ABSTRACT OF THE SECTORAL STUDIES

Each sectoral report includes a chart which provides a visual reference of both the market driven competitive forces of Chinese companies, plotted to the left of the horizontal access as well as those trade and investment barriers which are deemed to result from market distorting measures, plotted to the right. The author has indicated the relative importance of these competitive impacts in terms of their position on the vertical axis. Those nearer the top are deemed to be the most significant.

Figure 1 which follows is a generic summary designed to capture trends across all sectors and highlights where barriers are most problematic. The Chart is designed as a guide only, to provide some perspective to the descriptions of competitive forces in this sector.

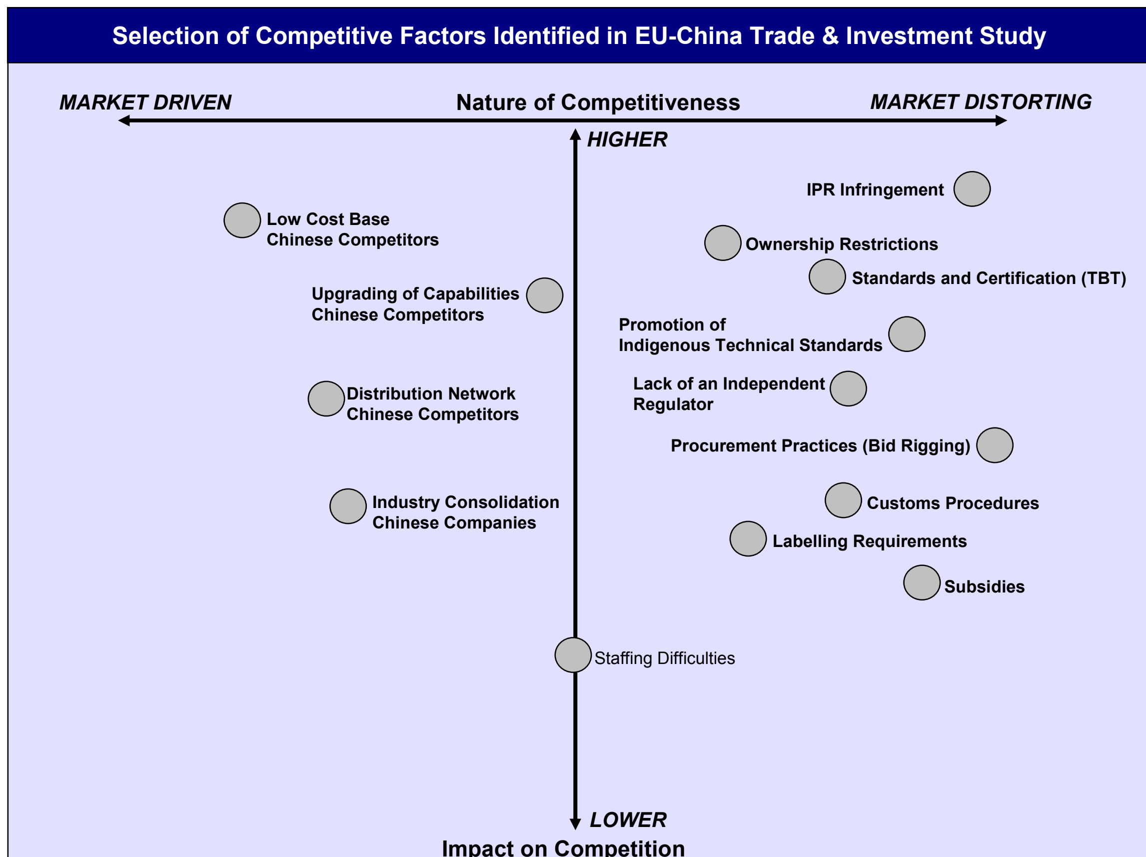


Figure 1: Template for Visual Summary of Competitive Factors

In addition to the above visual summary, each study includes a SWOT Analysis summarising they key strengths, weaknesses, opportunities and threats for European and Chinese actors competing in the Chinese market. The SWOT table below is a representative example taken from the Automotives sector study.

