consequently, China when compared with developed countries (where construction markets are already saturated and in which investment is mainly concentrated on the already existing building stock) offers higher investment potential in the construction market (cf. **Section 3**).



**Figure 4: Share of total employed working in the Construction sector 1998-2010**

At present, nearly 40 million workers are employed in the Chinese construction sector. 80% of these come from China's rural areas and received little proper training before taking their jobs. Most of them lack sufficient operational skills for security and protection, which results in a high accident rate for the industry.<sup>6</sup> The employment structure of the Chinese construction sector, a situation likely to reflect GDP share, is shown in **Figure 4**. While 4.7% of total employment was contributed by the construction industry in 1998, the rising demand for construction "products" and services is expected to result in an increase of up to 6.5% by 2010.

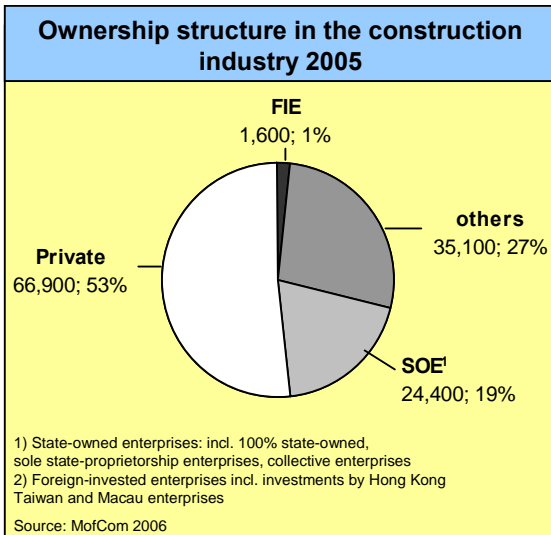
In addition to rising employment in the industry, profits have also been increasing by 35% in the period between 2000 and 2004 as shown in **Figure 5**.



**Figure 5: Profits of construction enterprises in China 2000-2004**

### 2.1.2 Restructuring of the Construction Sector

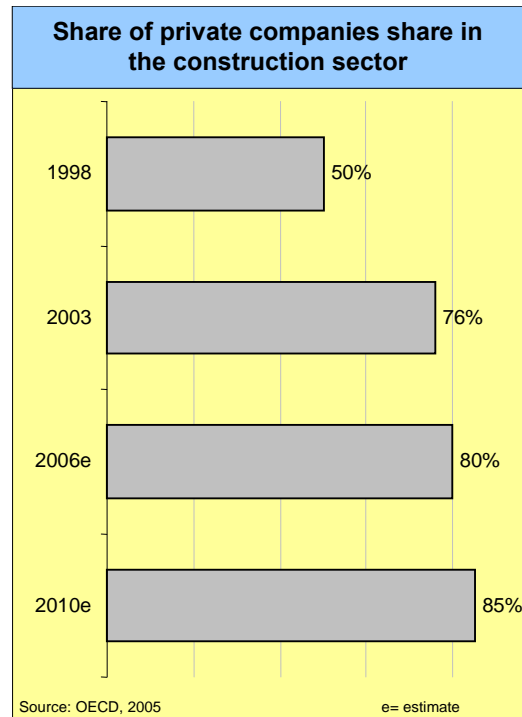
Along with ongoing growth of the Chinese construction industry, a restructuring of the state-owned sector is taking place. Currently, private companies account for well over half the construction sector's contribution to China's GDP and three-quarters of its exports. Further private sector growth is expected.<sup>7</sup> However, this fact is tempered due to government authorities holding a stake in most privately owned companies.



**Figure 6: Ownership structure in the construction industry in 2005**

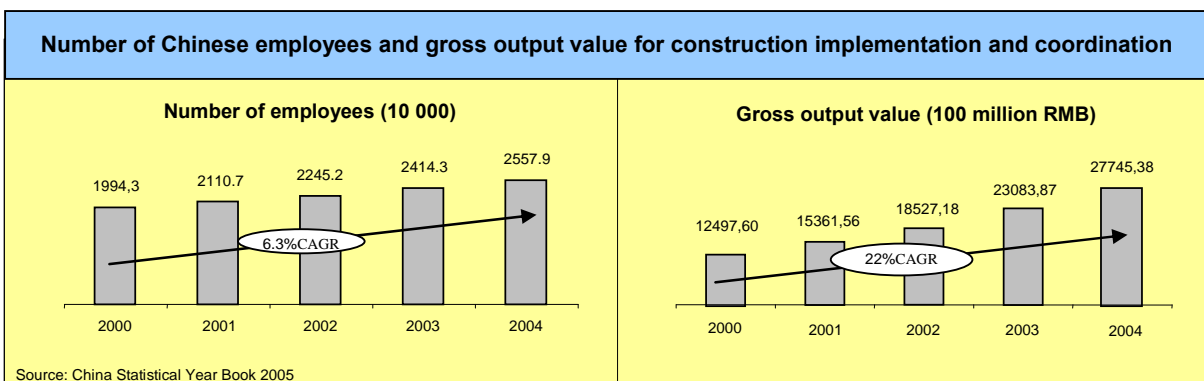
**Figure 6** shows the structure of the construction industry operating in China according to ownership type in 2005. Altogether, about 128,000 enterprises are operating in this sector in China. These include major Chinese construction companies, for example, the China Railway Engineering Corporation, the China State Construction Engineering Corporation, and the China Harbour Engineering Corporation.<sup>8</sup> Although Foreign Invested Enterprises (FIEs), operate in the Chinese construction market, their share amounts to only 1% of total enterprises and has not changed over the last few years.<sup>9</sup> The low number of FIEs in ownership share gross output value, is

mainly caused by difficult and complex access restrictions to enter and operate in the Chinese market, as referred to later in **section 4** of this report.



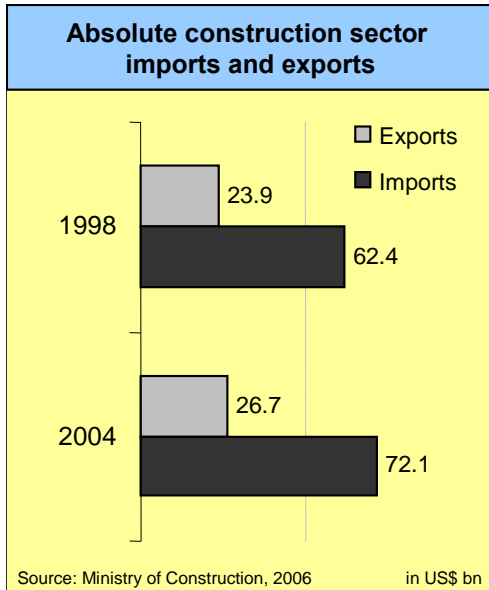
**Figure 7: Share of private companies in the construction sector**

**Figure 7** presents the estimated overall sector share of private construction companies (non-state and non-collective registered companies) in the construction industry for the years 1998, 2003, 2006 and estimated figures for 2010.<sup>10</sup> A significant shift has occurred from the dominance of SOEs to private domestic companies and FIEs since China's accession to the WTO.<sup>11</sup> The number of employees as well as the gross output value of construction companies is shown in **Figure 8**. The number of employees rose approximately 6.3% annually from 2000 to 2004, whereas the compound annual growth rate (CAGR) amounts to 22% per year.



**Figure 8: Employees and gross output value - sub-sector implementation and coordination**

### 2.1.3 Construction Sector Imports-Exports



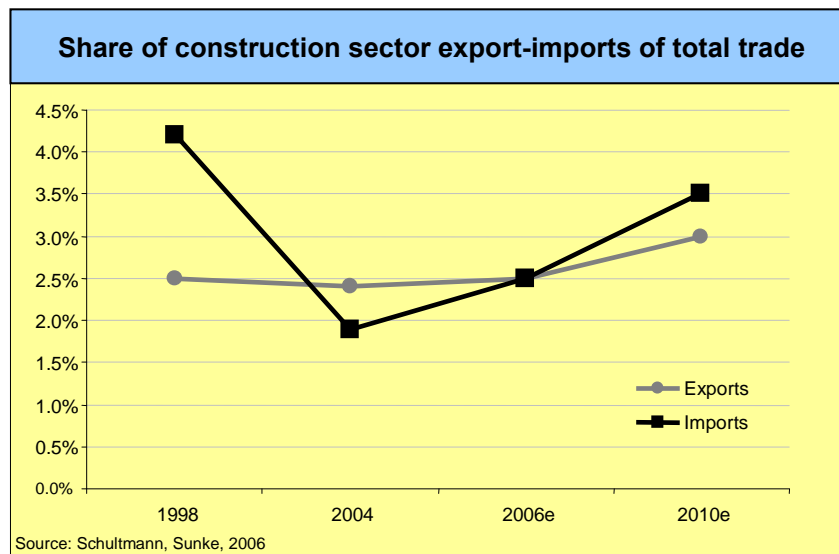
**Figure 9: Absolute construction sector exports and imports for China**

The absolute value of China's construction sector related imports and exports is depicted in **Figure 9**. China's imports exceeded its exports by more than 270% in 2004. However, as China is swiftly advancing towards technological parity with industrial nations, its balance of trade in this sector is

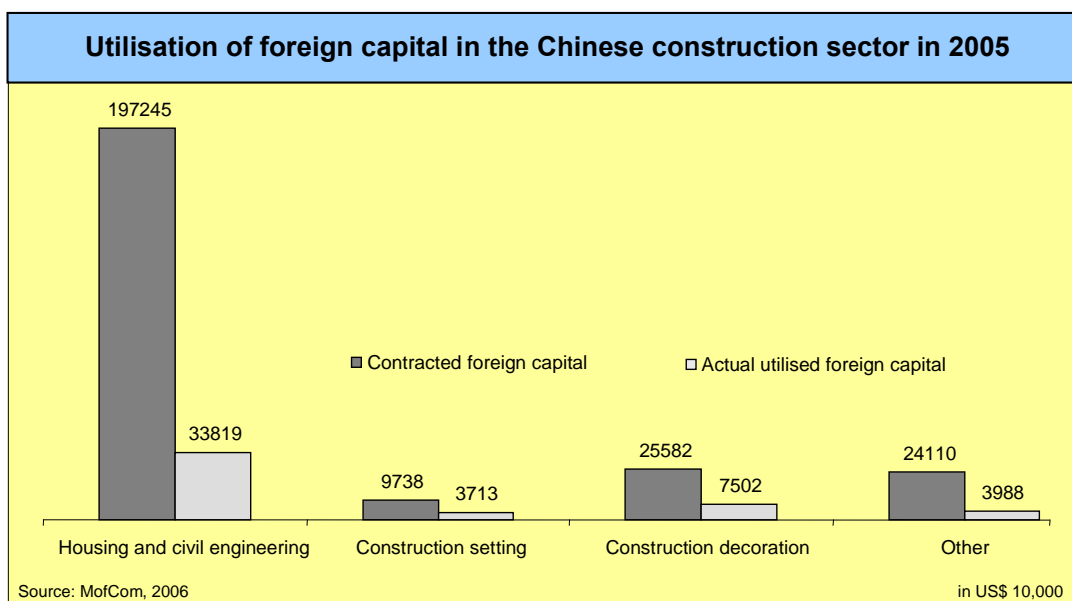
set to improve in the next 5 years where exports are expected to increase significantly.

Analysis of the construction sector (design and engineering, as well as implementation and coordination), shows that imports are also expected to grow (**Figure 10**). This is due to the relatively long life-span of construction projects leading to longer innovation and knowledge adaptation cycles as compared with other industry sectors. Moreover, the increase in imports is driven by the low capacity of Chinese companies in advanced construction and project management techniques.

In recent years Chinese construction enterprises do appear to be catching up with European counterparts. Private sector motivation is fostering the penetration of the global market, particularly in other Asian countries (ASEAN). Nevertheless, European contractors will remain competitive in high value segments and large scale projects requiring extensive expertise and specialisation. These sub-sectors include environmentally friendly projects, the manufacturing of bridge elements, and special niche markets (e.g. desalination and waste incineration).



**Figure 10: Share of construction sector export-imports of total trade for China**



**Figure 11: Utilisation of foreign capital in the Chinese construction sector in 2005**

#### 2.1.4 Foreign Investment

According to MOFCOM statistics, 287 foreign contractors have registered in China and 1,000 Sino-foreign joint-ventures (JVs) or cooperative construction enterprises are engaged in civil engineering construction, line, pipe and equipment setting, as well as building interior decoration projects. Most of these enterprises are from Hong Kong, the US and Japan, with relatively few from Europe. These FIEs have the opportunity to undertake projects with loans from both the private sector and international institutions, such as the World Bank and the Asia Development Bank, with loans or subsidies from foreign governments. In addition to international donor funded projects undertaken by foreign contractors, the

planning of large projects in Shanghai has attracted nearly all of the well-known international architectural companies. According to MOFCOM statistics 140 out of the 200 top international design and engineering companies have already opened offices in China. The utilisation of foreign capital in the construction industry is presented in **Figure 11**.<sup>12</sup>

The main figures on projects, contractual value and realised value for foreign direct investment in China are shown in **Table 1**. In terms of country of origin, roughly 6% of the total Foreign Direct Investment (FDI) in 2004 originated from the European Union and 9% from the US. The main investors were Asian nations, with 70% of FDI inflows.

**Table 1: Inflow of FDI to China**

	No. of Projects	% Change previous yr	% Share	Contractual Value	% Change previous yr	% Share	Realised Value	% Change previous yr	% Share
<b>Total FDI 2004</b>	43664	6.29		1534.79	33.37		606.30	13.31	
<b>EU 15</b>	2423	16.83	5.55	83.19	42.83	5.45	42.39	7.86	6.99
<b>USA</b>	3925	-3.33	8.99	121.65	19.72	7.93	39.41	-6.13	6.5
<b>10 Asian Investors</b>	30671	5.73	70.24	917.94	24.26	59.81	372.71	9.98	61.47

Unit 10,000 US\$ Reference date: 29.11.2005 www.fdi.gov.cn

Top 10 Asian Investors: Hong Kong, Indonesia, Japan, Macao, Malaysia, The Philippines, Singapore, Republic of Korea, Thailand, Taiwan Province.

Source: MOFCOM 2006

**Table 2: FDI for the construction sector for 2004**

	No. Of Projects	% Share	Contractual Value	% Share	Realised Value	% Share
<b>Total FDI 2004</b>	43664		1534.79		606.3	
<b>Construction</b>	411	0.94	17.69	1.15	7.72	1.27

Unit 10,000 US\$

Reference date: 29.11.2005

www.fdi.gov.cn

Source: MofCom 2006

**Table 2** shows the sectoral distribution of FDI in 2004, with the construction sector only amounting to 1.15% of total inward FDI in terms of contractual value share in comparison to the real estate sector with 8.79% and the manufacturing sector with a contractual value share of 71.5%. However, with a contractual value of USD 1.77 bn FDI inflows for construction are similar to other major industry sectors in China such as Computers and Software, Wholesale – Retailing and Transport – Warehousing – Post/ Telecommunications.

### 3. OPPORTUNITIES AND ADVANTAGES FOR EUROPEAN CONSTRUCTION COMPANIES WITH RESPECT TO CHINA

This section explores sector trends and potential opportunities for European construction companies in China. The 11<sup>th</sup> 5 year programme for the period 2006 – 2010 prioritises sustainable development in terms of:

1. Investment in major infrastructure projects
2. Construction in rural areas.
3. Environmental and energy conscious considerations.

These factors highlight the importance of sustainable development and the construction of sustainable urban environments. Additionally, as the construction industry is a major driver for the economic growth of other industries, the rapid growth of other sectors such as the metalworking industry, the chemical industry and the finance sector, raises the demand for construction services and activities (e.g. industrial infrastructure/ commercial buildings).

#### 3.1 Construction Sector Trends

##### 3.1.1 Enhancement of Infrastructure

In line with strong current and future planned economic growth, the Chinese government is prioritising all aspects of infrastructure developments. The scope of these developments will include road networks connecting all major cities and the improvement of urban network capacity.

Other national level developments will focus on rail networks, harbours, water supply and recovery facilities, and power generation and distribution networks. For a number of these large-scale projects, which require knowledge intensive construction techniques (e.g. tunnels, atomic power plants, bridges, dams, etc.), the expertise of highly specialised enterprises is required<sup>13</sup>. Most European enterprises operating in these niche markets hold a competitive advantage over Chinese enterprises, not just with respect to technological innovations and engineering capabilities but also with respect to project management, (e.g. risk management and quality management), whereas Chinese construction enterprises are characterised by poor management, the use of out-dated technology<sup>14</sup> and labour intensive production.

##### 3.1.2 Construction in Rural Areas

The Chinese government's objective of developing rural areas with improved public service facilities provides opportunities for the construction sector. Statistics show that, by the end of 2005, China had 3 million km of rural roads (including 980,000 km of surfaced roads). The continued upgrading of rural roads will improve living standards and create favourable conditions for developing the rural economy to build the so-called "New Socialist Countryside".

The 11<sup>th</sup> FYP adopted by the National People's Congress in March 2006 states that all Chinese villages and townships will be accessible by highway by 2010. China has launched the implementation of a programme to build and/or upgrade 1.2 million km of rural highways before the end of 2010. This programme will cost around 45 billion RMB (5.6 billion USD) and includes 27,012 roads in east and central China and 996 in the west. The National Development and Reform Commission (NDRC) has announced that the Chinese government is set to provide a subsidy of 17.5 billion RMB (2.2 billion USD) for 28,008 rural roads amounting to 119,200 km in 2006.<sup>15</sup>

### 3.1.3 Environmental and energy conscious construction

One of the objectives of the 11<sup>th</sup> FYP is to promote the development of a resource saving society thereby balancing the negative effects of rapid economic development and its repercussions on the use of resources and impact on the environment in general. At present, the total energy consumed through the construction and use of buildings equals 46.7% of the total energy resource consumption in China. It also accounts for 47% of water consumption<sup>16</sup>. However, China's steady economic growth and the related growth of all industrial sectors will lead to further increases in energy consumption in the coming years. This energy demand is already causing highly polluting industrial emissions to air and water cycles and if unchanged will significantly contribute to global warming. Hence, measures and technologies for energy saving, as well as energy efficiency improvements, must become part of the construction design and engineering phase. The construction sector has the potential to greatly contribute to a more sustainable development of China's economy; for instance, with high performance buildings, sustainable construction, and the principles of industrial ecology.<sup>17</sup> China has introduced an energy saving policy and makes efforts towards the adoption of energy saving design and standards in new housing construction. For example, in 2005 some cities had already started to implement the strict "Energy Saving Standard for Residence Construction". Since 1 January 2005, energy consumption in Beijing has been reduced in compliance with newly established standards. New projects which are not designed according to these might well fail to get approval from the authorities.<sup>18</sup>

Awareness of the concept of sustainability among public and private users of buildings and other facilities is also rising. The public is becoming more aware of the depletion of natural resources and the need to act responsibly to ensure a healthy environment. The following considerations are especially important during the construction process to ensure 'sustainability' and should become key features of the value added by European construction companies:<sup>19</sup>

1. Reuse of existing built assets,
2. Design for minimum waste,
3. Minimised energy use throughout the life cycle,
4. Avoiding pollution,
5. Preserving biodiversity,
6. Conservation of water resources,
7. Respecting people and communities.

The regulatory system in China has already improved with regard to resource conservation and in the area of environmental protection. Progress has also been made in applying energy-efficient techniques in construction, the production of new wall materials, on saving lumber and with using wood substitutes.<sup>20</sup>

However, Chinese competitors in the areas of construction design and engineering, as well as construction implementation and coordination, have not yet been able to match the capacity of European companies. These have developed sustainability knowledge, are highly specialised in environmental planning and have benefited from their research cooperation with scientific institutions and experience in the utilisation of technologies for sustainable construction for many years. For the sub-sectors this knowledge includes:

1. Construction design and engineering: Design of construction products and buildings which are environmentally friendly, energy efficient and made of sustainable and recoverable materials.
2. Construction implementation and coordination: environmentally friendly construction techniques, materials management, deconstruction/demolition of buildings and waste management, recovery of building materials and waste.

## 3.2 Competitiveness of and Opportunities for European Construction Enterprises

### 3.2.1 Research & Development, Innovations

Research & Development (R&D) in the construction industry mainly covers the introduction, development and transfer of new materials (close cooperation with the chemical industry and the manufacturing industry) to raise resource efficiency. Additionally, new construction techniques for faster and safer construction, innovations in housing design, the option to shift from over-ground design to under-ground design and an efficient operations (e.g. new transportation systems, accessible supply and service pipes) are the focus of R&D. European construction enterprises can still benefit from their advantages in R&D, as Chinese construction companies usually do not have specialised departments and only 0.6% (530 million RMB) of the nation-wide R&D expenditure was invested in the construction industry in 2004<sup>21</sup>.

### 3.2.2 Design

In the sub-sector design and engineering, European companies excel in innovations in

aesthetic design and the design of construction products or buildings and infrastructure for reuse by using innovative materials. Additionally, they include specialists in different housing structures with environmentally friendly designs, which contribute to a resource saving in society through the utilisation of sunlight and rainwater. Furthermore, the design and engineering sub-sectors should take advantage of the opportunity to actively participate in construction development in rural areas considering issues such as biodiversity conservation of the natural habitat and endangered species through eco-friendly projects. The experience of European companies in the development and implementation of environmentally friendly construction techniques should offer significant advantages over Chinese competitors.

### *3.2.3 Construction Techniques*

Opportunities in the construction implementation and coordination sub-sector mainly pertain to the provision of expertise in large-scale projects requiring knowledge intensive construction techniques (e.g. bridges, tunnels, power plants, etc.). Additionally, environmentally friendly techniques for construction and deconstruction with the possibility of waste reduction and recovery of deconstructed material are of particular interest. Although European enterprises still hold their main competitive advantage in knowledge intensive construction techniques, required to execute infrastructure projects such as those encouraged by the 11<sup>th</sup> FYP, it is worthy of note that Chinese construction companies are catching up in these areas and European enterprises find it increasingly difficult to win large-scale projects in tenders. One example is represented by the world's longest cable-stayed bridge, upon which construction will begin at the end of 2006. This will be built entirely by a Chinese consortium with no foreign participation.

### *3.2.4 Customer Services*

In project management, European enterprises in the construction implementation and coordination sub-sector have become a valuable partner in Chinese projects, being able to offer "integrated project packages" which include concepts for financing, planning, organising, and implementing the project. Further European companies should explore opportunities to offer services throughout the entire life-cycle of a building or construction project, which generally consists of the following phases: design, construction, use/ reuse and deconstruction. These are usually integrated

and especially during the phase of use or reuse, product and facility management, present an opportunity for European enterprises to enlarge their business activities by offering integrated services. Furthermore, although real estate and services related to real estate management are not part of this report, it has to be noted that new approaches in these areas like ( public-private partnerships (PPP) are an area that attracts all major European construction enterprises.

### **3.3 Reflection on Opportunities for European Construction Companies with Respect to China**

The current situation<sup>22</sup> of European FIEs operating in China, as indicated in the industry survey carried out in conjunction with this study, shows that approximately 88% of the enterprises surveyed are represented by multinational Wholly Foreign-owned Enterprises (WFOEs). This reveals that only a few have chosen cooperation in a Sino-European JV with the remainder being made up by SMEs. However, recent trends reveal that foreign construction enterprises are becoming increasingly interested in Merger and Acquisition related activities, although obstacles such as the compulsory reassessment of the qualification of the Chinese partner exists (cf. **section 4.2.1**).

Most FIEs have been active in China for more than 10 years and their scope of activities includes project planning and project management, often combined with architectural and engineering services. Highly specialised European construction enterprises (e.g. those active in the construction of infrastructure facilities) are also involved in the export of building materials, elements and modules (e.g. steel grille, bridge elements) as well as knowledge intensive technology and advanced equipment to China, if not locally available (cf. **section 3.1**). The average share of the total revenue of the majority of enterprises amounts to approximately 6% of their global turnover and it is expected to increase to as much as 8% in the coming 5 years. However there are some exceptions to this in cases where some big European WFOEs and SMEs concentrate 40% to 100% of their business in China. The market share of WFOEs and JVs is difficult to estimate due to the vague regional, service and ownership demarcations of the construction market in China. It ranges from 0.25% to 3% of the whole construction market and from 5% to 10% in comparison to other WFOEs.

Currently, the majority of European construction as well as design and engineering enterprises consider China to be

of moderate importance for their business and investments in the international construction market. However, as China's impact on the world market is expected to grow significantly during the next 5 – 10 years, enterprises are becoming aware of the necessity to further monitor developments in China, both with respect to the restructuring of the construction sector (the number of SOEs is expected to decline with further achievements in the implementation of China's WTO agreements) as well as to new fields of operation which are encouraged by the 11<sup>th</sup> FYP. Consequently, they should ensure that they expand early to increase their sales figures and market share in the sector in China.

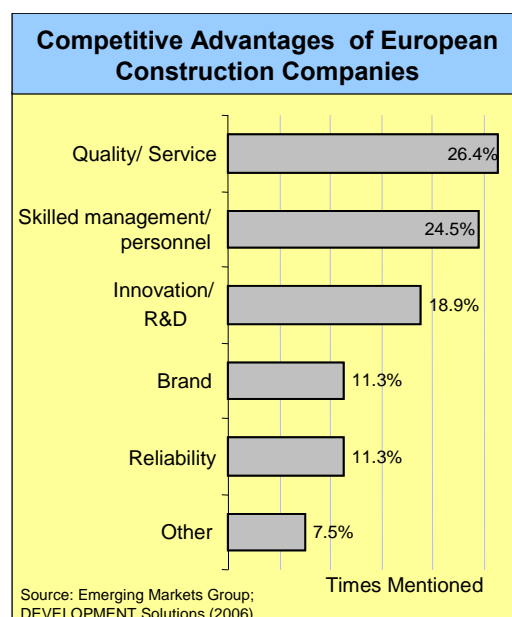
The majority of FIEs expect the implementation of the 11<sup>th</sup> FYP will give them a superior position in the Chinese market because they are world leaders in all related areas. FIEs are also known for their reliability in terms of budget and implementation. The Chinese can profit from European expertise and reputation gained in numerous international projects and from qualified personnel from the EU. Consequently, the strategy of many European companies is to counteract the development of cheap pricing strategies of many Chinese competitors by maintaining quality standards for their products and services, vindicating high prices for quality products.

These opportunities could raise revenue share by up to 15% for the majority of FIEs and from 30% to 70% for enterprises specialising in these sectors. However, while trends reveal that international investors and the Chinese government will have a vested interest in implementing the objectives of the 11<sup>th</sup> 5 year programme, implementation may be hampered by corruption and poor enforcement.

Despite these fears and the overall restrictive business environment in the Chinese construction sector, representatives from the European construction industry identified the following competitive advantages over Chinese competitors as illustrated in **Figure 12**. This feedback was received as part of the industry survey the consortium conducted in May/ June 2006.

Quality of product and services (26.4%) was mentioned as one of the significant competitive advantages that European construction companies have over their Chinese counterparts. The surveyed companies listed highly skilled management/personnel (24.5%) as another advantage over Chinese competitors. Capabilities in innovation and R&D (18.9%) were also identified as being more advanced than in Chinese competitors. Brand (11.3%) and

reliability (11.3%) were also important advantages for European companies. Other advantages (7.5%) that have been indicated are in safety standards and human capital.



**Figure 12: Competitive Advantages of European Construction Companies vis-à-vis Chinese Competitors**

#### 4. CHALLENGES AND MARKET OBSTACLES FOR EUROPEAN CONSTRUCTION COMPANIES OPERATING IN CHINA

**Table 3: Overview of Market Access Obstacles**

Section	Topic
4.1	<b>Affected Products and Services</b>
4.2	<b>Regulatory System</b>
4.2.1	Qualification and Licensing Regime
4.2.2	Tariffs and Taxes
4.3	<b>Business Practices</b>
4.4	<b>Intellectual Property</b>

China's accession to the WTO gave rise to high expectations for improved trade and investment relations. By opening its market to international trade and services as agreed to under WTO accession requirements, China was expected to establish a market economy providing for a fair and legal business environment both for domestic as well as for foreign enterprises. In the construction industry, however, these expectations have not yet been met. Construction enterprises are still subject to a number non-WTO compliant regulations and commitments. China imposes regulations on FIEs that have a greater negative effect than those in force prior to its WTO accession. Consequently the share of FIEs in the Chinese construction market, which amounted to 6% before WTO accession has fallen to below 1% today. Assuming that pre-WTO conditions were still

in place (in particular the ability to work on a project per project basis) the value of European construction companies' market share would be \$5.2 bn higher than it is under current conditions<sup>23</sup>. **Annex 8** provides a visual summary of both market driven competitive forces as well as those derived from NTBs.

#### 4.1 Affected Products and Services

Market access obstacles and unfair competitive practices in China have considerable impact on European companies supplying products and services in the construction sector. In contrast to other industries such as the manufacturing industry, the financing sector and transport equipment, the "product", or rather the output of the construction industry is installed on-site; e.g. houses, streets, bridges, harbours, or airports are assembled through a combination of the following three affected categories:

1. Know-how, such as design services, know-how of engineers, construction processes and technology.
2. Resources, such as labour, crafts, and machines.
3. Material, such as raw material, prefabricated housing elements, installation, building services engineering.

The last category plays a minor role, as this is commonly part of the manufacturing sector. Trade regulations and business practices addressing the first two categories are further explained in the following sections.

#### 4.2 Regulatory System

General company regulations include the New Chinese Company Law (released 1 January 2006), the WFOE and the JV laws. In addition to these regulations, construction sector-specific decrees have been released since China's WTO accession:

##### Construction design and engineering

1. Regulations on the Administration of Foreign-invested Construction and Engineering Design Enterprises, 27.09.2002, Decree No. 114.
2. Interim Provisions of Administration on Foreign Enterprises Designing Activities for Construction Works Within the Territory of the PRC, 10.05.2004, JianShi (2004) No. 78.
3. Supplementary Provisions of the Provisions on the Administration of Foreign-funded Construction and Engineering Design Enterprises, 19.12.2003, Order No. 122.

##### Construction implementation and coordination

1. Regulations on the Administration of Foreign-invested Construction Enterprises, 27.09.2002, Decree No. 113.
2. Construction Law of the PRC, 01.11.1997, Decree No. 91.
3. Implementation Measures of the Ministry of Construction on Qualification Administration in the Administrative Provisions on Enterprise Management of Construction Enterprises with Foreign Investment, 08.04.2003, JianShi (2003) No. 73.

These significant obstacles on European enterprises can be summarised as:

- High capital and asset requirements
- Unreasonable personnel requirements
- Consortium qualification
- Qualification requirements for Project Management Activities
- Qualification requirements for Project Consulting activities, as well as
- An unpredictable and ambiguous regulatory system

These obstacles, alongside tariffs and taxes, evolve from the Decrees and Circulars issued by the Chinese government and are addressed in the following sections.

##### 4.2.1 Qualification and Licensing Regime

On 27 September 2005, the Ministry of Construction (MOC) and MOFCOM issued Decree No. 113 and Decree No. 114 to regulate foreign investment construction (Decree No. 113) and engineering design enterprises (Decree No. 114). For the first time, construction enterprises and construction and engineering design enterprises were allowed to set up WFOEs in China. The corresponding implementation measures stipulate the requirements for the setting up of Sino-foreign construction JVs, as well as the types of enterprise which are authorised to obtain a Skill Qualification Classification (SQC) and the classes of SQC available. This involves being able to work on a **project-by-project** basis as a 'registered foreign contractor' and was the case before China's WTO accession under **Decree No. 32**.

Furthermore, with the enforcement of **Decree No. 113** FIEs involved in construction were disadvantaged in comparison to their Chinese competitors by facing a discriminatory national qualification system with vexatious minimal registered capital and assets, minimum annual turnover,

minimum personnel as well as know-how requirements.

- **Capital and asset requirements** concern the minimum amount of capital and assets FIEs are required to hold in order to obtain a license to operate in China, i.e. the application for high grade qualification requires a very high amount of registered capital and net assets. For instance, to register as a Super Grade contractor, a company has to hold 30 million EUR of capital and 36 million EUR of net assets. To register as a Grade A contractor, a company still needs to have 5 million EUR of capital and 6 million EUR of net assets. Construction companies are allowed to contract for work of up to five times their registered capital and two times their net assets. Although the purpose of this system is to safeguard the interest of the clients, it limits the activities of FIEs to operate in the Chinese construction sector and is disproportionate when compared with international practice.
- **Personnel requirements** stipulate that foreign technical and economic management personnel of FIEs in the construction sector must have spent an accumulative 3 months in China per year (Decree No. 73, Part IV). Furthermore, requirements state that 1/8 of the total number of architects and engineers (design companies) of JVs, and 1/4 of those of WFOEs must be foreigners qualified as Chinese architects and engineers (Decree No. 114, Article 15), i.e. foreign staff must obtain a Chinese certificate/qualification.<sup>24</sup>
- **Know-how requirements** stipulate that prior project experience of an applicant would only be valid if obtained in China and disregards the global project experience of foreign enterprises and related enterprises towards the qualification standard.<sup>25</sup>

The introduction of “**Circular No. 159** covering several Issues regarding the Administration on qualifications of Foreign-Invested Construction Companies”, (on 6 September 2004), allowed the global skills, expertise and project experience of Foreign-invested construction enterprises (FICE) obtained outside China, to be taken into consideration in the qualification process under Decree No. 113. Circular No. 159 also stated that FIEs could employ “foreign service providers” as its management, technical, and engineering personnel. The requirements of the minimum number of foreign project managers was removed. However, Circular No. 159 was not applied to construction and engineering design

enterprises operating under Decree No. 114 and left space for interpretation and discretion of the Chinese authorities in vague phrases of the Circular No. 159 such as “Foreign-invested construction enterprises may employ foreign service providers...”. The Circular 159 officially expired in July 2005. The responsible authorities so far have not clarified if there will be a continuation or an extension of Circular 159 for construction and engineering design companies. FICEs once more face a great deal of uncertainty as they seek to participate in projects in China.

Further limitations of the operational freedom of foreign contractors are provided by the licensing regime which limits the scope of activities a construction enterprise is allowed to undertake. This is due to the fact that:

1. Companies working globally, but who have not yet qualified under Decree No. 113, are not allowed to undertake work in China.
2. Companies with global expertise in not yet licensed areas are unable to bid for work and introduce their expertise in other areas.
3. Cross-border operations are no longer possible

Another problem occurs with **Circular No. 200** (Trial Measures Concerning Construction Project Management, effective 1 December 2004) which does not allow WFOEs to provide **project management services** in China, unless they are licensed under Decree No. 113 as a construction company (or under Decree No. 114, exceptionally for some CEPA eligible companies). Additionally, there are no regulatory instruments for FIEs to gain qualifications for **construction supervision, project cost-consulting or tendering agency services**.

With regards to all of the above mentioned regulatory obstacles, **work in a consortium** is restricted from a regulatory point of view as well. Currently, two qualified construction enterprises working together in a consortium or jointly on a large project are limited to undertake work within the lowest qualification grade, as held by any of the two enterprises, despite them being jointly liable.

These regulatory measures are intensified by the **unpredictable and ambiguous regulatory system**, which is often too ambiguous when regulations are issued without adequate time even for compliance (as required by GATS). For example the declared implementation rules for Decree 114 concerning FI design enterprises has not yet been issued by the MOC<sup>26</sup>. Another example is the re-assessment of the grade qualification of a local construction company

when it is being bought or is merging with a foreign invested construction enterprises.

This non-transparent regulatory system is applied with varying degrees of rigour across regions highlighting gaps in the regulatory system. The implementation of projects by foreigners is either easier or more difficult, depending on which province a company operates in.

#### 4.2.2 Tariffs and Taxes

Further market access barriers at the regulatory level, which hamper EU-China engagement in the sector can be classified into the following three categories:

1. Tariffs (i.e. Trading costs for services).
2. Non-Tariff (e.g. Quotas).
3. Taxes (direct/indirect).

As construction companies are subject to general company laws, tax rates for all FIEs of 15% and 24% also apply to construction companies. However, the preferential tax rate of 15% is valid for FIEs engaged in port construction projects. Additionally, foreign JVs engaged in port and wharf construction with operating periods of over 15 years can benefit from a corporate tax exemption in the first 5 years, followed by a 50% reduction in the following 5 years. Currently, the Chinese government is planning to establish a standardised corporate income tax system for both domestic as well as overseas-funded companies. The law, due in 2008, would scrap the privileges of FIEs, which they have held for more than 15 years.<sup>27</sup>

#### 4.3 Business Practices

Unfair business practices can also negatively affect European operations in the Chinese construction market, both nationally and internationally. They pose a threat not only to European but also to Chinese construction companies. The most significant business practices perceived as unfair are reported as<sup>28</sup>:

- Corruption;
- Renegotiation on pricing;
- Financing the project during construction;
- and Bid rigging

Attempts to assess the costs of corruption have indicated the pervasiveness of these practices. In aggregate terms, it is estimated that the costs of corruption including negative repercussions on government procurement account for about 1.5% of China's GDP.<sup>29</sup>

The strong position of Chinese clients/consumers of construction services in the market further results in unfair commercial practices. Companies often do not have sufficient funds to finance the projects they

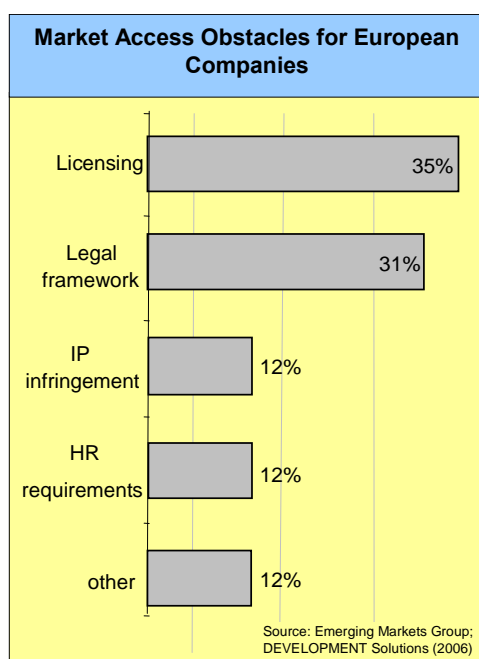
commission. Instead, they benefit from a "buyers' market" and the underdeveloped market mechanisms in China. Due to their bargaining power with regards to tenders, they are able to force down prices by declaring their bottom line before the bidding begins. Additional negotiations after tenders are won are very common. More so, the clients are in the position to ask or expect the construction enterprise to finance the project during construction, hence, tying up a lot of the enterprises' working capital, whereas the construction enterprises (foreign and Chinese) face serious delays in payments<sup>30</sup>. Another problem, especially for European enterprises, is a lack of information about the Chinese tendering system, which is often decentralised and not transparent. In public tendering, the main competitors of European construction companies are large scale public enterprises. Therefore, FIEs have little chance of success in competitive bidding unless a partnership is forged with a local enterprise<sup>31</sup>.