Table 1: Sample of SWOT Analysis EU-China Competition (Automotive Sector)

European Actors	Chinese Actors
Strengths - European technological advantage in innovation, quality, safety and energy efficiency - Strong brand recognition in China and the introduction of new models over the next five years will help stabilise market share - Capabilities within China are highly regional, and European suppliers are located in the strongest region, i.e. Shanghai - Intense competition among JV assembly projects and the consequent need to rapidly introduce new models will mean European partners remain important - Components producers have strong global OEM linkages	***Strengths*** - Comparative advantage in low-cost and labour intensive manufacturing (majority of exported vehicles from China are compact cars and pickups that were priced under US $5,000) - Close ties with local governments: Benefit from subtle forms of local protectionism, favouritism in purchasing arrangements, and inadequate enforcement of existing laws and regulations - Chinese auto companies are highly responsive to shifts in the domestic marketplace - Rapid increase automotive components exports from China (from $5 billion. in 2003 to $7.8 billion in 2004)
Weaknesses - Foreign investment auto assembly sector restricted to JV and limited to 50% of equity share. Success foreign firm largely dependent on JV structure and Chinese state-owned partners - EU companies have less flexible JV structures than more recent foreign entrants and have struggled to adjust to dramatically different market conditions - EU companies have been slow to invest in China-based design centres: Less flexibility in product offerings, which is a primary competitive advantage of domestic companies	***Weaknesses*** - Independent technical capabilities are weak. Heavily reliant on copies of foreign models. Most Chinese manufacturers are short of financing (particular non SOEs) - The export plans of Chinese companies stem from weakness rather than strength: It is their desire to escape intense competition that drives the export push - In terms of value, auto exports amounted to only $1.6 billion, which was much less than the $5.2 billion value of imports. - Component producers lack global OEM Linkages.
Opportunities - Lowering of formal barriers after accession to the WTO. - Stricter standards on fuel consumption and emissions. New standards are often modelled on EU standards. - Rapid increase in competition and model introduction will mean high-tech components required from foreign suppliers - Intense price competition serves to break down the barriers of local protectionism -China's objectives in creating its indigenous auto industry can only be achieved in cooperation with foreign companies	***Opportunities*** - Access to foreign IP through JV and technology transfer agreements -Foreign investors see local sourcing as key to cost competitiveness within and outside China. Chinese companies can take advantage of new linkages to foreign companies to expand and upgrade their operations - Chinese component companies can avoid the complexity of complete vehicles, and can focus initially on products for which they have a comparative advantage, after which they can gradually increase in scale
Threats - Severe overcapacity: Despite rapidly growing demand, the massive amount of investment in China's auto sector translates into severe overcapacity. - Ownership requirements not affected by WTO. Foreign companies can still not have more than two Chinese partners - Imported components are restricted by tariff calculation based on local content - Increased competition increases demands for localisation and exposure to IP leakages.	***Threats*** - Rising Prices for factors of production (e.g. labour & raw materials) - Legal actions from foreign investors, in China and abroad - Removal of government subsidies and other support - Overcapacity will drive Chinese car sales abroad in low value fringe markets (Africa; Middle East; etc) - Many auto parts are more efficiently produced in proximity to the point of final assembly.

STUDY 1: MACHINERY

During the last decade, trade and investment relations with China have been of increasing importance to European machinery manufacturers – as a major export market, a production base, and as a location generating an increasing number of visible competitors. In the mechanical engineering sub-sector, the technological superiority of European companies generates substantially higher profit margins than their low-cost rivals in China and other developing countries. Unless Chinese manufacturers acquire a comparable level of technology, European manufacturers will broadly continue to have a positive outlook.

However, the current trend of dramatic increases in capacity in an already overcrowded domestic market is leading to an increase in export volumes by Chinese competitors with the consequent reward of better margins through export for Chinese companies. As competitive pressures increase in traditional export markets such as South East Asia, Chinese companies will attempt to open up more advanced markets. In China, this is likely to result in increased technology pressure on Chinese companies and further exploitation of foreign-owned Intellectual Property Rights (IPRs). In addition, there is growing concern amongst European operators that Chinese exports to third markets are supported by government incentives to host countries (e.g. barter deals for oil).

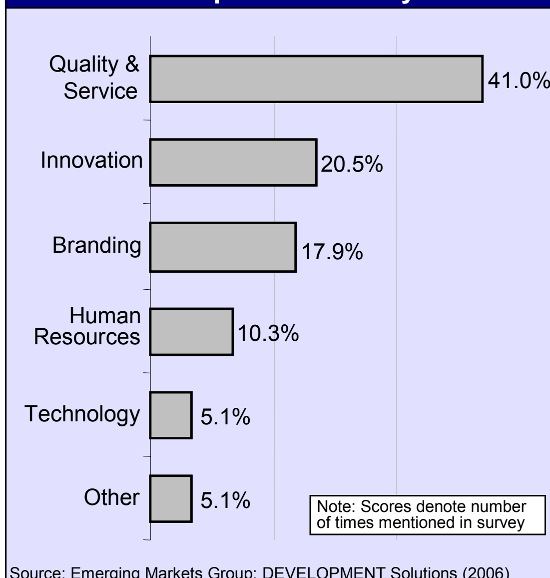
Competitive Strengths and Market Opportunities

Europe's competitive strength remains in its superior knowledge in producing specialised, innovative, highly integrated, precise and high quality machines. Not only does the European machinery industry have a much longer history and stronger brand name, European manufacturers also faced stricter environmental regulations much earlier than developing countries. Thus, European machinery is usually more energy-efficient with lower emission rates and less waste production than the functionally comparable machines of its Chinese counterparts.