#### 4.4 Intellectual Property

Intellectual property (IP) presents a relatively smaller problem for the European construction industry operating in China compared to other sectors, although for some enterprises owning patents in areas such as environmental applications the problem is sometimes severe. However, in general, despite that increased activity in China exposes know-how and technologies to Chinese competitors, this does not yet supply them with the numerous skills needed to implement them for the near future. However, this is slowly changing, as emerging Chinese companies operating in the high-end segment of the market employ technology acquired from foreign companies to carry out complex projects.

#### 4.5 Market Access Obstacles: Survey Results

The industry survey commissioned under this study adds to the consensus among European companies having difficulties in conducting business in China. **Figure 13** presents the findings of the industry survey regarding market access obstacles. European companies operating in the construction sector consider the licensing requirements as too restrictive (35%). Main obstacles for European construction enterprises include Decrees No. 113 and No. 114 with unreasonable capital and asset requirements. The second most often sighted point is a weak legal framework (31%), which hinders European companies from further expansion into the Chinese market. Issues include the lack of enforcement and implementation of rules and regulations, an unfair and non-transparent tendering process, the inability to sub-contract work to local partners and other commercial irregularities, corrupt practices and local and diverging interpretation of the law. Intellectual Property Rights (IPR) infringements and unreasonable human resource requirements (both 12%) were also identified as negatively affecting productivity. Other obstacles (12%) mentioned include the quality of local supplies and difficulties of cooperation with local JV partners. **Box 1** holds selected comments from industry representatives related to market access obstacles.



**Figure 13: Industry Survey Results - Market Access Obstacles**

#### Box 1: Market Access Obstacles – Voices from Industry

*What are the problems of doing business in China?*

“Legal matters are a huge issue and the main reason for the limitations within the Chinese market. Irregularities include the need for handlers, divergence of local law enforcement, etc...). “

“The local government is difficult to approach and we are sometimes not welcomed. Obtaining a license from these government bodies is difficult as they see foreign construction companies not as contractors but as project managers. “

“A problem is the Chinese mentality of doing business namely to expand production and gain market share through cut throat competition solely based on price. “

“Chinese construction companies have far better relationships ('guanxi') than us. When we know a Chinese company is bidding for a contract we do not bother to bid ourselves as we know we can't win.”

“Construction services will become more and more local services, strongly supported by the Government to come up against growing unemployment and growing number of migrant workers as this is a possible source of social unrest.”

“They will improve their operating systems and practices and will become increasingly disciplined.”

#### 4.5.1 Survey Results of Economic Impact Market Access Obstacles

Although FIEs are becoming increasingly active in China, their business is negatively influenced by the costs of business operation and lost market opportunities caused by market restrictions and unfair commercial practices. Not only are administrative requirements taking up to 20% of management time but up to 50% of the revenue of the interviewed enterprises<sup>32</sup> is estimated to be lost due to market barriers through unfair competition and business practices in China. Furthermore the potential revenue of construction enterprises is expected to be twice or three times if market barriers were to fall and competition would become fairer, especially with respect to the treatment of SOEs and FIEs. However, significant improvements are not anticipated in the short term. In fact, the increasing trend of Chinese companies entering into international projects will most likely lead to decreasing profit margins for European companies working abroad, due to the aggressive pricing strategy employed by Chinese companies. **Table 4** on the next page provides direct quotes from representatives from European companies regarding the costs of market access obstacles to their businesses in China.

**Table 4: Economic impact of market access obstacles – industry survey results**

Where respondents made specific calculations:				
Comment		Sub-sector		
		CE	EC	O
Legal Framework	“We predict about 50% of business is being lost in China due to legal irregularities such as backhanders, local law enforcement or lack of enforcement.”	•	•	
Sub-Contracting Restrictions	“If we were allowed to include local sub-contractors for execution work when making bids we would be making 3 times more revenue than we do today. (Instead of 5m it would be 15 m revenue)”	•		•
Bureaucratic Operating Procedures	“Bureaucratic operating procedures of the Chinese government take up 20% of the management time of the top 3 managers at the office here.”	•		
Operating Restrictions	“50% of total revenue is lost due to shortcoming in the operating restrictions. Since July 2005, new laws have made the construction industry for foreign firms even more difficult to operate in.”	•	•	
Where respondents made estimates:				
Comment		Sub-sector		
		CE	EC	O
“Between 10% and 15% of the revenue made from China.”-Import of planning services		•		
“A conservative estimate would be 10% of potential revenue lost. ~28m RMB/ year.”-Export of design services, planning services, construction execution and materials.				•
Where respondents found it difficult to quantify market access obstacles:				
Comment		Sub-sector		
		CE	EC	O
“Not sure, costs mainly take place on micro-implementation level.”		•	•	
“Difficult to say, the complete system of operating is difficult here. It is not worth imagining a situation where this is not the case.”		•	•	
CE: Construction Engineering EC: Execution of Construction Work O: Other				

#### 4.5 Competition in Third Country Markets

With the opening of China's market, Chinese companies are actively trying to participate in the global market. In November 1978, the first Chinese international construction enterprise, China Construction Engineering Corporation (former China State Construction Engineering Corporation) was established. Soon after more followed: the China Road and Bridge Corporation, the China Civil Engineering Construction Corporation, the China International Water and Electric Corporation, etc. Since the 1990s, some of the largest SOEs in construction were able to gain experience in the international construction market and the larger and more experienced enterprises rapidly increased their international activities. **Table 5** provides an overview of the growth of the Chinese construction industry's overseas contracting in 2004 and 2005.

**Table 5 Chinese Overseas Project Contracting in 2004 and 2005**

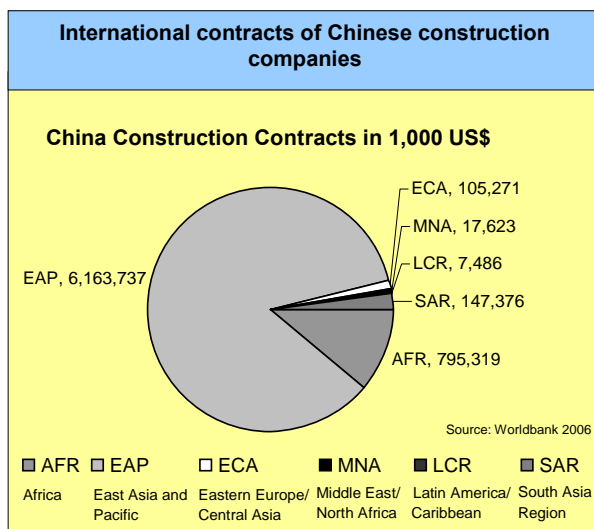
	New contracts won (USD)	Total turnover (USD)
2004	23.84 bn	17.47 bn
2005	29.6 bn	21.7 bn

Source: Thouret, 2006

Chinese companies that work abroad can generally be placed into two broad categories. One type has been concerned with international construction projects since their establishment. These companies were usually set up for this particular purpose and are supported by the Chinese government in their operations, thereby reducing their risk of operation in third countries. Among these companies are CSCEC, the China National Engineering Company, China Overseas Engineering Corporation and CITIC International branch. Political considerations driven by the national government often influence the international contracts these companies enter into and in particular aim at third countries that have an abundance of raw materials. The second group of Chinese contractors gained experience through cooperation with foreign companies in the Chinese mainland, initially and began to expand abroad as a result of China's open door policy. Their primary sphere of operation is South East Asia. This group includes companies such as the China Harbour Engineering Company, the China Road & Bridge Corporation, the China Communications Construction Co. and China

Major Bridge.<sup>33</sup> In 2001, Chinese enterprises operated in more than 190 countries. The projects carried out were mainly undertaken in Asia and Africa. These regions account for about 73% of total turnover for work carried out abroad<sup>34</sup>.

East Asia and the Pacific are the main regions of expansion for Chinese construction enterprises. From 2000 Chinese companies also began to explore new regions including the Middle East, Africa and Central America (**Figure 14**) CSEC, as one of the leading Chinese construction companies, first established business operations in the USA in 2005 by winning the high profile contract Harlem Park in New York City (worth USD 240 million). In the same year, the consortium won a second contract to build an office building in Chicago.<sup>35</sup> Following these developments it can be expected that Chinese construction companies will enter the European market in the next few years, most likely with an initial presence in the new member states.<sup>36</sup>



**Figure 14: International contracts of Chinese construction companies 2000 - 2006**

Currently, these overseas markets are characterised by a balanced competition among Chinese and European enterprises. However, FIEs are aware of the threat posed by the development and restructuring of the Chinese construction industry from a mid-term and long-term perspective. However the scale of overseas operations of Chinese enterprises is still relatively small in comparison to their European, Japanese, and North American competitors.

While competition in ASEAN and African markets is mainly price driven, US investors in construction tend to seek quality products. Chinese construction companies entering the US market would need to raise substantial investment, hire highly skilled professionals and workers and establish a customer-

partnership-network, which the majority are currently lacking. These measures would result in the increase of their cost base to similar levels to that of their European and US competitors. However, as the example of CSEC shows, initial attempts by Chinese companies to enter the US market have been successful despite these obstacles.

Whereas competition in the US market seems to be still in its infancy, competition in the ASEAN markets and Asia turns out to be a greater challenge for European construction companies. Chinese enterprises are becoming increasingly active in Asia and benefit from the strong price orientation in these markets, and their regional as well as cultural proximity. This is facilitated by the extremely low, often subsidised, prices Chinese companies are offering in Southeast Asia in all construction related fields. Currently, the most successful Chinese global contractors are<sup>37</sup>:

1. China State Construction Engineering Corporation
2. China Harbour Engineering Co. Group
3. Paul Y. – ICT Construction Holding Ltd., HK
4. China Civil Engineering Construction Corporation
5. China National Chemical Engineering Corporation

A more detailed overview of Chinese contractors engaged in international projects can be found in **Annex 4**.

#### 4.6 China's WTO Commitments vs. Current Legislation

As China nears the end of its transition period as a new WTO member it should have made corresponding market access improvements as required by its WTO commitments. An initial overview of market access conditions before and after China's WTO accession for the sub-sectors of construction design and engineering and construction implementation and control is given in **Annex 2** and **Annex 3**. This information was developed by the Construction Working Group of the EUCCC.

Enterprises in the *construction design and engineering sub-sector* (cf. **Annex 3**) are allowed to operate through cross-border modes of supply (with some restrictions) or through a Sino-foreign JV. In order for China to comply with its WTO commitments, WOFEs will be allowed to operate fully from 2007. Hence, the opportunities for FEs operating through a JV or a WOFE in China, in addition to the alternative of cross-border supply, should represent a market opening and liberalisation in accordance to the WTO.

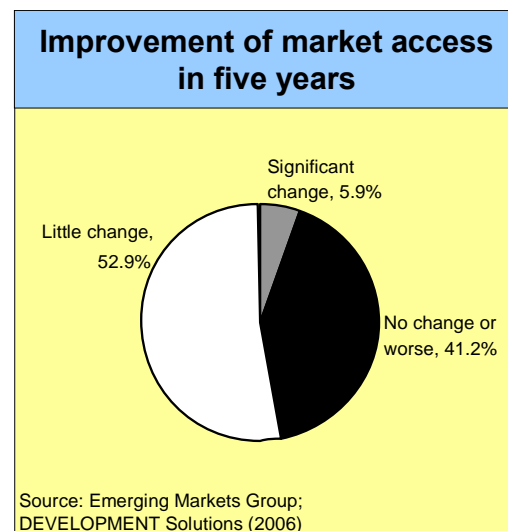
FIEs of the *sub-sector construction implementation and control* (cf. **Annex 2**) were able to operate on a cross-border supply mode for the past decade. However, Decree 113 now forces foreign companies to set up JVs or WOFEs in China and no longer allows for cross-border supply mode for construction companies. This regulation represents a retreat with regard to China's fulfilment of its commitments. Additionally, the standards and licensing requirements bar many foreign companies from the market and restrict the scope of activities that FIEs of the construction industry may undertake in China<sup>38</sup>. This is due to the exclusion of global capital, assets and qualifications as well as foreign gained experiences and references from the qualification process. Hence, the qualification grading system significantly limits the scope of business activities of FIEs in China, disregarding the real capabilities and qualifications of foreign enterprises (e.g. high capital requirements, instead of foreign company guarantees or financial bonding are contrary to internationally accepted business practices). Furthermore, foreign companies are required to apply for type-specific engineering certification, which prohibits the application of a widely practiced international business models in China.

Residency requirements for foreign staff prevent companies from staffing their China projects with the most qualified and experienced personnel available and is believed to significantly contribute to losing bids<sup>39</sup>.

Circular 159 (Notice Concerning Issues Regarding the Administration of the Qualifications of Foreign-Invested Construction Enterprises, effective 6 September 2004) allowed FIEs, to apply for a project-by-project licence from the Chinese Ministry of Commerce. Therefore the introduction of circular 159 salvaged the discontinuation of decree 32 as a result of China's accession to the WTO. Though Circular 159 was issued for construction companies, design companies were not able to benefit from it. Although this situation was significantly improved under the remit of Circular 159, its official expiration in July 2005 has once more added to the legal uncertainty foreign companies face in China and puts them at a disadvantage compared to their Chinese competitors.

Qualification requirements for foreign companies are discriminatory since they do not take into account experience gained from international project but only those undertaken in China giving Chinese competitors and obvious advantage. This situation obviously is inconsistent with the international and Chinese principles of equal treatment. **Figure 15** shows

that the majority of European companies (52.9%) surveyed are cautious that the situation with regard to market access obstacles will improve in the next five years. They expect some improvement in particular regard to government attitudes to foreign contractors and requirements in obtaining a licence. These responses, combined with the small number of respondents who expect significant change (5.9%), recognise the necessity for China to demonstrate that it is a reliable destination both for business and investment. It is expected this will be done by enhancing the legal stability and therefore the predictability of the system. This will be important to support the progressing privatisation of Chinese construction companies. The removal of market access obstacles by decreasing the operating costs and facilitating fair competition in the Chinese market is expected to happen gradually over the coming years. However, 41% of the respondents remain sceptical as to whether or not these improvements would be realised. These companies were pessimistic about development towards a fair, competition based market in China. In this eventuality foreign companies either have to find ways to circumvent the regulations or simply exit the market.



**Figure 15: Expected improvement of market access in 5 years**

#### 4.7 SWOT Analysis of the European and Chinese Construction Sectors

Table 6 is based upon two sets of inputs. First, the data and analysis cited in this

report. Second, returns of the questionnaires as distributed by the consortium in May 2006 to European construction companies doing business in China.

**Table 6: SWOT analysis of European and Chinese construction sector**

Europe	China
<p><i>Strengths</i></p> <ul style="list-style-type: none"> <li>- European project management expertise including international and large scale projects such as reliable time and budget management</li> <li>- Quality in products and strong brand names of European construction companies in China</li> <li>- Value added technology and services, e.g. offering project packages including concepts for financing, organising and implementing projects</li> <li>- World class innovation and know-how (patents) e.g. development of new materials</li> <li>- Competitive advantage in sustainable construction e.g. design of energy efficient buildings made of sustainable and recoverable material, materials management, recovery of building waste, etc.</li> <li>- Global network of foreign MNC clients</li> <li>- Highly skilled human capital</li> </ul>	<p><i>Strengths</i></p> <ul style="list-style-type: none"> <li>- Supportive environment for knowledge transfer from multinational companies</li> <li>- Much lower cost base through comparative advantage in labour costs, construction equipment, M/E products, etc.</li> <li>- Quick to learn and copy</li> <li>- Close ties with local government providing easy access to licences and qualification certificates granted by authorities, better access to tendering information</li> <li>- Support from national government to create 'national champions'</li> </ul>
<p><i>Weakness</i></p> <ul style="list-style-type: none"> <li>- Difficulties in obtaining licences in China and to operate in higher grade categories in order to bid for large scale projects</li> <li>- High labour costs make it difficult to compete in low and medium segments of the Chinese market.</li> <li>- Difficulty to win bids in a non-transparent procurement system</li> </ul>	<p><i>Weakness</i></p> <ul style="list-style-type: none"> <li>- Poor quality and less experience in safe and protective construction, not yet able to meet internationally accepted quality standards</li> <li>- Most construction workers are untrained migrant farmers. Especially the lack of skilled senior engineers and managers makes it difficult to implement complex, large scale projects. Chinese companies therefore have difficulties to fully take advantage of technology transfers</li> <li>- Risk management is poorly developed</li> <li>- Majority of Chinese enterprises lack international customer base and partner network. Hence they lack the experience to cater for the needs of international clients (e.g. to provide contractual and financial services to intern. standards).</li> </ul>
<p><i>Opportunity</i></p> <ul style="list-style-type: none"> <li>- European companies have a competitive advantage in sustainable construction which is a policy priority of China's 11th FYP, e.g. Buildings alone (cooling, heating and lighting), account for 28% of total energy consumption in China. Those constructed after 2005 must be at least 59% more energy efficient than the existing ones.</li> <li>- Lowering the cost structure through localisation</li> <li>- Finding niche markets for specialised services in China</li> <li>- New ways of accessing the market (M&amp;A, JVs, localization, PPP)</li> </ul>	<p><i>Opportunity</i></p> <ul style="list-style-type: none"> <li>- China could expand to ASEAN and US countries due to price competition</li> <li>- Know-how and technology transfer from FIEs localising their operations in China</li> <li>- Continued restructuring of Chinese construction from inefficient SOEs to private companies will increase competitiveness</li> </ul>
<p><i>Threats</i></p> <ul style="list-style-type: none"> <li>- Poor enforcement of WTO rules in China, high legal barriers (licensing and qualification regime)</li> <li>- Failure to meet the sustainable objectives of the 11<sup>th</sup> FYP due to lack of Chinese laws and their enforcement, demand limited to international clients, Chinese government and a few pilot projects</li> <li>- China's efforts to enter third country markets where price competition plays a major role, especially ASEAN countries increases competition for European enterprises</li> <li>- Cost pressure on European companies is rising as Chinese competitors continue to move up the value chain</li> <li>- IPR infringement</li> </ul>	<p><i>Threats</i></p> <ul style="list-style-type: none"> <li>- Inability to keep up with an increasing demand for higher quality and energy efficient construction products</li> <li>- Take over by FIEs through acquisition</li> <li>- Rising costs of raw materials and labour</li> </ul>

## 5. TRENDS AND SCENARIOS

In the previous sections, the Chinese construction industry market was described and opportunities and advantages of European construction enterprises were identified. In addition the threat of Chinese competitors and obstacles facing European enterprises with respect to China were analysed. Before turning to possible scenarios for developments of the construction industry over the next 5 years, major current trends, as addressed in this study, will be summarised:

- Restructuring of the Chinese construction sector has taken place and an ongoing shift from a public dominated sector to a private controlled sector can be observed.
- The cost pressure on European construction enterprises is rising.
- Chinese enterprises are entering the global market, especially Asian/ASEAN countries.
- Demand for environmentally friendly and sustainable construction products is rising endorsed by the targets of the 11<sup>th</sup> FYP. The high-end segment of the construction sector is becoming increasingly competitive.
- Demand for construction services is rising disproportionately to other sectors, triggered by economic growth and infrastructure development

The construction industry is one of the main drivers of economic growth and stimulates (and is stimulated by) demand generated in other industry sectors. There exist numerous examples of interaction between the construction industry and economic activity in other sectors, which stems from the demand for preliminary products and capital goods in terms of construction material and construction equipment. Further linkages between the “core” construction sector (in particular construction implementation and coordination) exist between service sectors, such as construction design and engineering, materials and equipment wholesale as well as with financial institutions, insurance companies and with the real estate sector.<sup>40</sup>

The complex structure of the construction industry can hardly be fully considered in trend forecasts and scenarios in a mid-term perspective. The assumptions taken and the scenarios developed for this study are based on economic statistics, expert findings, outcomes of the interviews taken and sector development trends. They refer to a baseline scenario (scenario 1) and an optimistic scenario (scenario 2).

### 5.1 Scenario 1 – Baseline

This baseline-scenario is characterised by no improvements in market access issues and the assumption that sustainable development in construction remains limited to a few pilot projects.

*Assumptions:*

- 1) Stable growth of the Chinese economy.
- 2) Stable demand for project planning and management services due to stable project activity according to the 11<sup>th</sup> FYP objectives, which will most likely only appeal to public projects and foreign investors. An increasing demand for design and engineering services due to 11<sup>th</sup> FYP objectives for sustainable development.
- 3) Progressive shift to private dominated industry.
- 4) Ongoing restrictions on European design and engineering enterprises in the qualification process.

*Impact on industry development:*

- 1) No significant development in exports of project management and planning services to China.
- 2) FDI will stagnate for implementation and coordination services and possibly decline for design and engineering services due to restricted access to licenses.
- 3) European contractors, design and engineering companies will seek new opportunities in other emerging markets to place their products and services.
- 4) Share of FIEs in construction will stagnate or fall further below 1%.
- 5) More privately-owned Chinese construction, design and engineering enterprises will dominate the market and distribute market share among them but will also sub-contract to foreign enterprises to gain access to expert knowledge.

Under this scenario, the potential held in the Chinese construction market for European companies is disappointing. Although growth of the sector will remain strong European companies would be largely unable to take advantage of these opportunities while current restrictions remain. Applying the current growth rate of 22% year-on-year for the gross output value of the domestic construction industry (see **Figure 8**), total output in 2010 can be estimated to be USD 931.5 bn.<sup>41</sup> If maintaining the current market share of 1%, FIEs will then potentially contribute to USD 9.3bn in gross output value by 2010.

**Table 7: Baseline Scenario Summarised Results (USD)**

	Gross Output value growing at 22% p/a	Value of FIE share	% of FIE share	Imports value of Services at 22% p/a	Value of Construction services thereof	% of total imports service sector
2004	335bn	3.3bn	1%	72bn	1.37bn	1.9%
2010	1,018bn	10.1bn	1%	237bn	2.37bn	1%

Furthermore, if the implementation of new guidelines on sustainable development in construction under the 11<sup>th</sup> FYP is limited to a few pilot projects, demand for foreign expert services in project planning, management and design will not increase significantly. In fact, it is possible, European companies will concentrate on other emerging markets in the region and therefore this demand will decrease. The impact this could have on the share of the construction sector in the total imports in services is significant. If the current growth rate of 22%<sup>42</sup> in total imports of services is to continue, it is estimated that the percentage the construction sector maintains would drop from 1.9% in 2004 to 1% in 2010, the absolute value of USD 1.37bn would increase to 'only' USD 2.37bn by 2010. **Table 7** provides a summary of the baseline scenario results.

### 5.2 Scenario 2 – Optimistic

Scenario 2 depicts an optimistic situation with significant improvements in market access, the objectives of the 11<sup>th</sup> FYP on sustainable development being realised country wide.

#### *Assumptions:*

- 1) Rising demand for project planning and management services due to increased project activity according to the 11<sup>th</sup> 5 year programme objectives. Up to a two fold increase in demand for design and engineering services.
- 2) Domestic construction continues at a high growth rate of 22% annually
- 3) Ownership structure will significantly change in favour of private enterprises, with 90% share (compared to 53% in 2004).
- 4) Foreign Companies are permitted to operate on a project by project basis, with recognition of overseas experience and easing of personnel requirements as was the case prior to China's accession to the WTO.
- 5) China will ratify the WTO Government Procurement Agreement resulting in a

more transparent bidding process for publicly tendered construction projects.

#### *Impact on industry development:*

1. High share of private enterprises will increase competition in the Chinese construction market.
2. European SMEs will explore opportunities for different types of cooperation, either with other European enterprises or Chinese contractors.
3. The successful implementation of the WTO Government Procurement Agreement will result in better value and higher quality construction services provided to public authorities constituencies.
4. Number of FIEs will increase.
5. Flow of FDI into China will increase.
6. Share in gross output value of private enterprises will increase to approximately 80%.

Under these assumptions, European companies stand to gain a substantial amount within the Chinese construction sector. The relaxation of current market access obstacles and non-tariff barriers, as experienced under decree 32 prior to China being a WTO member and partially under Circular 159, will allow foreign enterprises to compete on a level playing field among Chinese competitors. Furthermore, with the comprehensive implementation of the 11<sup>th</sup> FYP, across the country, foreign expertise in sustainable construction design and management will be in high demand.

In this scenario of increased market access and higher demand for foreign services and expertise in the construction sector, an optimistic outlook may be considered. The FIE share in the sector is estimated to double by 2010. A constant construction sector gross output value growth of 22% annually, will therefore lead to a potential contribution of USD 20.2bn of FIEs to the sector by 2010.<sup>43</sup>

**Table 8: Optimistic Scenario Summarised Results (USD)**

	Gross Output value growing at 22% p/a	Share of FIE at 1%	% of FIE share	Imports value of Services at 22% p/a	Value of Construction services thereof	% of total imports service sector
<b>2004</b>	335bn	3.3bn	1%	72bn	1.37bn	1.9%
<b>2010</b>	1,018bn	20.2bn	2%	237bn	8.32bn	3.5%

In addition, it can be estimated that the share of the construction sector in the total imports of services will rise from 1.9% to 3.5% (see **Figure 10**). Including a continuation of the 22% annual growth of imports experienced since 2001, it can be estimated that this share will amount to USD 8.32bn by 2010. **Table 8** provides the summarised results of the optimistic scenario.

## 6. RECOMMENDATIONS

The following recommendations summarise the core strategic approaches for the European construction industry as well as suggestions for policy initiatives with respect to China.<sup>44</sup>

### 6.1 Recommended Actions for European Construction Companies with Respect to China

#### *Assessment of know-how and service market potential and risk in China*

The environmental policy of the Chinese government is presenting a new paradigm for European construction business, especially in sustainable construction, energy efficiency, and energy efficient buildings, as well as in the high-end segment of the construction sector. The demand for design and technologies reducing energy consumption in construction processes or the comprehensive services offered by European companies through all phases of an infrastructure life cycle are not offered by the Chinese (or indeed by many other competitors from third country markets). However, attention should be paid to the fast learning processes of Chinese construction companies, eager to continuously upgrade their knowledge of new designs, building methods, technologies and materials. Emerging Chinese companies may rapidly diminish the competitiveness of European enterprises through copying technology and know-how held by European companies due to the lack of adequate IP protection. While European construction enterprises interviewed do not rate this as an immediate threat at present, it is felt that in order to stay ahead of competitors, construction companies are obliged to continuously rethink and improve their own products and processes especially to support sustainable development.<sup>45</sup>

#### *Assessment of potentials and risks of new types of cooperation or localisation*

To operate in the Chinese and international market and to overcome the competition from Chinese enterprises, new ways of cooperation, e.g. mergers and acquisitions to integrate Chinese operators should be explored. In the case of mergers and acquisitions, the Chinese company's qualification should not be re-assessed, but maintained. Otherwise, the foreign enterprise would buy a local company without reassurance of its actual grade qualification. European enterprises could then benefit from their partners "guanxi", the good relationship Chinese companies have with other business partners and the government, which is essential for running a business successfully in China and is particularly important for competitive bidding procedures. Participation in PPP, as has already proved successful in projects carried out in the EU, might also provide potential for investment with the right trading partners. Localisation of enterprises could also foster access to domestic advantages which are currently the domain of Chinese construction companies. A localised company with international references will have an advantage over Chinese contractors who lack multinational experience.

#### *Identification of niche markets with strong growth potential*

Currently, European construction enterprises with speciality expertise and know-how should continue to explore market niches not yet explored by Chinese enterprises; this especially refers to the design, construction and maintenance of high speed railways, power plants (nuclear power plants as well as renewable energy, e.g. hydroelectric projects), bridge construction, water treatment construction, and sustainable infrastructure and technologies in general. Based on the opportunities and strengths of European construction enterprises in high-end technology construction, as discussed in **section 3**, these niche markets represent excellent opportunities.

#### *Assessment of alternative investment locations*

European construction enterprises should acknowledge emerging markets other than

China that offer high growth potential. They should seek to diversify in order to minimise their risks and take advantage of opportunities in other emerging markets, such as India and Africa by offering their superior services in high-end technology and construction project management abilities.

*Offering superior service and quality and maintaining high standards in construction*

Although the general tendency in China is for low cost offers cheap labour which triggers a harsh price competition, European enterprises should stay ahead of developments and be aware of their outstanding position, both in technology as well as in project management. They are not advised to participate in sheer price competition, as the low prices of Chinese construction companies go along with quality deficiencies and subsidised work.

*Enlarge scope of construction services*

European construction enterprises should emphasise the advantages of being able to offer a "service portfolio" to their clients, offering an integrated package of construction related activities, providing support in all phases of the life cycle of a building or infrastructure. This includes real estate management, cooperation with financing and insurance institutions, design services, implementation, project management, facility management and concentration on services for the end-consumer. Additionally, the participation in supply chains of other industries, such as cooperation with the machinery industry might represent interesting new business opportunities. European construction companies could provide ready made solutions to the customer, not just in China but also in other emerging markets. Even though, these sub-sectors are not the subject of this report, they present significant opportunities and should be considered in future strategies of the European construction industry.

*Foster innovation, research and development*

European construction enterprises should further expand their close cooperation with universities and improve techniques and products for sustainability, materials, energy-efficiency and building behaviour to stay ahead of competitors from China, the US, ASEAN and other regions trying to increase market share in China.

## **6.2 Recommended Actions for Policy Initiatives Concerning Market Obstacles for the European Construction Industry in China**

Concerning the current developments in international trade and the importance of China as an emerging market, the recommendations presented might well apply to other industries, too. The construction industry, however, is especially exposed to the unpredictability of Chinese government policy and its enforcement. FIEs operating in the Chinese construction market must have an operating licence. These are difficult to obtain, especially for SMEs. While IPRs, a topic heavily discussed (also in other industry sectors), are not a major concern of European enterprises operating in China at present, generally there remains room for the improvement of the legal, regulatory and economic framework to further ensure transparency and reliability.

Recommendations for European policy initiatives should focus especially on increasing the pressure on China to improve market access for European companies since an improvement through current negotiations cannot be observed. One of the main recommendations brought forward in the July conference by industry representatives in this respect was to reinstate Decree 32, which enables foreign companies to operate in the Chinese market as 'registered foreign contractors' and therefore pursue projects on an individual basis. Other measures should include those that lead to the elimination of legislation which discriminates against European design and construction enterprises, supports the stability of the legal system, and develops wider commercial transparency. In particular this addresses the following issues:<sup>46</sup>

1. *Grade of companies working in a consortium*

Allow construction companies working in a consortium to undertake work at a level defined by the combined strengths of the entities' qualification grades. The qualification of consortia should not be established on the basis of the partner having the lowest qualifications, but by taking into consideration the combined strengths.

2. *Flexibility in the application of capital and asset requirements*

Encourage the use of financial instruments in construction capital (i.e. Parents' guaranty in place of high capital value, bank guaranty etc.), and relax the linkage between contract value and registered capital / net assets.

3. *Issue drafts of pending regulations for consultation on an expedited basis*

On 10th October 2006, the MOC and MOFCOM jointly issued draft implementing rules on Decree 114 for public comment. However the text was only made available to the general public through the MOC's official website on 25th October. According to the covering circular, public comments were to be submitted to the designated officers of the MOC or the MOFCOM before 30th October 2006. Although the Commission has duly given its feedback, this time period has given only a very short time for comments on such a crucial and long-awaited piece of legislation. The Commission should encourage Chinese ministries to issue all relevant industry information and new regulations in a timely manner in order to comply with the commitments under the GATS.

4. *Negotiate with the Chinese government on further improvements for European international contractors.*

- a) This applies to "invisible construction trade barriers".
- b) The operational restrictions for foreign contractors should be reduced and off-shore entities should be allowed to obtain project-by-project licenses to provide construction related services within the PRC. This can be achieved through: i) A resumption of "Decree 32" to reinstate the 'registered foreign contractor' status as was the case prior to China's accession to the WTO and would allow for cross-border construction services on a project-by-project basis. ii) An extension of types of work allowed for international contractors.
- c) Persuade China to ratify the WTO Government Procurement Agreement in order to arrive at a more transparent bidding process for publicly tendered construction projects. This will result in better value and higher quality construction services provided to public authorities constituencies.
- d) Analyse and consider taking legal action against China to improve market access through the enforcement of WTO/ GATS rules if other measures prove unsuccessful.

## **7. CONCLUSION AND OUTLOOK**

An overall aim of this study is to investigate current trade and investment relations between the European Union and the People's Republic of China and analyse the prospects on future developments. This includes an

analysis of the current market situation in the EU and China and WTO accession. The report distinguishes between two sub-sectors: construction design and engineering, construction implementation and coordination. Together with an extended literature review, several construction companies and China-based experts were interviewed and asked to provide their knowledge about opportunities and obstacles of market access to the Chinese construction industry. Additionally, they were asked to identify the economic impacts of trade barriers and unfair commercial practices faced by companies that operate in the Chinese construction sector, as well as the competitive situation in third country markets.

In summary, China has failed on several points to fulfil its commitment made in the WTO's General Agreement on Trade in Services; mainly, by making it more restrictive for FEs to enter the construction market than was the case at the time of its accession to the WTO. The efforts of the EU member states, as well as the Chinese government, should focus on providing a less restrictive business environment in the construction sector to trigger global competition between construction, engineering and design companies in order to allow cost advantages, know-how and technology transfer, and quality improvement. This refers to, for example, the ability for a consortium to work under the highest qualification grade among its members, the elimination of capital, asset and know-how requirements, and the abolishment of residency requirements and minimum professional foreign personnel, not just for enterprises operating in construction implementation, but also in the design sector.

With its new policy of sustainable development, China is increasingly dependant on the technology of FEs experienced in the sector of sustainable design, engineering and construction. However, although European construction enterprises still gain significant advantage over Chinese competition in the field of sustainable design and construction, Chinese contractors to date rarely have anything to fear, as, in general, "local" construction projects will continue to be inaccessible to international FIEs, due to current market obstacles. Thus, mainly international small and medium sized FEs will most probably not want to participate in local projects, as they usually do not have sufficient knowledge and understanding of and the complexities associated with doing business in China. Multinational large scale enterprises, however, with sufficient experience and knowledge in partnering and project implementation in China might well benefit from local projects

due to their enterprise infrastructure allowing them to have offices across China.

Despite being vulnerable to global competition in the Chinese construction sector, China should realise that global competition in the construction sector and smoother cooperation of FEs or FIEs on a voluntary basis can support international cooperation and also enable Chinese

enterprises to export their construction design, engineering, and execution and control services to the EU. This will most likely be possible when Chinese construction companies access foreign know-how and technology, especially with regards to sustainable building design. Hence, the protection of IP might become an increasingly important issue in the construction sector in the next few years.

## ANNEX 1: ESTIMATED PRIVATE SECTOR SHARE

Table 9: Estimated private sector share (non-state and non-collective registered companies) of GDP by sectors for the years 1998 and 2003 (National Bureau of Statistics and OECD estimates<sup>47</sup>)

Sector	1998		2003	
	Share in GDP	Share of Private Economy	Share in GDP	Share of Private Economy
Agriculture 1	18.6	96% = 17.9	14.6	96% = 14.1
Industry above cut-off 2	24.8	28% = 7.0	35.1	52% = 18.4
Industry below cut-off	17.8	78% = 13.8	10.2	90% = 9.2
<b>Construction</b>	<b>6.7</b>	<b>50% = 3.3</b>	<b>7.0</b>	<b>76% = 5.3</b>
Transport, post, telecom	5.3	5% = 0.3	5.7	16% = 0.9
Distribution	8.4	58% = 4.9	7.7	80% = 6.1
Misc. commercial services	12.8	20% = 3.3	13.3	39% = 5.2
Government services 3	5.7	0% = 0.0	6.4	0% = 0.0
Economy-wide total	100	50.4	100	59.2
Commercial Business Sector only	94.3	58.5	93.6	63.3
Non-Farm Commercial Business Sector only 1,3	75.7	43.0	79.0	57.1

1 Agriculture excluded from non-farm commercial business sector

2 Industrial comp. with over CNY 5 million in annual sales directly reporting to the National Bureau Statistics

3 Government and non-profit service sectors excluded from commercial business sector

Source: OECD 2005a

## ANNEX 2: MARKET ACCESS CONDITIONS FOR FOREIGN CONSTRUCTION ENTERPRISES PRIOR AND AFTER WTO ACCESSION

Table 10: Market access conditions for foreign construction enterprises prior and after WTO accession

Market Access Conditions for Foreign Construction Enterprises Prior and After China's WTO Accession				
Scope of Contracting Pursuant to Article 15 of Decree 113 (1)	Prior WTO acc	After WTO Accession		
	Decree 32 (3)	Decree 32	Decree 113	
Supply Mode Operating Vehicle	Cross-border supply	Cross-border supply	Sino-foreign JV	WOFE
Construction projects: (1) totally funded by foreign investments and/or grants (2) or financed by international financing organisations and awarded through international tendering Process (3) or where foreign investment is equal or greater than 50% and which cannot be undertaken by a Chinese construction enterprise alone	Allowed (i)	Not Allowed Any More After April 1, 2004 (ii)	Allowed (iii)	Allowed (iii)
Other Chinese publicly and/or privately funded projects	Not Allowed	Not Allowed	Allowed (iii)(iv)	Restricted (v)

Adapted from EUCCC 2004

- (i) Subject to enterprise qualification grading system as per Jian Jian [1994] 410 <sup>(4)</sup>
- (ii) Pursuant to article 26 of Decree 113 (repeal of Decree 32) and to Jian Shi [2003] 193 <sup>(5)</sup>
- (iii) Subject to enterprise qualification grading system (decree 87 <sup>(6)</sup>, Jian Jian [2001] 82 <sup>(7)</sup>, Jian Ban Jian [2001] 24 <sup>(8)</sup> and Jian Shi [2003] 73 <sup>(9)</sup>)
- (iv) Since December 11, 2004
- (v) Under Decree 113, WOFEs can bid only on projects for which 50 percent or more of the project funding is from foreign sources. However, in projects "which Chinese construction enterprises cannot undertake independently due to technical difficulties" operations through joint operations with Chinese companies (usually in the form of a contractual joint venture (CJV)) or other contractual arrangements such as partnerships are possible.