Voices from Industry:

> *"We are the market leader in terms of quality and technology thus our products are sold on the basis of their reliability."*

For the time being, the mechanical engineering sector in China remains very lucrative for European companies. Sales are estimated to be worth over US$ 300 billion, of which US$ 88.5 billion is accounted for by Foreign Invested Enterprises (FIEs). However, Chinese companies are attempting to advance their technical quality through a combination of R&D, technology transfers, and copying of foreign innovations. This threatens the current market position of European companies with an ensuing potential fall in profits and, in some cases, even exiting of the market.



In 2006, with the release of the 11th Five Year Programme (FYP), the Chinese government stated that its energy consumption per unit of GDP must drop by 20% from its current level by 2011. The breathtaking speed at which China is using and polluting its natural resources due to rapid industrialisation is the reason for a growing concern for the environment. China's power shortages have certainly given an incentive for customers to purchase more energy efficient machines, a field in which European machinery excels.

Services in the machinery sector offer a higher growth potential and profit margins than the mere selling of machines. European machinery manufacturers have in-depth expertise in offering customised services in their home markets. Indeed, it is necessary for European manufacturers to expand and customise their service offerings in international markets, particularly in China. It is estimated that China has the highest growth potential for service business in the Asia Pacific region.

Obstacles to Trade and Investment

Some government ministries are reluctant to remove market obstacles for foreign competitors as many believe that Chinese domestic companies would lose out if they competed with foreign companies on a level playing field without government protection. The operations of European companies in the machinery sector are increasingly compromised by obstacles including:

- **Government Procurement:** In 2004, direct government procurement accounted for greater than 1.3 % of China's GDP. However, public spending stands at approximately 15% of GDP on non-salaries. This results in a large unexplored 'grey area' where public spending can be allocated straight away to local bidders only.
- **Local Content Requirements:** The Chinese government is reverting to its old practice of encouraging foreign manufacturers to comply with some of the formerly mandated practices in biddings for government projects. For example, a 70% local content rule is enforced in government procurement projects for imported machinery and equipment such as wind generators. Apparently, some state owned enterprises (SOEs), as customers of FIEs in China, demand 70% local content of purchased equipment as well.
- **Subsidies:** Subsidies are known to occur through areas such as the transfer of ownership including cash grants/ debt-for-equity swaps/ interest subsidies/ debt forgiveness/ deliberate extensions of non-performing loans/ currency management/ and energy or raw material subsidies.
- **Investment Rules:** The Government attaches certain ownership restrictions to companies supplying power-generating equipment. Foreign enterprises cannot enter the industry as wholly owned foreign enterprises but must establish joint ventures with domestic partners.
- **Standards and Certification requirements:** Application of the China Compulsory Certification (CCC) regime has led to uncertainty and disadvantages for foreign companies. They report a lack of transparency, inconsistent interpretations, and little coordination among Chinese authorities. The CCC disadvantages foreign companies by imposing unnecessary high costs, especially for SMEs, and bears the risk of unintentional know-how transfer.
- **IPR Infringements:** Due to low industry profitability, the average Chinese manufacturer cannot afford to allocate much of its earnings to R&D (estimated to be less than 1% of turnover). Product development efforts are often limited to re-engineering of foreign advanced machinery.

Voices from Industry:

> *"We are aware of an increasing number of attempts to copy our machines."*

Based on 2004 figures, a quantitative analysis of market access obstacles conducted in the frame of the study reveals that due to non-tariff barriers (NTBs) to trade, the European Machinery industry loses as much as US$ 7 billion per annum in lost business opportunities.

Policy Recommendations

- Compulsory technology transfers, as a precondition for the Chinese government accepting the bid of a foreign firm, is the biggest threat for the European machinery industry as their long-term competitiveness is entirely dependent on their technological edge. The EU should therefore encourage China's ratification of the WTO Government Procurement Agreement.
- Intensify exchange and co-operation on all levels with Chinese authorities on NTBs to trade in order to arrive at solutions in a timely manner related to certification requirements and mandatory standard issues.
- China is still confronted with significant shortcomings in the protection and enforcement of intellectual property rights, causing harm to virtually all industries. The EU should further support China with respect to legal support for making Chinese IP law more precise and hence enforceable, and in training Chinese legal staff and multiplicators – not only to make enforcement more applicable but also to raise awareness for this cause.
- Support elimination of industrial policies that discriminate goods of foreign origin in the Chinese market.
- Lobby for the removal of Chinese national standards in areas where international standards already exist and are internationally regarded as sufficient.
- Support China's opening of the banking sector in order to cool down excessive investment into production capacity. A reformed banking system would probably be less inclined to increase their share of non-performing loans to mainly state owned machinery companies.