### ANNEX 3: MARKET ACCESS CONDITIONS FOR FOREIGN DESIGN AND ENGINEERING ENTERPRISES PRIOR AND AFTER CHINA'S WTO ACCESSION

**Table 11: Market Access Conditions for the Foreign Design and Enterprises Enterprises prior and after China's WTO Accession**

Market Access Conditions for the Foreign Construction Design & Engineering Enterprises Prior and After China's WTO Accession				
Project Development Stage	Prior	After WTO Accession		
		Jian She [2000] 17 (10)	Jian She [2004] 78 (11)	Decree 114 (2)
Supply Mode / Operating Vehicle	Cross-border supply	Cross-border supply	Sino-foreign JV	WOFE
Scheme Design	Allowed	Allowed	Allowed	Allowed (vi)
Design Stages Further to Scheme Design	Allowed (iv)	Allowed(v)		

Adapted from EUCCC, 2004

- (iv) Only in collaboration with Grade A Chinese construction and engineering design enterprises
- (v) Under the framework of Jian She [2000] 17 only until June 10, 2004
- (vi) Only after December 11, 2006 when the current limitation on WOFE will no longer exist

- (1) Decree 113: "Regulations on Administration of Foreign-Invested Construction Enterprises", MOC & MOFCOM, September 27, 2002
- (2) Decree 114: "Regulations on Administration of Foreign-Invested Construction Enterprises", MOC & MOFCOM, September 27, 2002
- (3) Decree 32: "Tentative Measures on Administration of Foreign Enterprises Qualifications for Construction Projects in China", MOC, March 22, 1994
- (4) Jian Jian [1994] 410: "Implementation Details on Administration of Foreign Enterprises Qualifications for Contracting for Construction Projects in China" MOC, July 1, 1994
- (5) Jian Shi [2003] 193: "Notice on Administration of Foreign Enterprises Qualifications for Contracting for Construction Projects in China", MOC, September 28, 2003]
- (6) Decree 87: "Regulations on Administration of Construction Enterprises Skills Qualification", MOC, April 18, 2001
- (7) Jian Jian [2001] 82: "Circular on Dispatching Criteria of Construction Enterprises Skills Qualification", MOC, April 2000
- (8) Jian Ban Jian [2001] 24: "Notice on Promulgating the Implementation Opinions on Qualification Administration Regulations of Construction Enterprises", MOC, May 28, 2001
- (9) Jian Shi [2003] 73: "Implementation Measures to the Regulations on Administration of Foreign-Invested Construction Enterprises", MOC, April 8, 2003
- (10) Jian Shi [2003] 17: "The Supplementary Circular on the Administration of the Survey and Design Market Entrance", MOC, January 11, 2000
- (11) Jian Shi [2003] 78, "Interim Provisions of Administration on Designing Activities for Construction Works Within the Territory of the PRC", MOC, May 10, 2004
- (12) Decree No. 29 "Regulations for Project Consulting Enterprise Accreditation", National Development and Reform Commission, March 4 2005
- (13) Jian [2006] 76: "Circular on Cooperating with Commerce Administration Departments to Administrate the establishment of Foreign-Invested Construction enterprises and Foreign-Invested Construction Engineering enterprises" MOC, March 29, 2006

#### ANNEX 4: LIST OF MAJOR CHINESE CONTRACTORS WORKING ABROAD

Domestic Ranking	2004 ENR Ranking	Overseas Turnover (million USD)	Company	Website
1	17	2,124.3	China State Construction Engineering Corp.	<a href="http://www.cscec.com.cn/english/co.htm">http://www.cscec.com.cn/english/co.htm</a>
2	39	925.2	China Harbour Engineering Company(Group)	<a href="http://www.chec.bj.cn/eout/zgjs/tjij.jsp?sk_id=010100">http://www.chec.bj.cn/eout/zgjs/tjij.jsp?sk_id=010100</a>
3	47	708	China National Machinery Industry Corp.	<a href="http://www.sinomach.com.cn/english/about/index.htm">http://www.sinomach.com.cn/english/about/index.htm</a>
4	48	678.6	China Railway Engineering Corporation	<a href="http://www.crecg.com/eng3/index.htm">http://www.crecg.com/eng3/index.htm</a>
5	58	500.2	China Petroleum Engineering & Construction (Group) Corp.	<a href="http://www.cpecc.com.cn/english/1-1-1.htm">http://www.cpecc.com.cn/english/1-1-1.htm</a>
6	68	381.2	Shanghai Construction Group	<a href="http://www.scg.com.cn/main.html">http://www.scg.com.cn/main.html</a>
7	69	379.7	China Civil Engineering Construction Corporation	<a href="http://www.ccecc.com.cn/english/company.asp">http://www.ccecc.com.cn/english/company.asp</a>
8	81	303.2	SINOHYDRO Corporation	<a href="http://www.sinohydro.com/global/group.aspx">http://www.sinohydro.com/global/group.aspx</a>
9	84	290.6	China Road & Bridge Corp.	<a href="http://www.crbc.com/lq/tjs.htm">http://www.crbc.com/lq/tjs.htm</a>
10	101	197	China Metallurgical Group Corp.	<a href="http://www.mcc.com.cn/english/">http://www.mcc.com.cn/english/</a>
11	102	192.2	China National Chemical Engineering Group Corp.	<a href="http://cncec.com.cn/">http://cncec.com.cn/</a>
12	103	190.2	China International Water & Electric Corp.	<a href="http://www.cwe.com.cn">http://www.cwe.com.cn</a>
13	105	188.4	Shandong Electric Power Construction Corporation	N/A
14	116	130.5	China WanBao Engineering Company	N/A
15	121	118.8	Zhejiang Construction Investment Group	<a href="http://www.cnzgc.com/">http://www.cnzgc.com/</a>
16	123	110.1	China Jiangsu International Economic & Technical Corp.	N/A
17	126	97.5	China National Overseas Engineering Corp.	<a href="http://www.covec.com">http://www.covec.com</a>
18	131	92.4	China National Machinery Import & Export Corporation	<a href="http://www.cmc.com.cn">http://www.cmc.com.cn</a>
19	139	82.1	Harbin Power Engineering Company Limited	<a href="http://www.chinahpe.com">http://www.chinahpe.com</a>
20	142	79.5	China Wu Yi Co. Ltd	<a href="http://www.chinawuyi.com">http://www.chinawuyi.com</a>
21	146	73.9	Guangdong Xinguang Int'l Group	N/A
22	149	68.2	Shanghai Industrial Engineering CO.,LTD	N/A
23	150	67.5	China Non-ferrous Metal Industry's Foreign Engineering & Construction Co., Ltd	<a href="http://www.nfc.com.cn">http://www.nfc.com.cn</a>
24	154	59.4	China Gezhouba (Group) Corporation	<a href="http://www.cgqc.cn/">http://www.cgqc.cn/</a>

25	156	57.4	China CAMC Engineering Co., Ltd.	<a href="http://www.camce.com.cn">http://www.camce.com.cn</a>
26	158	55.7	China National Complete Plant Import & Export Corporation (Group)	<a href="http://www.complant.com">http://www.complant.com</a>
27	161	55	China Henan International Cooperation Group CO., LTD	<a href="http://www.c-chico.com">http://www.c-chico.com</a>
28	167	48.3	China Railway Construction Corporation	N/A
29	171	47.7	China ZhongYuan Engineering Company	<a href="http://www.czec.com.cn">http://www.czec.com.cn</a>
30	172	46.5	Sinopec Engineering Corporation	<a href="http://www.sei.com.cn">http://www.sei.com.cn</a>
31	173	45.1	China Huanqiu Contracting & Engineering Corp.	<a href="http://www.hqcec.com">http://www.hqcec.com</a>
32	176	40.6	Beijing Municipal Construction Co., Ltd	N/A
33	181	37.9	Beijing Construction Engineering Group	<a href="http://www.bcegc.com/Default.aspx?tabid=216">http://www.bcegc.com/Default.aspx?tabid=216</a>
34	183	37	Beijing Uni-construction Group Co., Ltd	<a href="http://www.bucc.cn/">http://www.bucc.cn/</a>
35	184	36.4	Transtech Engineering Corporation	<a href="http://www.transtech-cn.com/about-us/about-us1.htm">http://www.transtech-cn.com/about-us/about-us1.htm</a>
36	187	35.5	China National Electric Equipment Corporation	<a href="http://www.cneec.com.cn/English/Eindex.asp">http://www.cneec.com.cn/English/Eindex.asp</a>
37	190	33.6	China Petroleum Pipeline Engineering Corporation	-
38	195	26.9	Chongqing International Construction Corp.	-
39	196	24.8	Jingsu Construction Group Corp.	-
40	198	24.3	China Jiangxi Cooperation for International Economic and Technical Cooperation	<a href="http://www.cjic.cn/cjic1/indexn-2.asp">http://www.cjic.cn/cjic1/indexn-2.asp</a>
41	201	22.6	China Electric Power Imp. & Exp. Corp.	<a href="http://www.cetic.com.cn/Template/English/index.jsp">http://www.cetic.com.cn/Template/English/index.jsp</a>
42	208	17.7	China Liaoning International Cooperation (Group) Holdings LTD.	<a href="http://finance.sina.com.cn/stock/company/sz/000638/2.shtml">http://finance.sina.com.cn/stock/company/sz/000638/2.shtml</a>
43	209	17.1	China Shenyang international Economic & Technical Corporation	<a href="http://www.job-cn.com/">http://www.job-cn.com/</a>
44	210	16.9	Xinjiang Beixin Constr. & Eng'g Co. Ltd., Urumqi, China	-
45	212	15.1	Beijing Urban Construction Int'l Engineering Co., Ltd	-
46	213	14.6	Sichuan Electric Power Import & Export Corp.	-
47	215	13.5	China Sichuan Int'l Cooperation Co., Ltd	-
48	218	13.1	Longjian Road & Bridge Co. Ltd.	<a href="http://www.longjianlq.com/English/Introduction.htm">http://www.longjianlq.com/English/Introduction.htm</a>
49	221	10.4	Chongqing International & Technical Cooperative Co. China Economic	<a href="http://www.cqtrade.com/firstp.asp">http://www.cqtrade.com/firstp.asp</a>

Source: Thouret, 2006

## **ANNEX 5: FURTHER EXPLANATIONS ON RECOMMENDED ACTIONS FOR THE CHINESE GOVERNMENT<sup>48</sup>**

Following the official expiration of Circular No. 159 for construction companies, the EU member states should urge that the concessions granted under Circular No. 159 for FIE in construction should be officially re-introduced and also be applied to FIEs offering design services under Decree No. 114. This would mean that nationality-based qualification requirements in FIEs would be abolished to improve quality and efficiency of construction and design markets in China. This will also motivate FIEs under Decree No. 113 and 114 to work with Chinese engineers, not just in China but in other countries as well. It also offers Chinese engineers considerable opportunities to enter the global design and service market. In addition to the easing of personnel requirements, further progress towards an open market economy in China could be made by recognising project experience obtained overseas and know-how of design companies in the qualification process by eliminating the discriminatory requirement that prior project experience is only valid if gained in China. This measure should not just be enforced for the sake of easier market access for FIEs, but also to profit from the opportunity of shared specialised know-how, operating techniques, and technological innovations. Additionally, Chinese companies can profit from the re-introduction and extension of Circular No. 159, as Chinese companies would be allowed to include their global experience in the yearly qualification assessment.

Furthermore, the EU member states should demand that global capital and assets of FIEs, as well as of their related and parent companies, be allowed to exert influence on the qualification process of a company. Other alternatives which meet the regulatory objectives of the registered capital and asset requirements for foreign-invested construction companies should be allowed in the qualification process. For example, bonding and parent company guarantee arrangements, as is the international norm, should be utilized, so that the true value and capability of the FEs are valued in the qualification application. Additionally, the enormous minimum capital and asset requirements should be reduced, in order to offer a realistic chance of qualification and entrance into the Chinese construction market for small and medium sized FEs.

Addressing the *cooperative work of construction companies* in a consortium or in large projects, China should allow two or

more construction companies to operate under the highest qualification grade. Chinese construction companies could benefit from the extended knowledge transfer and it will be more attractive for FEs concerned with the financial status of the Chinese company. FIEs will facilitate increased opportunities by being allowed to work at a higher qualification grade and gaining access to a wider scope of projects. Additionally, European construction companies will benefit from knowledge transfer of local construction practices from Chinese construction companies.

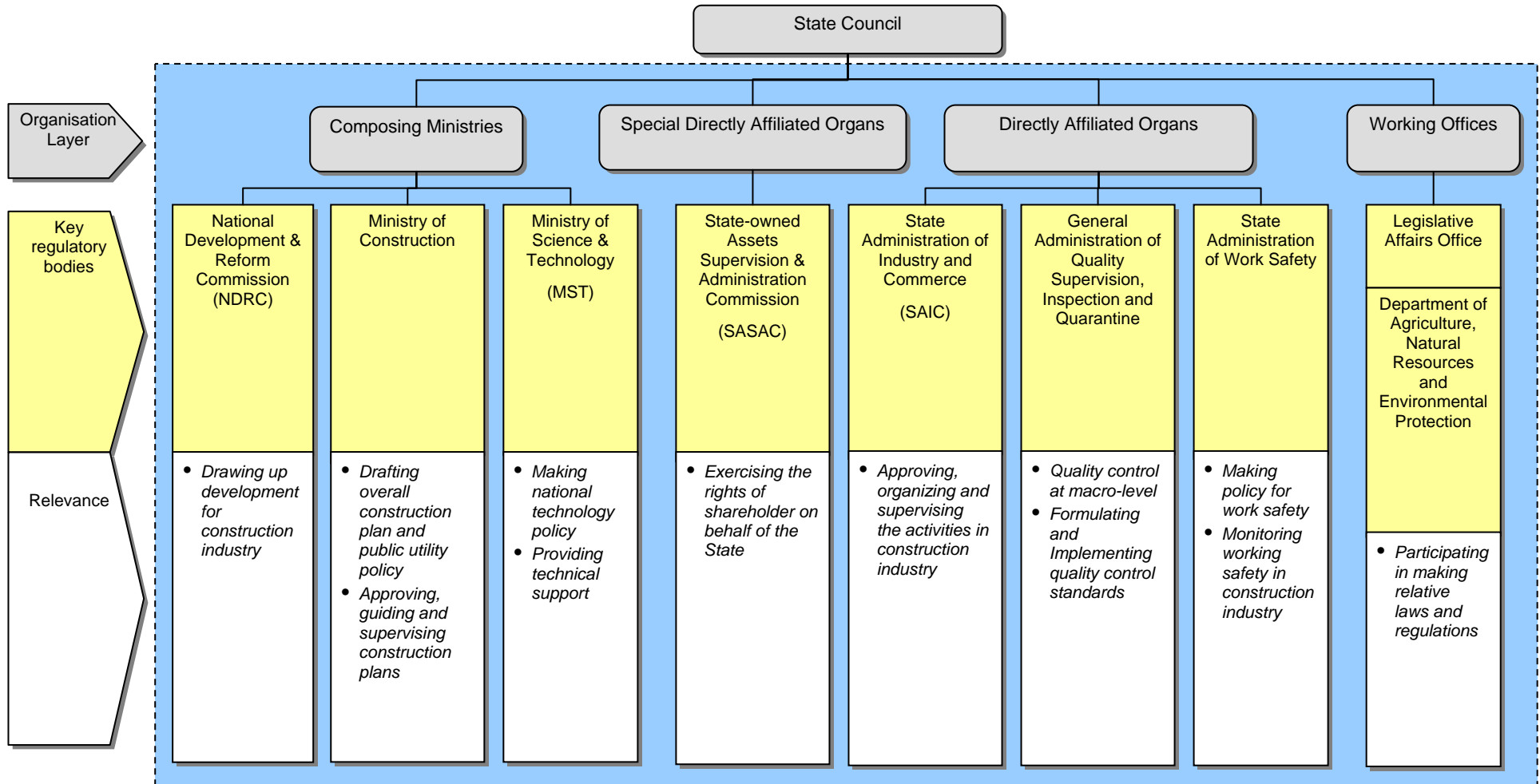
Considering the impacts of Circular No. 200, that only allows enterprises to offer project management services in China after being qualified in China as a construction company, the allowance of the cross-border provision of project management services would enable foreign project management service providers with specialised experience and expertise to undertake highly specialised project management work in China. By maintaining the current status, China will fail to benefit from those products and technologies possessed by only a few specialised contractors. It will also miss opportunities to implement products or technologies where licensing requirements require that only a contractor with special expertise may undertake work utilizing these products or technologies.

Additionally, the Construction Working Group of the EUCCC stipulates that a clear regulatory path for the establishment and licensing in China of property development WFOEs should be developed. The fulfilment of this recommendation would meet the growing demand from FIEs to lease premises in China which are owned, built-to-suit and managed by a third party.

The easing of capital and asset requirements, as well as the re-introduction of Circular No. 159 to European companies working under Decree No. 113 and 114, will contribute the most to facilitating market access for European construction, as well as design, enterprises. The EU member states should insist that this requirement is withdrawn as quickly as possible, as it limits the flexibility of FIEs to act in the Chinese construction market.

A market-approach, allowing both EU and national Chinese companies to operate in the market under equal conditions, would not only lead to improvements in quality and efficiency, but also to lower costs of infrastructure projects, due to more solid competition.

**ANNEX 6: CONSTRUCTION GOVERNMENT STRUCTURE**



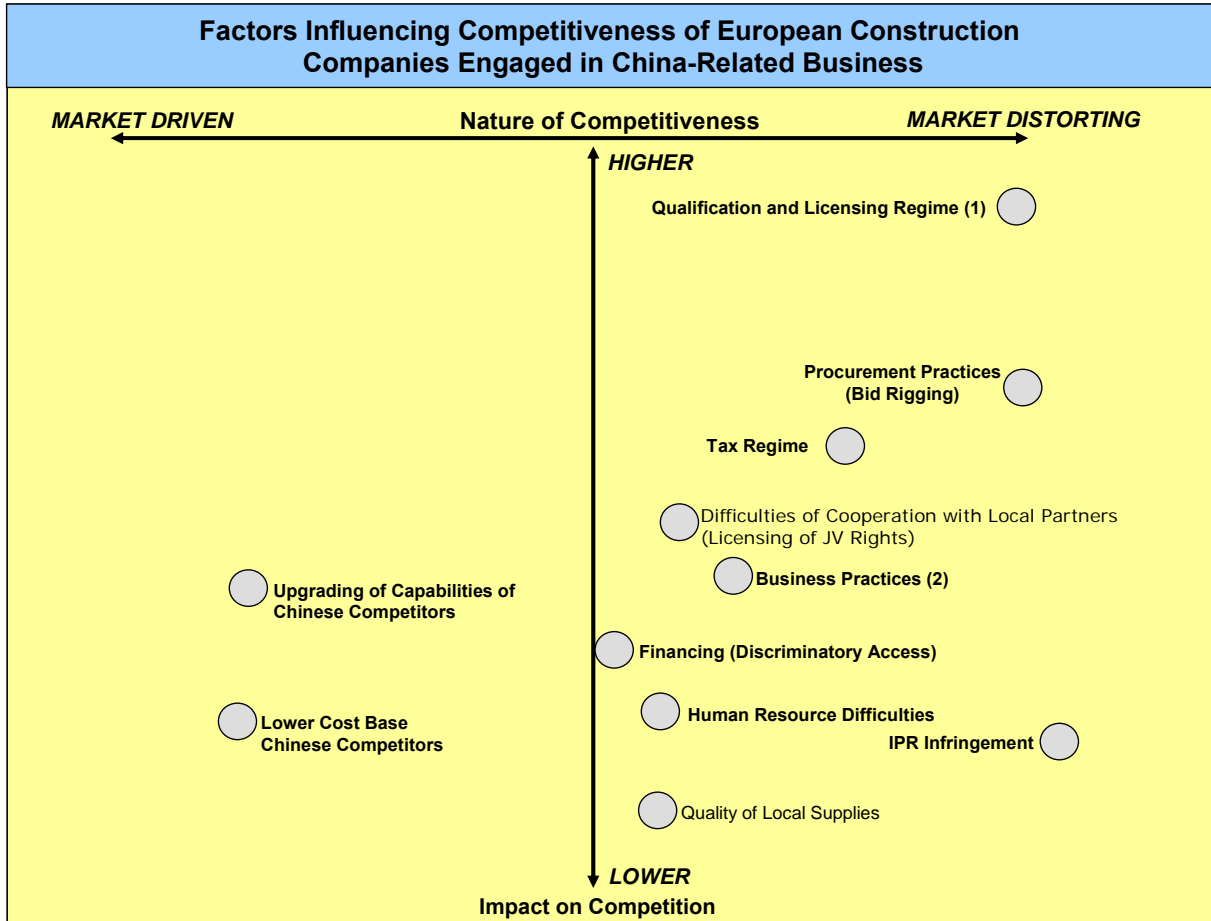
**ANNEX 7: TABLE OF KEY LAWS AND REGULATIONS PERTAINING TO CONSTRUCTION SECTOR**

Sub-Sector	Key Laws and Regulations
<p>I) Construction Implementation and coordination</p>	<p>Regulation on Administration of Foreign-Invested Construction Enterprises issued on September 27, 2002, effective from 1 Dec. 2002 ( Decree No. 113);</p> <p>The Implementing Rules for Decree 113 issued by MOC, effective from 8 April, 2003;</p> <p>These new regulations have simplified the approval procedure, but set higher market entry requirements.</p> <p>Other new regulations related to construction include but not limited to:</p> <p>Circular on the Issue of Construction and Engineering Project Management Tentative Measures (Jian Shi [2004] No.200);</p> <p>The draft revised PRC Construction Law was issued on 3 September 2004 for public comments;</p> <p>Administrative Provisions on the Work Safety License of Construction Enterprises 2005-7-5;</p> <p>Notice of the Ministry of Commerce on Entrusting the Provincial Administrative Departments of Commerce to Examine, Approve and Administrate the Foreign-Invested Construction Enterprises 2006-1-22.</p> <p>Implementation Measures of the Ministry of Construction on Qualification Administration in the Administrative Provisions on Enterprise Management of Construction Enterprises with Foreign Investment, 08.04.2003, JianShi (2003) No. 73.</p>
<p>II) Design and Engineering</p>	<p>Regulation on Administration of Foreign-Invested Construction Engineering and Design Enterprises issued on September 27, 2002, effective from 1 Dec. 2002 ( Decree No. 114);</p> <p>Provisional regulations on the Administration of Foreign Enterprises Engaging in Design Activities in relation to Construction Projects in the PRC (MOC Decree No.78);</p> <p>Supplementary Provisions of the Provisions on the Administration of Foreign-funded Construction and Engineering Design Enterprises, 19.12.2003, Order No. 122.</p>

**ANNEX 8: FACTORS INFLUENCING COMPETITIVENESS IN THE CHINESE MARKET**

In addition to the genuine market driven competitive threats posed by Chinese operators in this sector, European companies also face competitive forces as a result of non-tariff or 'behind the border' barriers. Those NTBs which are deemed to result from strong Chinese government intervention are plotted on the right of the horizontal axis while those derived from genuine competition while those derived from genuine competition

are plotted to the left. The author has indicated the relative importance of these competitive forces in terms of their position on the vertical axis with those nearer the top deemed as the most significant. The graph is designed as a guide only to give some perspective to the descriptions of competitive forces in this sector.



**ANNEX 9: INDUSTRY SURVEY RESULTS**

**Construction**

**SECTION 1: SECTOR OVERVIEW**

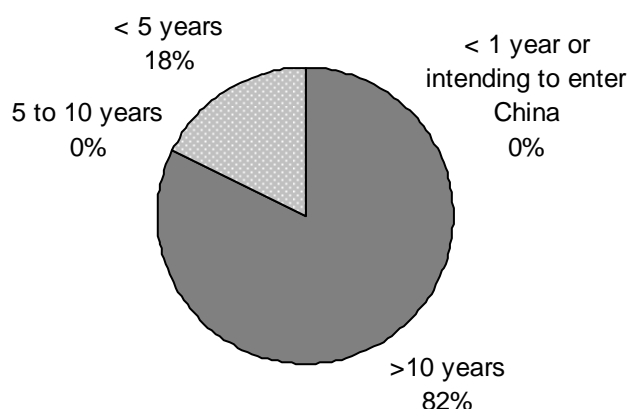
**1.1 Sample group profile**

**Table 1 – Sample Group Profile**

MNC		Total MNC	% sample
WFOE	12	15	88%
JV	3		
SME		Total SME	% sample
WFOE	1	2	12%
JV	1		

**1.2 For how many years has your company been engaged in China-related business?**

**Chart 1- Length of Engagement in China-related Business Activities**



A majority of the surveyed foreign companies have considerable experience in operating in the China market where 82% of companies interviewed have been engaged in China-related business activities for 10 or more years. 18% of the sample group is relatively new to the market with less than 5 years of China experience.

### 1.3 Which market segments related to construction does your China business operate in?

**Table 2- Market Segments Operated In**

	Total	%
Construction Engineering (CE)	15	60.0%
CE + 'Execution of Construction'	6	24.0%
CE + Other work	2	8.0%
Not known	2	8.0%

The vast majority (60%) of respondents stated that their China business is operating in construction engineering (CE), which encompasses the design, planning and management of construction projects, thus indicating that the Chinese market has a relatively high demand for European technological expertise and specialised know-how in the construction sector. This is further reflected in the survey where 24% of respondents are also engaged in CE as well as execution of construction (EC) work which involves on-site engagement of trades, workers and equipment.

### 1.4 Please describe the main scope of your business with China.

**Table 3- Surveyed Companies Scope of Business in China**

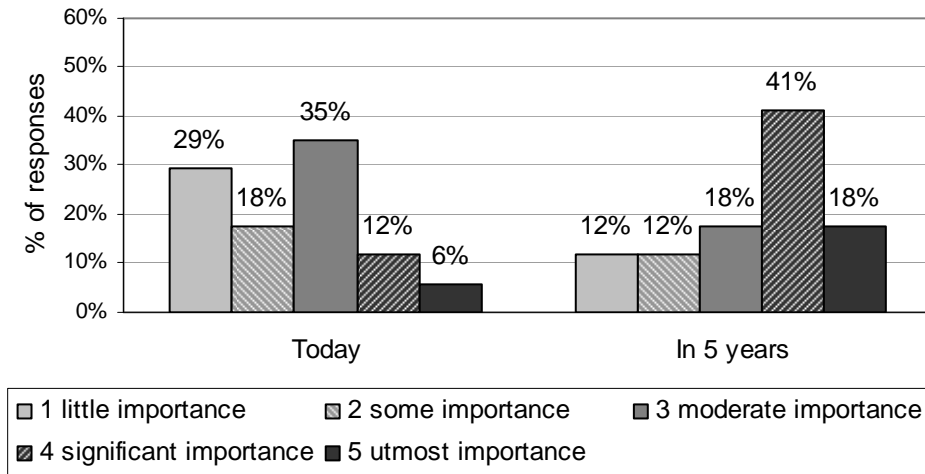
	Total	%
Design Services	17	29.8%
Planning Services	19	33.3%
Construction Execution	9	15.8%
Materials	8	14.0%

The survey indicates that European companies still have a comparable advantage in technical expertise and innovation. This is illustrated in the table above where the surveyed companies' main scope of business in China is in design and planning services (63.1%) and 15.8% are engaged in construction execution and only 14% is involved in the materials segment of the construction sector.

## SECTION 2: CHINA MARKET OPPORTUNITIES

### 2.1 How important is the Chinese Market for your business?

Chart 2- Chinese Market Importance<sup>49</sup>



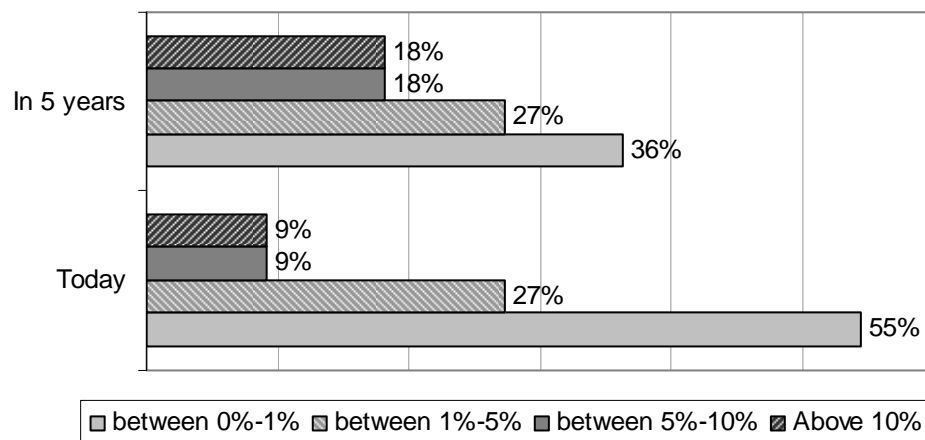
On average, responses indicated that today the overall importance of the Chinese market is of 'some importance' and will increase to 'significant importance' over the next five years, with the average response increasing from 2.4 for today's market to 3.3 for the next five years future.

18% of respondents consider the Chinese market to be of significant or of utmost importance to their business today. 35% of companies consider the Chinese market to be of moderate importance, and 18% consider it to be of some importance. Companies believe that the importance of the Chinese market will increase in the next five years, with 59% of respondents expecting that it will be of significant or utmost importance to their business in the next five years.

### 2.2 and 2.3 What is the percentage of your company's turnover in China?

- today compared to overall/global turnover in revenue?
- in 5 years?

Chart 3- Revenue from China as a % of Global Revenue



A majority of respondents placed their company's turnover in China at between 0% and 1% of overall turnover. The average reported China revenue today is 5.76%. In the next 5 years more

revenue is expected to come from China and this is depicted in the increase in the average China revenue % to 8.36%.

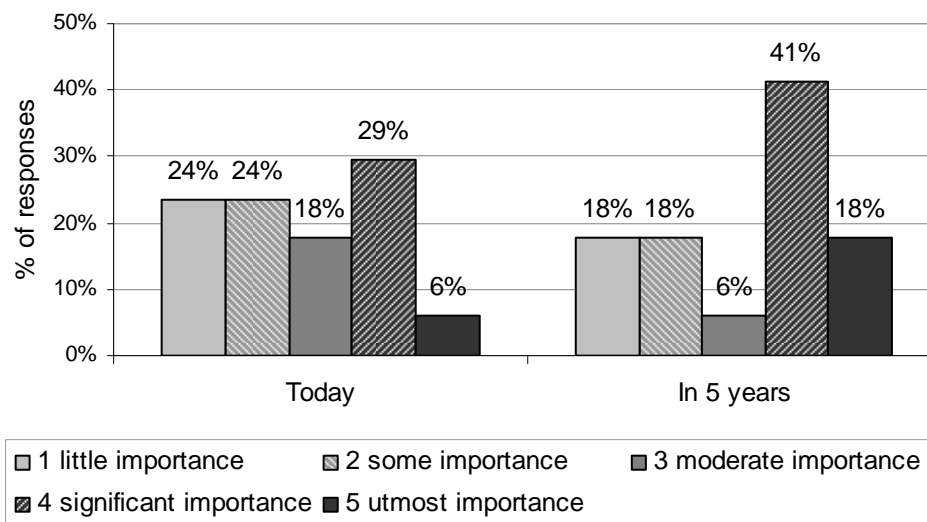
There is general agreement amongst construction companies that there is relatively little room left for expansion in China in the mainstream construction market. One survey described the situation as having past its peak. This is compounded by the difficulties for foreign constructors to do business in China.

However, the situation very much depends on the company. Surveyed general construction companies which normally operate in the execution of construction work have stated that unless a licence is attained, there are few market opportunities in China. In the field of architecture, there is little market expansion expected but an increase in demand for interior design services is forecasted to be substantial.

In addition, companies which specialise in environmental protection related projects will have a much easier task in gaining projects in China.

#### 2.4 How important is China as an investment destination for your sector of operation in general?

**Chart 4- China as an Investment Destination<sup>50</sup>**

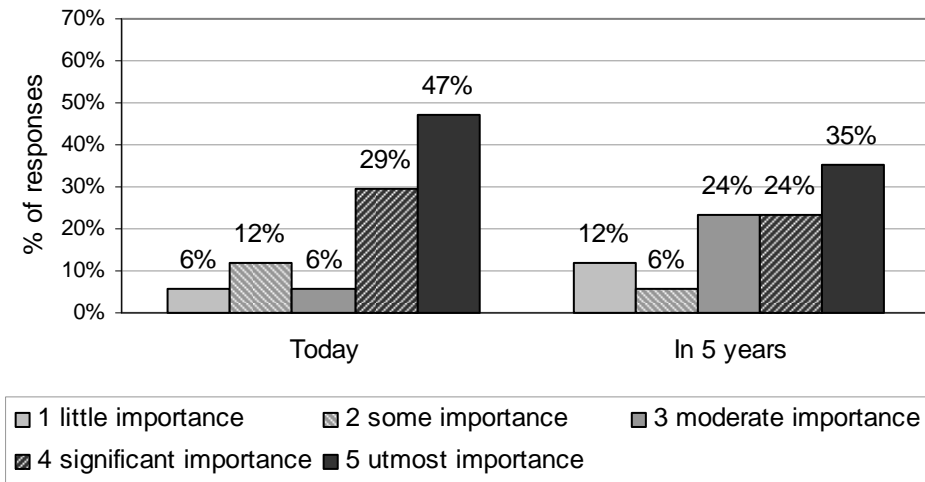


On average, responses indicated that the overall importance of China as an investment destination will continue to be a moderately important in the next five years, with the average response increasing slightly from 2.6 today to 3.1 in five years time.

Approximately 35% of companies rate China's importance as an investment destination of significant or of utmost importance today and 48% of respondents indicates that China is of less than moderate importance to their sector of operation. These same numbers change over five years, with 36% of companies rating the overall importance of China as an investment destination as less than of moderate importance and 59% of companies rating it more than of moderate importance.

**2.5 How much of a problem would you rate market access in China and other commercial practices by China?**

**Chart 5- Market Access and other Commercial Practices**

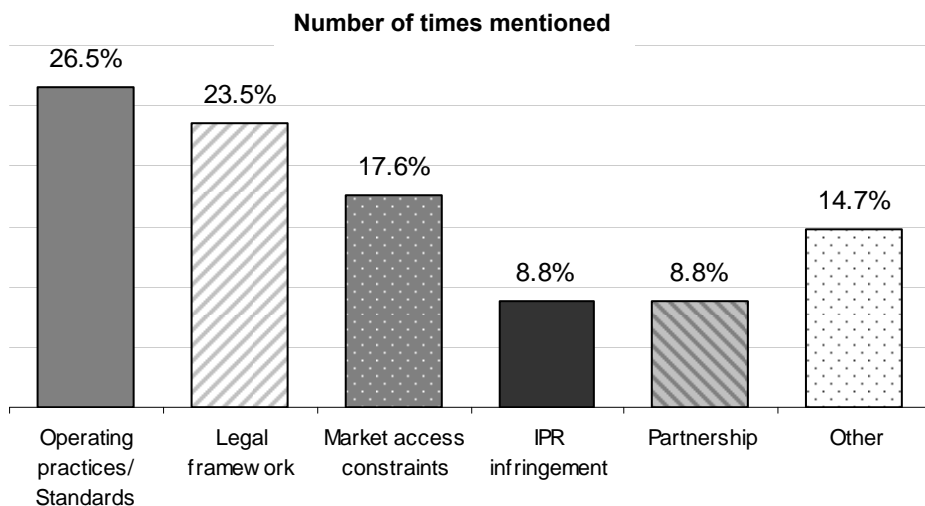


Companies interviewed indicated that market access and other commercial practice problems in China are of significant importance today, with an average 4 response score. The survey reports an average 3.6 response score in regards to market access problems in five years time indicating that the respondents believe that market access in China will improve.

Approximately 76% of respondents rate these problems to be of significant importance to utmost importance today. In the next five years this decreases to 59%.

**2.6 What are the main current obstacles preventing you from expanding further in the Chinese market? Please list in terms of priority (e.g. market access constraints, IP protection, Chinese standards/ operating practices, etc.).**

**Chart 6- Main Current Market Obstacles**



Operating practices and standards (26.5%) are mentioned as one of the biggest obstacles to further expand in the Chinese market. This includes unethical business practices such as bribery, corruption and unfair or secret public tenders. Due to the above stated reasons highlighted by the surveyed European companies and their unwillingness to play 'unfair' are noted to be factors in the loss of several projects. In addition, unfair requirements for foreign contractors are a widely

recognized issue preventing further expansion. This specifically refers to decree 113 and 114 which require a high fixed staff number and high capital assets in China.

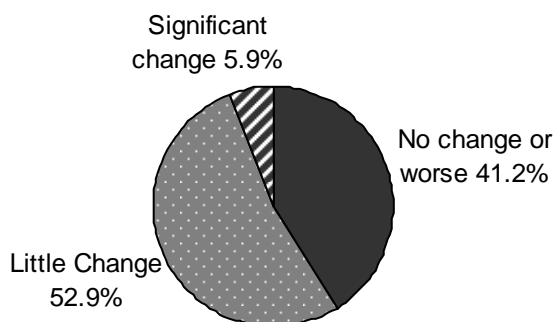
A second obstacle (23.5%) that is emphasised is the lack of a legal framework in China. Legal matters concerning foreign companies operating in China and an inconsistent legal system create an unpredictable market which is very discouraging for an investment destination.

Market access constraints (17.6%) are also indicated as an obstacle to strengthen European companies' market position. Many of the surveyed European construction companies stated that it is too difficult to get a licence to execute construction work in China. It is mentioned that obtaining a license from government bodies is difficult as they see foreign construction firms not as contractors but as project managers.

Some companies raised IPR (8.8%) concerns (particularly those in design services) but largely, it doesn't seem to come as a major obstacle for European companies. It is stated that without partnerships in the form of a JV it is difficult to obtain a strong market share. Other issues that are raised include high taxes for expatriate salaries, a lack of qualified people and remnants of the "old" system.