- European policymakers need to encourage the Chinese government to develop a more flexible and market oriented stance towards the valuation of the Yuan.

Recommendations for Competitiveness

European companies should carefully evaluate the long-term sales potential for their product in the Chinese market and not be simply blinded by the apparent huge domestic market. Even if there is an attractive Chinese home market, the competitive landscape and potential threats like losing one's IP must be considered before entering the market. Foreign investors in China are confronted with numerous challenges that may distort competition, thereby hampering the success of foreign investment. Apart from frequent IPR infringements, market access restrictions, discrimination, a lack of regulatory transparency and compulsory technology transfers are commonly reported. Understanding the likely impact of these risks on the individual organisation's future development should be the decisive factor in opting for or against investment in China. There are a number of steps European machinery companies might consider to enhance their competitiveness:

- Foster innovation, research & development especially in the high-end of the sector and in energy efficiency and renewable products. There is a high probability that the IP will be lost in China, however, the important issue will be to lose it at a time when it is less important.
- Although European manufacturers have a technology advantage over Chinese competitors, cost competitiveness is crucial in competing effectively with domestic and regional competitors in Asia. Having a better understanding of their own cost structure, benchmarked to the industry's average, will help to develop strategies in fields including sourcing, production, sales and recruiting talent. European companies should also tap into local networks to increase cost effectiveness of operating in the Chinese market.
- European manufacturers should expand and customise service offerings in international markets, particularly in China where domestic competitors are hitherto unable to compete.
- Effective cooperation should be developed between European businesses to allow the industry to speak with one voice to the Chinese government regarding mutually beneficial issues such as lower costs for inspected companies under the CCC regime**.** This will provide a more effective leverage as opposed to companies in dialogue with authorities on a case-by-case basis.
- Due to high protection for domestic companies, targeting other foreign competitors for market share is a viable option. In many sub-sectors European companies may be better served by concentrating on competing with other foreign competitors. 30% of imports into the Chinese machinery market are from Japan, 10% from the US, and 7.5% from South Korea, there is still untapped potential for European companies to take market share from these competitors.

The full, in-depth, report into the *Machinery Sector* can be found on the CD-Rom attached to this publication.

STUDY 2: CHEMICALS

The chemical industry is one of the largest and most diversified in the world. The total demand for chemicals (including pharmaceuticals) in 2004 was valued at €1.7 trillion. The EU-25 accounted for 29.1% of this figure, the United States for 23.7%, Japan for 9.9% and China for 9.2%. This can be contrasted sharply with ten years ago, when China's share of global chemicals turnover was only 3.5%. With a chemicals turnover of €137 bn in 2004, China has become the world's fourth largest manufacturer of chemicals, just after Germany (€142 bn), Japan (€185 bn) and the USA (€415 bn).

The structure of the global chemicals industry is changing, largely because China is becoming an increasingly important consumer and supplier of chemical products. The reasons for this include China's cost advantages over industrialised countries in the production of chemical products and strong demand conditions due to key customer industries building up production capacities in China. This has meant consumption of chemicals has increased by around 12% p.a. over the past ten years.

Competitive Strengths and Market Opportunities

Due to the importance of geographical proximity in the chemicals industry, multinational companies are increasingly shifting chemicals activities to China, following their main clients – the automobile, electronics, communications and textiles industries – that were attracted by Chinese sales prospects and cost advantages. This increase in demand from both foreign as well as local customer companies means that the market is estimated to grow 10% over the next decade, more than three times the growth rate of demand in markets such as the USA (3.5%) and Germany (3%).

China's Chemical Production Capacity Shortfall

	2004 [$ bn]	2015 [$ bn]	CARG [%]
Local Production	**120**	**220**	**5.6**
Imports	40	120	10.5
Export	30	100	11.6
Demand	**130**	**240**	**5.7**

Source: BASF Fact book. 2005

Although China is now the world's fourth-largest manufacturer of chemicals products, domestic production is unable to cover demand in all market segments. In 2004, China's chemicals imports (including pharmaceuticals) were valued at about €43.6 bn - equivalent to an import ratio of 27%. This provides an opportunity for European commodity chemicals producers in upstream segments to invest in China, as well as specialty and fine chemicals producers to export to China.

The customer base of the specialty chemical industry has experienced consolidation and globalisation. This is a competitive advantage for the larger-scale European specialty giants, since chemical companies with a global reach are preferred global partners of their multinational customers. They are focusing less on their products and more on the services supporting them by concentrating more on niche markets and on building exclusive relations with customers, especially with the help of e-business.

European specialty chemicals are in an advantageous position as they are able to offer tailor-made solutions for customers. Products like specialty chemicals, which contain a strong service component, are not as prone to local competition, since local companies tend to lack necessary prerequisites. Given that domestic manufacturers in many cases do not fully satisfy the quality standards required for exports, European companies have good opportunities in this market.

The European chemical sector is the world leader in terms of energy efficiency, environmental management and the development of renewable materials. European chemical companies would therefore clearly gain a competitive edge if Chinese authorities would increase stringency of enforcement to comply with environmental standards in order to avoid pollution and wasting of resources as outlined in the 11th Five Year Programme.

Obstacles to Trade and Investment

Since 2001, when China joined the World Trade Organisation, obstacles for chemicals imports have been reduced significantly as Chinese companies are no longer obliged to buy raw materials primarily in their home country. Liberalisation has eliminated many structural deficits and highly improved the quality of China as a business location. Despite this, there are still a number of areas which concern

European and other foreign chemicals companies operating in China:

- **Project Approval:** The Chinese government introduced legislation in late 2004 designed to simplify and speed up the approval process for investments by foreign and Chinese companies. Despite this, it remains unclear how effective this legislation will be and how it will be implemented.

- **Limitation in Project Size:** The Chinese government has acknowledged that the economy is prone to overheating and has introduced cooling measures. The Government has published a long list of industries and products that either prohibit or limit new investment which needs to be clarified.

- **Environmental and Labour Standards:** Environmental and labour standards are strictly applied to foreign invested enterprises whereas provincial and local governments tend to turn a blind eye when it comes down to local industries.

Voices from Industry:

> “*If health and safety standards improved we would be able to enter new markets and expect to gain 20-30% more revenue in China.*”

- **IPR Enforcement:** Although China has signed the Trade-Related Intellectual Property Rights Agreement (TRIPS), the enforcement of IP rights remains problematic.

Voices from Industry:

> “*The risk of leakage of proprietary knowledge means that innovation and leading edge technologies for the production of our next generation chemicals are likely to be retained by us in our domestic market for some time to come.*”

- **Chinese Legislation on New and Toxic Chemical Substances:** A significant and growing non-tariff barrier facing the global chemical industry in general is the divergence of regulatory schemes used to assure the protection of safety, health and environment. A case in point is the latest Chinese legislation on new chemical and toxic substances.

- **Export Controls on Rare Earth Materials:** The Chinese government operates a rare earth export quota system on critical raw materials, such as rare earth metals, phosphorous and fluorspar. These measures mean that European industry cannot obtain sufficient quantities of export licences and Europe-based Chemicals producers have difficulties in obtaining important inputs, giving Chinese competitors with easy access to these raw materials an unfair advantage.

A quantification of non-tariff barriers to trade reveals that these obstacles cost European Chemical producers up to US$ 379 million in lost business opportunities.

Policy Recommendations

When considering the competitive nature of markets and free trade it is important to recognise the inter-relationship that exists between upstream and downstream chemicals. To generate free and fair trade at all levels in the value chain it is important that these relationships are considered both independently and across the chain and that a test is applied to ensure that distortion does not exist or remain isolated at any one level.

- Initiate regulatory dialogues with relevant Chinese ministries to work on non-tariff obstacles to trade need to be actively sought. A stronger stance in negotiations with China on technical barriers to trade and IP infringements must be taken and all available means to secure market access (including the possibility of recourse to the WTO) must be considered. China must not be granted Market Economy Status unless a number of key criteria have effectively been met and overall progress regarding compliance with WTO agreements has been made. These steps must be made only together with the US to avoid distortion of trade.

- Many hope that new regulations intended to speed up project approvals mean that long delays to chemical investment projects by overseas companies in China, caused by government bureaucracy and inefficiency, will become a thing of the past. However, further improvement in administrative processes for project approval must be further monitored and encouraged.

- Although the austerity measures, implemented by the Chinese government, and put in place to limit the over-production of certain chemical products will ultimately benefit the Chinese chemical industry as well as

foreign chemicals companies, these measures must be closely monitored

- Environmental and labour standards must be implemented comprehensively and without prejudice. As is the case in other areas, this must be monitored and documented so that it can be brought to the attention of Chinese policy-makers.