## 2.7 How will this situation likely evolve in the next 5 years?

**Chart 7- Market Access Situation in 5 Years**



The respondents do not foresee an improvement in the current obstacles preventing further expansion in the China market in five years time. It is noted by the respondents that they do not expect positive change in the areas of IPR and legislation and that five years is too short for any effective change to occur. 53% of the surveyed indicated that they expect little improvement in the current obstacles preventing expansion. 41% of the surveyed indicated that they either expected no change in the situation or for the situation to get worse. Only 5.9% of the surveyed indicated that there will be a significant change in the industry.

**Table 4 – Market Access Situation in 5 years**

Selected Comments	
<b>Little Change</b>	“5 years is too short for anything to happen significantly but the ability to get a professional license will be improved. However the tendering process is almost certain NOT to improve.”
<b>Significant change</b>	“We expect the situation regarding the legal system to improve. China needs to show that it is a reliable destination for investment. Also, an increasing number of Chinese Construction firms will become privatised.”
<b>No change or worse</b>	“Local competitors will become stronger and more transparent. Good ‘guanxi’ (connections) will remain a key factor in gaining business for Chinese competitors.”

**2.8 What are the quantitative costs or impacts on your business today, resulting from these obstacles? This can be indicated as a percentage of turnover, profits, etc. Please specify.**

**Table 5 – Quantitative Costs or Impacts of Market Access Obstacles**

<b>Where respondents made specific calculations:</b>				
<b>Comment</b>		<b>Sub-sector</b>		
		<b>CE</b>	<b>EC</b>	<b>O</b>
Market Access obstacles	“We predict about 50% of business is being lost in China due to various market access obstacles.”	•	•	
Market Access obstacles	“If this sub-contracting problem did not exist we would be making 3 times more revenue than we do today. (Instead of 5m it would be 15 m revenue)”	•		•
Government regulations	“Bureaucratic operating procedures from Chinese government in enforcing legislation take up 20% of the management time of the top 3 managers at the office here.”	•		
Government regulations	“50% of total revenue is lost due to various restrictions. Since July 2005, new laws have made the construction industry for Foreign firms even more difficult to operate in.”	•	•	
<b>Where respondents made estimates:</b>				
<b>Comment</b>		<b>Sub-sector</b>		
		<b>CE</b>	<b>EC</b>	<b>O</b>
“Between 10% and 15% of the revenue made from China.”-Import of planning services		•		
“A conservative estimate would be 10% of potential revenue lost. ~28m RMB/ year.”-Export of design services, planning services, construction execution and materials.		•	•	
<b>Where respondents found it difficult to quantify market access obstacles:</b>				
<b>Comment</b>		<b>Sub-sector</b>		
		<b>CE</b>	<b>EC</b>	<b>O</b>
“Not sure, costs mainly take place on micro-implementation level.”		•	•	
“Difficult to say, the complete system of operating is difficult here. It is not worth imagining a situation where this is not the case.”		•	•	
<small>CE: Construction Engineering            EC: Execution of Construction Work            O: Other</small>				

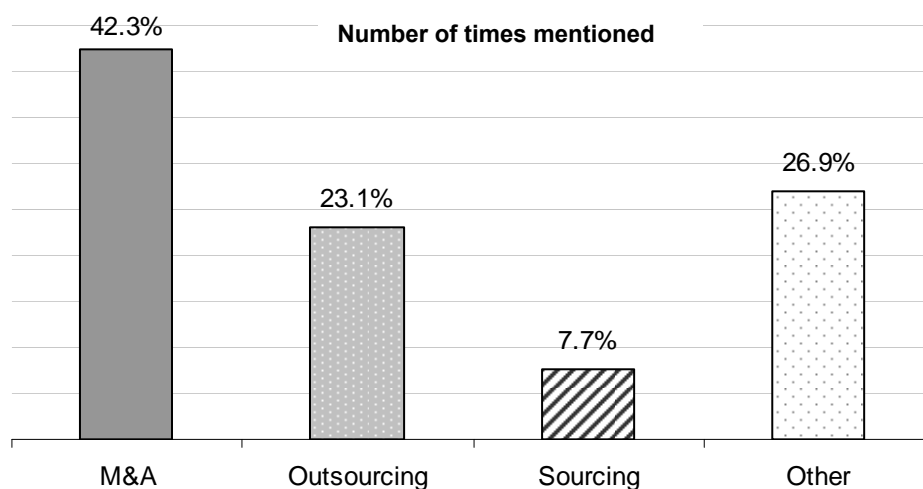
Most respondents indicated that the cost of these obstacles is difficult to quantify but that their impact makes the difference between progress in the playing field, stagnation or leaving the market all together. On average, there is a predicted 40% of revenue loss due to market access obstacles and government regulations. Some companies identified reduced prices and profit losses as costs related to these challenges.

**2.9 How is this situation likely to change in the next 5 years?**

Many of the interviewed companies plan to maximise their opportunities in the Chinese market by seeking niches. Some companies plan to utilise China as a sourcing base or to outsource to other countries. The general expectation is that quantitative costs as a result of market obstacles are likely to decrease. However, no accurate estimations can be made and therefore no averages or numerical trends can be established.

**2.10 How does your industry/ sector of operation plan to maximise the opportunities brought about by the Chinese market (e.g. outsourcing and exporting to home markets/ investments in China, etc.)?**

**Chart 8 – Plans to Maximise Opportunities in China**



By far the most widely stated method of opportunity maximisation is mergers & acquisition (42.3%) of local (Chinese) companies. Almost all construction MNC's surveyed stated that in the near future they plan to buy a Chinese construction company. Others wished to focus on finding a market niche within the Chinese construction market in order to face less competition from the Chinese who are becoming very competitive in the mainstream construction market.

Some of the surveyed European companies stated that they intend to outsource some of the more basic office duties to Chinese offices (23%). This includes limited back-office operations (e.g. drafting) in China, however the companies surveyed are aware of the fact that wages of skilled workers in China are rapidly increasing. There are also plans to use China to source materials (7.7%).

Lastly, a few of the surveyed companies suggested that in order to maximise opportunities in the Chinese market, Chinese companies must first be welcomed to the international market (including the EU market). Only then would EU lobbying have a leverage with the Chinese government. The need for European companies to 'localise' reoccurred frequently in the survey. This meant reducing cost-bases to that of Chinese competitors; removing expensive expatriate staff etc.

**2.11 Please consider how the direction of China's sustainable development as described above provides opportunities and challenges within your own sector and business units. What will be the likely challenges and constraints of realising these opportunities?**

Most of the larger surveyed construction MNCs spoke of PPP (public-private partnership) as the way forward. This is important because if the Chinese government wants to develop the rural economy, hospitals, roads and prisons will have to be built. Few Chinese companies have the expertise to construct these buildings and so the surveyed European companies are looking for a long-term relationship with the government to build these utilities. However, the surveyed companies also warned that in order to execute these building projects, they will need to collaborate with a Chinese company. This poses a problem for European companies because it is difficult to find an efficient, trustworthy Chinese partner (especially in the construction market).

All of the surveyed construction companies also spoke of opportunities brought about by the new focus on the environment and energy efficiency. However, these opportunities will only be

realised if the government agencies responsible for the enforcement of environmental law are strict and fair in their implementation of the law.

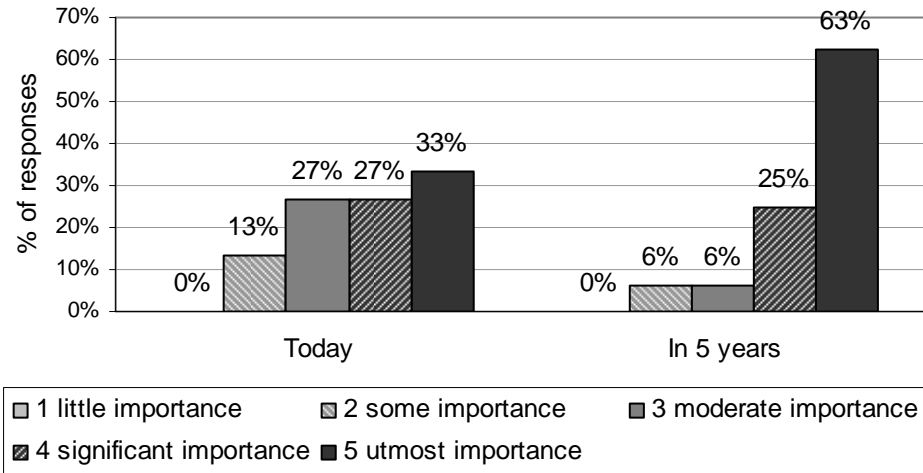
**Table 6 – Opportunities and Constraints Resulting from China’s 11<sup>th</sup> 5-Year Programme**

<b>a) Selected Comments</b>	
<b>New market opportunities (1)</b>	“Health will be a big factor of the next 5 years. The Chinese government plans to build hospitals. Therefore, we can put forward their PPP projects. It is a huge market opportunity and the 11th FYP looks very promising in this respect.”
<b>New market opportunities (2)</b>	“Generally it can be seen as a good move towards increasing construction quality in terms of energy saving and sustainable construction and thus more chances for exporting international advanced know-how.”
<b>New market opportunities (3)</b>	“Absolutely will increase our opportunities, particularly in energy efficiency. This could include new business in the area of environmentally friendly design and retro-fitting of existing plants.”
<b>Higher standards</b>	“Particularly in environmental protection & energy efficiency we have advantages, not only compared to Chinese competitors but also to US competitors who are equally polluting & energy inefficient (because energy is available almost for free in the US)”
<b>b) Selected Comments</b>	
<b>Constraints</b>	“This may have a marginal impact and add some opportunities for specialists. Their technologies will also be copied quite quickly, I guess.”

### SECTION 3: CHINESE SECTOR COMPETITION

#### 3.1 How significant is competitiveness from Chinese enterprises operating in your core sectors in the Chinese market?

Chart 9- Threat of Chinese Enterprises Operating in the Chinese market

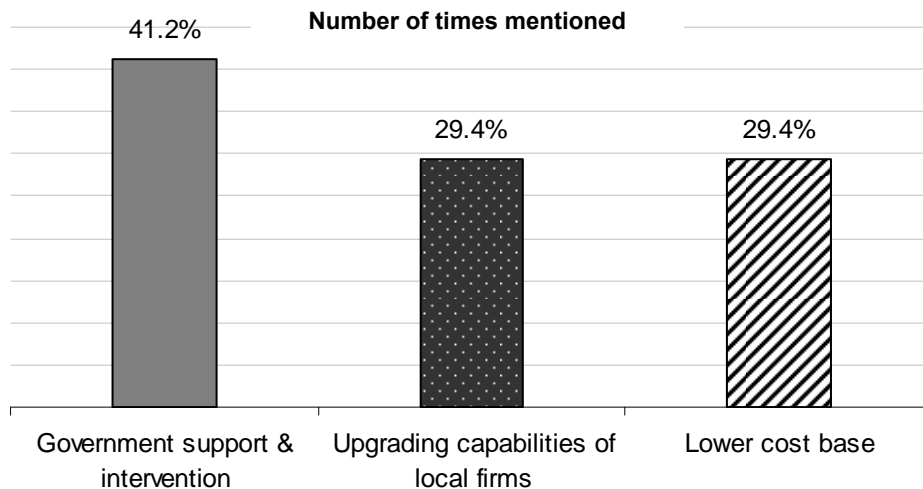


The average response to competition from Chinese enterprises indicates that companies expect this threat to increase in the next five years. The average response for today's market rate of 3.8 places the threat of Chinese enterprises at a level of moderate to significant importance. This perception increases to 4.3, however, indicating that companies expect local enterprises to pose an increased and significant threat in the next five years.

60% companies rated this threat to be of moderate or significant importance today, while this shifts the threat to significant or utmost importance in the next five years. This shift is especially pronounced by 63% of companies believing that the threat from Chinese competitors will be of utmost importance in five years time.

**3.2 Please describe the nature of this competitiveness. Include the role of SOE's in your description. How is the threat evolving?**

**Chart 10 – Expected Threats of Chinese Companies**



41.2% of the respondents stated that government support and intervention is a threat. Chinese companies are close to the government and therefore win many contracts. Furthermore, it is indicated that construction services will become more and more local which are strongly supported by the Government in order to reduce unemployment.

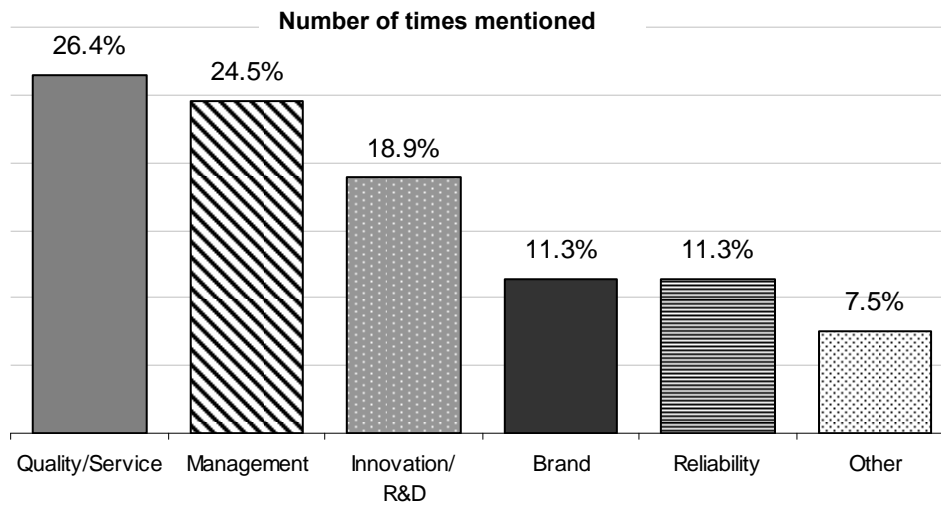
Another significant threat are the upgrading capabilities of local firms. For most companies surveyed, this threat stems from a growing efficient Chinese construction force. Knowledge transfer has paid off for the construction sector and Chinese fees are significantly lower. This is forcing European companies to seek other markets.

Operating on a lower cost base is also stated as a competitive advantage that Chinese companies have over European companies (29.4%). However, it is also indicated that the quality of their work is too low. Hence, increasing demand for quality will leave Chinese firms less competitive.

The respondents expect no particular threat from SOEs although the largest construction companies in China are SOEs. It is generally noted that construction SOEs are in-fact the more inefficient among the Chinese competitors. It is also worth noting that there is a drive to privatise the construction sector. This will mean a further increase in competitiveness.

### 3.3 What are the main advantages your company has in China compared to Chinese competitors?

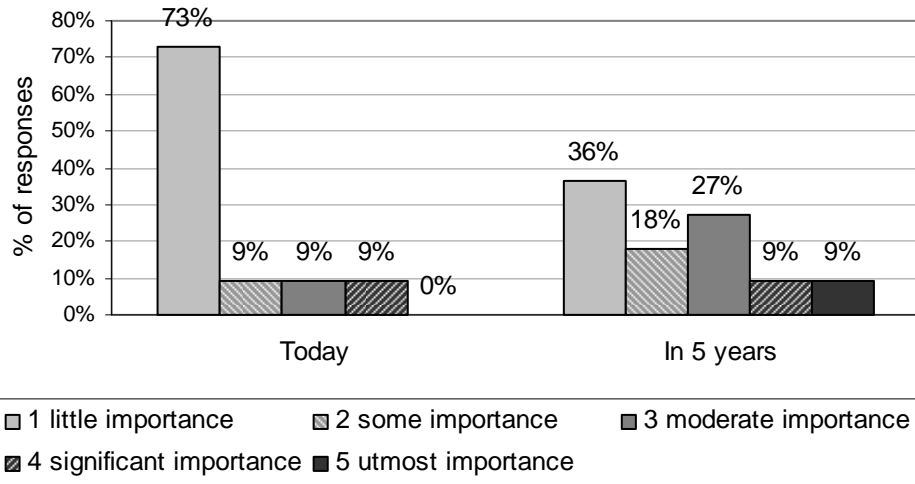
Chart 11- Main Advantages of European Companies



Although Chinese companies operate at lower costs, having access to skilled and efficient staff is highlighted as a key advantage by the European companies surveyed. Quality and service are mentioned as significant advantages of European construction companies. It is noted that Chinese construction companies face management and reliability problems. As a result, 24.5% of the surveyed companies listed management/personnel as an advantage especially when dealing with big and complex projects. Innovation/R&D, brand and reliability (30.2%) are also considered important advantages for European companies, especially with regards to projects employing environmentally friendly technology and services. Other advantages indicated were safety standards and human capital.

### 3.4 How significant is competitiveness from Chinese enterprises operating in the construction sector in the US market?

**Chart 12-Significance of Chinese Competitors in the US Market<sup>51</sup>**



On average, responses indicated that the overall importance of the US market will shift from little importance today towards some or moderate importance in the next five years, with the average response increasing from 1.5 for today to 2.2 for the next five years.

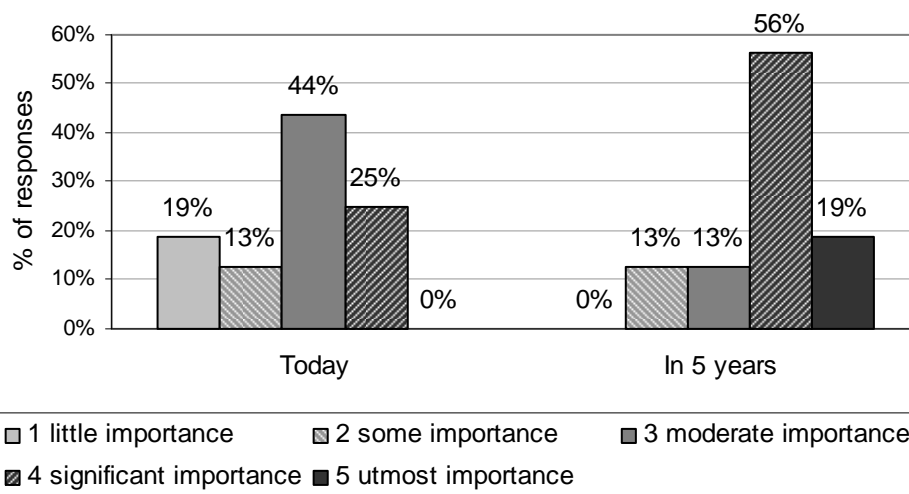
The majority of respondents (73%) consider the current presence of Chinese operators in the US market to be of little importance. In both current and future cases, less than 10% of companies believe Chinese operators operating in the US market to be of more than significant importance.

### 3.5 Please describe the nature of this competitiveness and its likely future evolution (5 yrs).

Although there is a general expectation among the surveyed companies that Chinese companies will at some stage enter the US market, it is not likely to be in the near future. In addition, the US market provides relatively little business for the majority of the surveyed European companies. Therefore, even if China did enter the US market successfully, the threat posed to European companies would be minimal.

### 3.6 How significant is competitiveness from Chinese enterprises operating in the construction sector in the ASEAN market?

**Chart 13- Problem of China-specific operating practices in the ASEAN Market<sup>52</sup>**



The average response to the competitive threat of Chinese enterprises in the ASEAN market indicates that although not of utmost importance, companies do expect this problem to increase in the next five years. Today's average response rate of 2.7 places the threat at a level between some and moderate importance. This perception increases to 3.8, indicating that companies expect the problem to pose an increasing threat in the next five years.