Voices from Industry:

"The EU should support the development of higher standards in environmental protection, health and safety. This would be beneficial to all sides since Chinese chemical producers will eventually be subjected to the same EHS [Environment, Health and Safety] standards and costs that apply internationally."

- The EU should pursue agreement on an ambitious Non-Agriculture Market Access (NAMA) Agreement in multilateral trade talks that include a chemical sector deal regarding the elimination of tariffs in which all major chemical producing countries are participating including, notably, China. Preference should be given to multilateral deals to trade liberalisation but the EU must react quickly should other trading partners engage in bilateral or regional trade agreements with China.
- The EU must maintain the efficiency of EU trade defence instruments and convince China to implement the WTO Anti-dumping Agreement in line with EU anti-dumping regulations.

In addition to China-specific policies, European regulations on energy and transport have a strong impact on the industry's competitiveness. In all three areas, Europe compares unfavourably to other parts of the world. Europe will need to tackle these issues through a more balanced regulatory framework which provides adequate incentives for innovation, a unified energy policy to reduce energy costs and investment in knowledge and physical infrastructure

Recommendations for Competitiveness

- European companies are world leaders in terms of energy efficiency, environmental management, and the development of renewable materials. With these strengths maintained, they will be best-placed to benefit from new environmental standards and efficiency targets under the 11th Five Year Programme.
- Utilising China as a base for the production of specialty chemicals, which is particularly labour-intensive, will allow European companies to improve profit margins. Furthermore, the advantages of China's low-cost base could also be applied to certain R&D investments, providing companies with additional resources to improve competitiveness.

The full, in-depth, report into the *Chemicals Sector* can be found on the CD-Rom attached to this publication.

STUDY 3: AUTOMOTIVES

After a decade of slow growth, sales of passenger vehicles in China exploded after 2001, and increased by more than 50% in 2002 and 2003. Driven by a nascent middle class of 100 million, price cuts and expanding access to credit, the Chinese market overtook Japan to become the world's second largest market for new vehicles in 2006 next to only the United States, registering sales of 7.22 million units. China's automakers last year produced 7.28 million vehicles, making the country the third largest auto producer in the world.

Despite this rapid growth, enormous investment in capacity over the last five years has led to intense price cutting and a consequent fall in profits. The total net earnings of the top 30 auto producers in China increased from 2003 to 2004 by 45.2% but profits in the industry fell by 6% during this period. European producers in particular have suffered from the rapid increase in competition.

The opportunities and obstacles for European companies in the Chinese auto sector cannot be understood without knowing the Chinese government's policy objectives in the industry. The foremost economic objective of the Chinese government in the automotive industry is to develop a team of domestic 'pillar' companies that are capable of competing in global markets. The auto industry is attractive because of its extensive backward linkages: two-thirds of the value of a car typically comes from outside suppliers, and the Chinese government seeks to utilise these linkages to develop related industries.

Competitive Strengths and Market Opportunities

European companies have enjoyed a dominant position in the Chinese auto market for two decades. In the 1980s and early 1990s they virtually had the market for passenger vehicles to themselves. By the early 1990s, Volkswagen's joint ventures controlled over 50% of the domestic market. During this period market conditions were relatively stable and tariff levels were high.

Despite lower tariffs following WTO entry, today the focus of competition is not between imports and domestically produced cars but rather on the competition between foreign-invested projects that are manufactured in China. This will remain so for the foreseeable future but there are signs that domestic car and components producers are becoming increasingly competitive. This trend is supported by China's industrial policy established in the 11th Five Year Programme which places an emphasis on the development of independent innovative capabilities and brands in the auto industry.

The most important advantage that European companies have over competitors is environmentally friendly technology – provided that they are not forced to transfer it to Chinese partners on less than commercial terms. The Chinese government will continue to promote the development of the auto sector over the next five years but, given the severe state of air pollution in China, it is also introducing legislation to improve fuel quality and the economic use of fuel. Competitors have been complaining about new environmental standards, but because these standards are modelled on European ones, this creates advantages for European companies.

Voices from Industry:

"The next five years will see a drive for greater environmental efficiency, hopefully this will include the use of clean diesel engines. The biggest obstacle remains the poor quality of diesel oil produced in China."

As in the case of passenger vehicles, the primary advantage of European truck makers will be their technology and in particular environmentally friendly technology. There is a trend towards higher power (280 h) and more fuel efficient engines and, if domestic manufacturers want to meet Euro III standards, most will have to increase their cooperation with foreign companies.