### 3.7 Please describe the nature of this competitiveness and its likely future evolution (5 yrs).

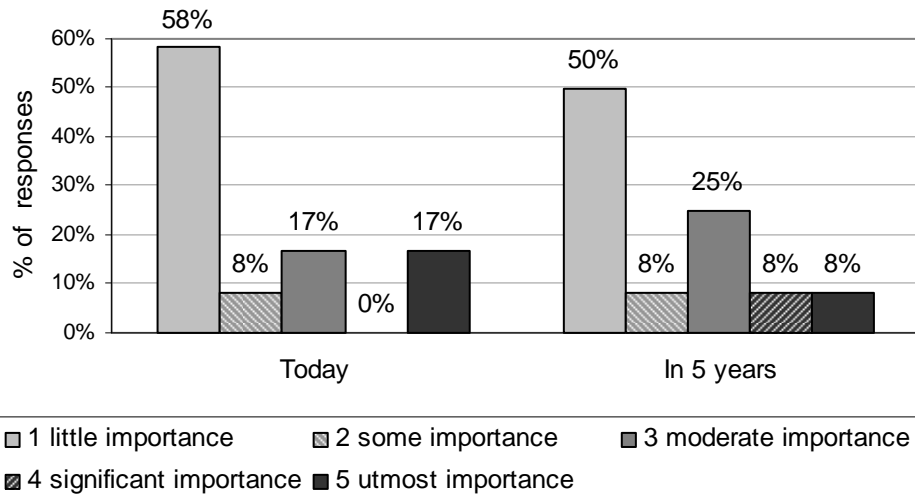
The ASEAN market is full of opportunities for both European and Chinese companies and therefore there is likely to be competition at some stage. For the most part, the surveyed European companies stated that Chinese companies are already operating in the ASEAN market with relative success, hence affecting European companies in the general construction sector. When asked about the development of competitiveness from Chinese companies in the next five years, the vast majority of the interviewed companies commented that Chinese companies are only going to get better and therefore take away more business from European companies also in the ASEAN market.

**Table 7 – Competition in ASEAN Markets in 5 Years**

Selected Comments	
<b>ASEAN market prospect (1)</b>	"Chinese companies are more price competitive and use unethical business practices to a significant effect."
<b>ASEAN market prospect (2)</b>	"Chinese increase their activity in Indonesia, Malaysia and Korea. EU companies will loose market share to the Chinese in this market."
<b>ASEAN market prospect (3)</b>	"Strong in price-sensitive regions within ASEAN and Africa. Chinese cultural closeness (Singapore; Thailand) might open the door."

**3.8 To what extent does the infringement on IPR by Chinese competitors affect your business with China?**

**Chart 6- Effect of Chinese IPR infringement<sup>53</sup>**



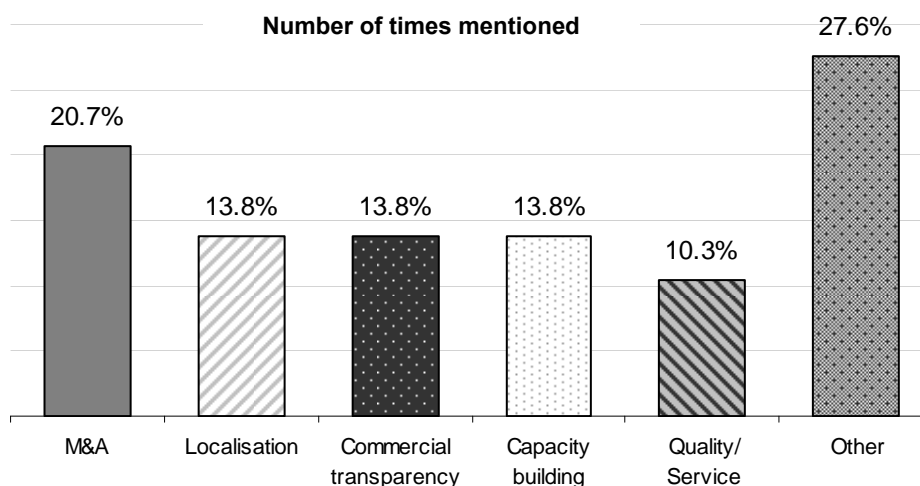
Companies interviewed indicated that the extent to which their business is affected by the infringement of IPR by Chinese competitors is of some importance today, with an average 2.1 response score. This average remains exactly the same at 2.1 indicating that not much progress is expected.

**3.9 How will this situation evolve in the next 5 years?**

While some companies expressed hope that this problem would improve in the future (e.g. through increased law enforcement), an equal number of companies expect little or no change, as the government lacks the commitment to enforce IPR adequately.

### 3.10 What is your priority in dealing with the challenge posed by the emergence of China/Chinese industry as competitors?

**Chart 15 – Plans to Remain Competitive in the Chinese Market**



Acquisition of successful Chinese competitors is the preferred option to deal with Chinese competition suggested by the respondents (20.7%). A few respondents preferred local partnerships with Chinese companies as a method of success. Localisation (13.8%) was often cited as a necessity to do business in China. This involves becoming fully integrated into the Chinese construction market and recognised as a Chinese company. Increased commercial transparency (13.8%), less bureaucracy and easier access to licences are also highlighted as a priority by the surveyed companies. Furthermore, capacity building, referring to the transfer of knowledge in order to increase the number of local qualified people is also noted as an important element (13.8%). A few companies surveyed stated that their priority is improving quality and services (10.3%). Branding, innovation and an improved understanding of the way business is conducted in China are also considered as important to remain competitive.

### 3.11 Please highlight ideas for acceptable investment scenarios in China outside those currently permitted by the Chinese government. Please be creative in considering EU-China win-win approaches to investment and cooperation.

Successful win-win scenarios suggested by the surveyed companies largely revolved around PPP with regards to knowledge-intensive areas of the construction market. An example of this is tunnelling, whereby only a handful of companies in the world can operate the equipment needed for large scale tunnelling projects. Others included environmental consulting for various issues such as water or waste treatment. These scenarios are win-win on the basis that European companies who win these knowledge-intensive projects can operate with fewer legal constrictions and the Chinese companies can benefit financially. It is also beneficial for China providing access to buildings and infrastructure that are technologically advanced and more environmentally friendly.

Another important suggestion given by the surveyed companies is to assist Chinese companies in the European market. By assisting Chinese companies abroad, the Chinese government would be more willing to allow better access for European companies to the Chinese market.

**Table 8 – EU-China Win-Win Investment Scenarios**

Selected Comments
“We would like to be able to sub-contract Chinese construction companies to do the activities we are not allowed to do. This would be a win-win scenario as it makes it easier for foreign MNEs to set up high-standard facilities here while the Chinese sub-contractor would gain business that is otherwise lost.”
“Already foreign construction firms have been able to contribute (design services in particular) to the Olympics 2008 and Expo 2010. Showing the potential for win-win cooperation. Our presence has also a number of spill-over effects when it comes to the upgrading of infrastructure.”
“We would welcome more private investment in public projects through public-private sector partnership (PPP) as seen in the UK and other EU countries. China is still very unfamiliar/ apprehensive towards this concept.”
“In order to create win-win investment scenarios in China, it is necessary to have acceptable and transparent legal frameworks for international investors, which will be encouraged to participate in Chinese construction enterprises or to undertake PPP projects (Ownership in Chinese Corporations).”

## REFERENCES

- Amil, D., Dolvet, J., 2006: Entwicklung der Bautätigkeit und Auswirkungen auf die übrige Wirtschaft, [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-NP-06-016/DE/KS-NP-06-016-DE.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NP-06-016/DE/KS-NP-06-016-DE.PDF), 16/2006, accessed: 2006-06-24
- BFAI, 2005a: Mögliche Überhitzung in Immobiliensektor der VR China macht weiter Schlagzeilen, [http://www.bfai.com/DE/Content/\\_\\_\\_SharedDocs/LinksEinzeldokumente-Datenbanken/fachdokument,templateId=renderSE.html?fIdent=MKT20050511094521&source=alteLinks&sourcetype=SE](http://www.bfai.com/DE/Content/___SharedDocs/LinksEinzeldokumente-Datenbanken/fachdokument,templateId=renderSE.html?fIdent=MKT20050511094521&source=alteLinks&sourcetype=SE), accessed: 2006-05-13
- BFAI, 2005b: Branche kompakt: VR China / Bauwirtschaft, [http://www.bfai.de/DE/Content/\\_\\_\\_SharedDocs/Links-Datenbankabfragen/mkt-branche-kompakt-bauwirtschaft-integrator.html](http://www.bfai.de/DE/Content/___SharedDocs/Links-Datenbankabfragen/mkt-branche-kompakt-bauwirtschaft-integrator.html), accessed: 2006-05-13
- BFAI, 2006a: Wirtschaftstrends kompakt VR China 2006, [www.bfai.de](http://www.bfai.de), accessed: 2006-05-13
- BFAI, 2006b: Asiens Bauwirtschaft boomt vor allem in den Entwicklungsländern, [http://www.bfai.de/DE/Content/\\_\\_\\_SharedDocs/LinksEinzeldokumenteDatenbanken/fachdokument.html?fIdent=MKT20060117105615&source=DBNL&sourcetype=NL](http://www.bfai.de/DE/Content/___SharedDocs/LinksEinzeldokumenteDatenbanken/fachdokument.html?fIdent=MKT20060117105615&source=DBNL&sourcetype=NL)
- Chinese Embassy, (2006-05-05): Steigender Produktionswert der chinesischen Bauwirtschaft, <http://www.chinabotschaft.de/det/jj/t250654.htm>, accessed: 2006-05-05
- Chinese National Development and Reform Commission, 2006: Report on the Implementation of the 2005 Plan for National Economic and Social Development and on the 2006 Draft Plan for National Economic and Social Development, available at: [http://service.china.org.cn/link/wcm/Show\\_Text?info\\_id=161917&p\\_qry=eleventh%20and%20five%20and%20year%20and%20plan%20and%20china](http://service.china.org.cn/link/wcm/Show_Text?info_id=161917&p_qry=eleventh%20and%20five%20and%20year%20and%20plan%20and%20china)
- Decree 113: "Regulations on Administration of Foreign Invested Construction Enterprises", MOC & MOFCOM, September 27, 2002
- Degree 114: "Regulations on Administration on Foreign-Invested Construction and Engineering Design Enterprises", MOC & MOFCOM, September 27, 2002
- EIC, 2005: Annual Report 2004 - 2005
- EUCCC, 2004: European Business in China Position Paper 2004
- EUCCC, 2005: European Business in China Position Paper 2005
- European Foundation for the Improvement of Living and Working Conditions, 2005: Trends and drivers of change in the European construction sector Mapping report, [www.eurofound.eu.int](http://www.eurofound.eu.int)
- fdi.gov.cn (2006-02-23): The development of Construction Industry and Summary of Tenth Five-Year Plan, [www.fdi.gov.cn](http://www.fdi.gov.cn), accessed: 2006-06-23
- fdi.gov.cn (2006-03-22): Utilization of foreign investment in construction industry, [www.fdi.gov.cn](http://www.fdi.gov.cn), accessed: 2006-06-23
- Howlett, A. M., 2003: Construction How will China's Accession to the WTO Affect the Construction Industry in China – Opportunities for Foreign Companies, May 2003, [http://www.jonesday.com/pubs/pubs\\_detail.aspx?pubID=S701](http://www.jonesday.com/pubs/pubs_detail.aspx?pubID=S701), accessed: 2006-05-29
- McGrawHill Construction, 2006: Top Chinese Contractors 2005, available at: <http://www.enr.com/people/people/Default.asp>
- OECD, 2005a: OECD Economic Surveys – China, Volume 2005/13, OECD Publishing, 2005
- OECD, 2005b: China in the Global Economy – Governance in China, OECD Publishing, 2005
- People's Daily Online: Foreign-funded firms to get grace period on new company tax, [http://english.people.com.cn/200606/10/eng20060610\\_272848.html](http://english.people.com.cn/200606/10/eng20060610_272848.html), accessed: 2006-06-22:
- Schultmann, F.; Kibert, C., 2004: Industrial Ecology, Issue Paper for the 2005 World Sustainable Building Conference, Tokyo, Japan, 27 - 29 September 2005
- Sha, K., 2004: Construction Business System in China – an institutional transformation perspective, in: Building Research and Information, 32(2004)6, pp. 529537
- Subrahmanyam, A., 2005: China and the WTO Perspectives on a changing environment, available at: [www.lawandpractice.com](http://www.lawandpractice.com)

- Sui Pheng, L.; Hongbin, J.: Internationalization of Chinese Construction Enterprises, in: Journal of Construction Engineering and Management, Nov/Dec 2003, pp. 589-98
- Thouret, Jean Louis 2006: "Report on the overseas project contracting activities of Chinese contractors" Vinci Construction Grand Projects, Beijing office, May 2006
- USCBC (USChina Business Council), 2005: China's WTO Implementation – An Assessment of China's Fourth Year of WTO Membership, 24 September 2005
- Wang, D.; Hadavi, A.; Krizek, R.J.: Chinese construction firms in reform, in: Construction Management and Economics, 2006, 4, pp. 509-19
- WTO, 2006: Trade Policy Review – Report by the Secretariat People's Republic of China, WT/TPR/S/161, 2006

## ENDNOTES

- <sup>11</sup> WTO, WT/TPR/S/161, 2006
- <sup>12</sup> European Foundation for the Improvement of Living and Working Conditions, 2005.
- <sup>13</sup> Chinese Embassy, 2006.
- <sup>14</sup> WTO, WT/TPR/S/161, 2006.
- <sup>15</sup> Sha, 2004.
- <sup>16</sup> www.fdi.gov.cn, accessed: 2006-06-23: The development of Construction Industry and Summary of Tenth Five-Year Plan.
- <sup>17</sup> OECD, 2005a.
- <sup>18</sup> McGrawHill Construction, 2006.
- <sup>19</sup> Some industry representatives interviewed estimate the share of FIEs (excluding Hong Kong, Macao and Taiwan) to be even lower than 1% with an average of 0.6%.
- <sup>20</sup> The estimates for 1998 and 2003 are based on ownership breakdowns of urban construction enterprise output. Coverage includes "Class 4" and above construction contractors, and all general and professional contractors starting in 2002. They represent around 60% of construction value added. The remaining companies for which limited data is available are made up of rural construction teams (two-thirds) and very small companies (one-third). For these companies, estimates for the non-reporting industrial sectors were used (OECD, 2005a). Estimates for 2006 and 2010 are based on expectations about the increase in demand of construction products and services. However, the demand for construction products, like residential and industrial buildings, water supply, bridges, harbours etc. heavily depends on the development of other sectors, such as: machinery and mechanical appliances, telecom services, financial services, chemicals, for which the construction industries supplies the necessary infrastructure.
- <sup>21</sup> Annex 1 shows the estimated private sector share (non-state and non-collective registered companies) of GDP by sectors for the years 1998 and 2003.
- <sup>22</sup> www.fdi.gov.cn, accessed 2006-06-23: Utilisation of Foreign Investment in Construction Industry.
- <sup>23</sup> BFAI (Bundesagentur für Außenwirtschaft), 2006a.
- <sup>24</sup> Sui Pheng, Hongbin, 2003
- <sup>25</sup> People's Daily Online : China begins ambitious rural road upgrading program, accessed 2006-06-22 at: [http://english.people.com.cn/200606/09/eng20060609\\_272577.html](http://english.people.com.cn/200606/09/eng20060609_272577.html).
- <sup>26</sup> www.fdi.gov.cn, accessed: 2006-06-06: The Development of Construction Industry and Summary of Tenth Five-Year Plan.
- <sup>27</sup> Schultmann, Kibert, 2004.
- <sup>28</sup> BFAI, 2005.
- <sup>29</sup> European Foundation for the Improvement of Living and Working Conditions, 2005.
- <sup>30</sup> Chinese National Development and Reform Commission, 2006.
- <sup>31</sup> Sui Pheng, Hongbin, 2003.
- <sup>32</sup> A summary of the outcomes of the survey conducted within this research is given in Annex V.
- <sup>33</sup> This estimate combines the difference between the market share of foreign companies today and pre-WTO levels. European companies are assumed to account for up to 67% of foreign Construction companies operating in the Chinese market. For a breakdown of the estimated quantitative impact on *imports* of construction services under free trade conditions (estimated at \$325 million) please refer to the Technical Appendix.
- <sup>34</sup> This certificate can only be obtained by sitting a local exam, with Chinese as the only exam language.
- <sup>35</sup> For further information on market access barriers resulting from legal issues it is referred to Decree No. 113, Decree No. 114 as well to reports EUCCC, 2004 and 2005; EIC, 2005.
- <sup>36</sup> On 10th October 2006, the Ministry of Construction and Ministry of Commerce jointly issued draft implementing rules on Decree 114 for public comment.
- <sup>37</sup> People's Daily Online: Foreign-funded companies to get grace period on new company tax, accessed on 2006-06-22: [http://english.people.com.cn/200606/10/eng20060610\\_272848.html](http://english.people.com.cn/200606/10/eng20060610_272848.html).
- <sup>38</sup> Wang et al., 2006
- <sup>39</sup> OECD, 2005b.
- <sup>40</sup> Wang et al., 2006
- <sup>41</sup> BFAI, 2006b.
- <sup>42</sup> For an analysis of the results of the survey see Annex V.
- <sup>43</sup> Thouret 2006
- <sup>44</sup> Sui Pheng, Hongbin, 2003
- <sup>45</sup> Thouret, 2006
- <sup>46</sup> *Ibid*
- <sup>47</sup> Sui Pheng, Hongbin, 2003
- <sup>48</sup> Subrahmanyam, 2005
- <sup>49</sup> USCBC, 2005
- <sup>50</sup> Amil, Dolvet, 2006.
- <sup>51</sup> China Statistical Yearbook 2005. These figures have been converted at the 2004 fixed exchange rate of 1 USD to 8.28 RMB
- <sup>52</sup> WTO statistical database
- <sup>53</sup> China Statistical Yearbook 2005. These figures have been converted at the 2004 fixed exchange rate of 1 USD to 8.28 RMB
- <sup>54</sup> Outcomes are based on interviews with industry experts, an extended literature review and on the industry survey conducted in this study.
- <sup>55</sup> European Foundation for the Improvement of Living and Working Conditions, 2005
- <sup>56</sup> These recommendations are based on and do incorporate the EIC position paper and the discussion of industry representatives during the July 2006 conference in Brussels, related to this study.
- <sup>57</sup> The estimates are constructed by taking the share of GDP in each relevant sector of the economy and estimating the proportion of the sector that is private. The result totals to the private share of GDP. The estimates are made for the economy as a whole, the commercial business sector, and the non-farm commercial business sector. The commercial business sector excludes services that are performed by government and nonprofit organisations in most OECD economies, and gives a more balanced portrayal of the extent to which China's economy is private.
- <sup>58</sup> EUCCC 2004, 2005
- <sup>59</sup> These percentages have been rounded to two significant numbers.
- <sup>60</sup> *Ibid*
- <sup>61</sup> *Ibid*
- <sup>62</sup> *Ibid*
- <sup>63</sup> *Ibid*