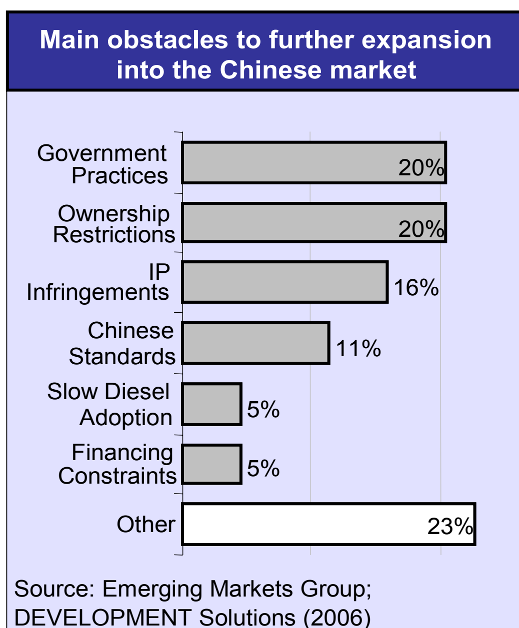
The competitive advantage of foreign component companies is likely to increase over the next five years. Through intense competition and the rapid introduction of new models in the Chinese domestic market, high technical levels of components will be required. This necessitates the use of foreign suppliers. European companies, through maintaining their current high quality standards, will be in a good position to take advantage of this trend. China is also emerging as an important export base for auto components and European companies are best placed to offer low-cost, high-quality supplies to the major global players in the industry.

Obstacles to Trade and Investment

Although accession to the WTO has dramatically decreased the formal barriers to entering the Chinese auto sector, how to progress to implementation remains unclear.

The details of implementation are only just beginning to emerge, and there are strong indications that the Chinese government is seeking to interpret the new regulations to maximum advantage, in potentially conflict with WTO commitments, including:

- **Tariff Calculation on Imported Car Parts**: Chinese rules on tariffs for the import of auto parts impose a duty for "complete vehicles" on certain valuable or combinations of imported parts - even when those parts do not in any way constitute a complete vehicle.
- **Restrictions on Dealerships:** The Chinese government requires car dealers wishing to sell imported cars to have an import license based on stringent financial performance and management criteria. This prevents many smaller dealerships from selling imported cars.
- **Regulations Governing Auto Financing:** Financing is often a key source of profits for auto companies. However, new regulations limit entrance to the largest of companies—few small players will meet the minimum registered capital threshold of RMB 500 million or over RMB 4 billion in assets.



Source: Emerging Markets Group; DEVELOPMENT Solutions (2006)

- **Chinese Standards:** Although the new Chinese product certification process (CCC) was created with the purpose of streamlining the previous certification system, it has become a major source of problems and confusion for foreign managers in China.

Voices from Industry:

> *"The ban on 2nd hand imports and the requirement to scrap commercial vehicles [after 15 years] limit the market for vehicles of higher quality. With no incentive to improve quality, road safety and environmental performance will remain poor."*

These formal barriers to investment are critical, but informal barriers are as important, and these are generally the issues that most concern foreign managers. The key problem is the lack of a level playing field. Domestic Chinese companies have close ties with local governments and benefit from subtle forms of local protectionism, favouritism in purchasing arrangements and inadequate enforcement of laws and regulations. With respect to the last, the most important area of concern is IPR protection. These problems are not easy to combat because more often than not the problem is in the application of existing laws and regulations rather than the need for new laws and regulations.

Voices from Industry:

> *"Market access obstacles reduces our turnover by 70% and delays break-even and payback by at least 5 years."*

A quantitative analysis reveals that due to non-tariff barriers to trade, the European Finished Vehicle and Auto Components industry suffer combined loses of up to US $4.6 billion per annum as a result of lost business opportunities.

Policy Recommendations

- In the case of IPR, China has only made progress in recent years in terms of the drafting of legislation. Enforcement must continue to be improved. Foreign pressure and monitoring will play an important role in this process.
- In the case of standards and certifications, the CCC requirements introduced by China should be discussed by the major stakeholders (EU, US, Japan, etc) to ensure that there are not disproportionate filing and inspection demands. Ideally, CCC should not be applied where international standards exist and are deemed to be sufficient.

- Pressure should be exerted to remove bans on the import of second hand commercial trucks and the rules mandating that trucks must be scrapped after 15 years. The objective of these rules, keeping poor quality and polluting vehicles off the streets, can be achieved by more rigorous annual inspections.
- Informal barriers continue to exist. These are mainly the lack of a level playing field due to government protectionism, favouritism, and non-application of existing laws and regulations for domestic Chinese competitors. These barriers must be carefully monitored and reduced wherever possible.

Voices from Industry:

> *"More non-tariff barriers and policies to favour local manufacturers will emerge. The EU-China trade dialogue has to deepen and the EU must become tougher."*

Recommendations for Competitiveness

- European companies should continue to invest in the research and development of environmentally friendly technology to maintain advantages vis-à-vis competitors. Companies will be in a good position to benefit from expected regulations limiting vehicle emissions.
- The major European players should commit greater resources to designing vehicles in China and to be more flexible in its product offerings, weakening a primary competitive advantage of the domestic companies.
- European companies should seek new ways to leverage their operations in China so as to benefit global operations. There are two routes to accomplishing this goal: integrating China-based suppliers into global procurement programmes and utilising China-based R&D facilities to support global operations.
- Finally, European companies should make a greater effort to achieve cost competitiveness, particularly those that created joint ventures in the pre-WTO era and formed patterns and practices that were appropriate for an era of relatively easy profits but which are no longer sustainable in an era of intense competition.

The full, in-depth, report into the *Automotive Sector* is available on the CD-Rom attached to this publication.

STUDY 4: PHARMACEUTICALS

China has 20% of the world's population but still only accounts for 1.5% of the global drug market with per capita spending on drugs is at a low US$ 16. When considering strong economic growth, China thus offers considerable potential as an export market as well as a production base for pharmaceuticals. While the exact size of the market is difficult to quantify – figures range from US$ 8 bn to US$ 21 bn. - there is no denying that China's pharmaceutical market has been growing rapidly in the past couple of years. China recorded the highest growth rate of any single country or region, expanding by 28% from US$ 7.4 bn in 2003 to US$ 9.5 bn in 2004. China also experienced double digit growth (20.4%) in 2005 reaching US$ 11.7 bn. It is expected that the Chinese pharmaceutical market will grow by at least 10% per annum over the next five years. In line with these estimates, China can be expected to rank just outside the top five pharmaceutical markets in the world by the close of the decade.

Projected Chinese Pharmaceutical Market per capita and total, 2006-2011

Year	Market ($ bns)	Per capita ($)
2006	20.8	16
2007	22.6	17
2008	24.5	18
2009	26.6	19
2010	28.9	22
2011	31.4	23

Source: Espicom Business Intelligence

Chinese domestic production is dominated by generic products and Traditional Chinese Medicines (TCMs). Estimates suggest that 97% of all domestically produced drugs are generics, a significant proportion thereof being counterfeits. The industry's 3,500 domestic manufacturers are made up of mostly State Owned Enterprises (SOEs) or joint ventures who engage in intense price competition over market share. This has led to an overcapacity in terms of production and has driven the sale of intermediates by Chinese companies to third markets. An overall lack of profitability combined with poor protection of intellectual property rights (IPR) has meant that the R&D capacity of China's domestic industry has historically been weak.

Competitive Strengths and Market Opportunities

In contrast, the European pharmaceuticals industry represents one of Europe's best performing high-tech industries and is characterised by significant investment in R&D. The EU pharmaceutical industry accounts for around a fifth of global pharmaceutical R&D expenditure. EU countries were the largest supplier of pharmaceuticals (including raw materials) to China in 2003, accounting for 55.2% of total imports worth €928.1 million.

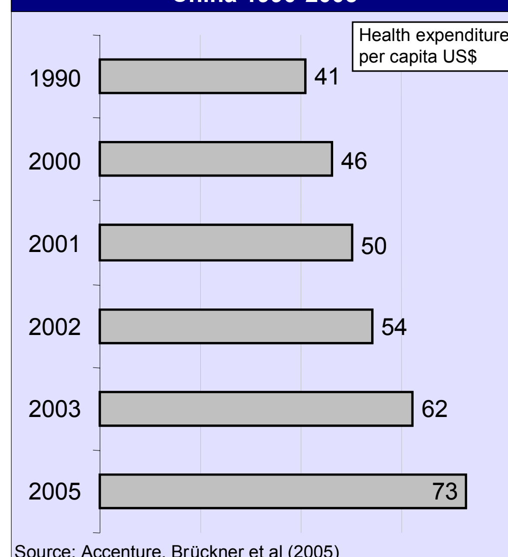
Voices from Industry:

"Our advantages lie in our access to modern technology, investments in development and innovation as well as strong customer relations and links to Western markets."

Increasingly, China has become a desirable low-cost location for R&D activities. Government policy (including legislation) is favourable towards foreign-invested R&D activities and China has become home to a number of world class biomedical facilities which are the recipients of considerable amounts of government resources geared towards biopharmaceutical research. This has meant that increasing opportunities exist for European companies to leverage cost advantages in China by investing in R&D.

Furthermore, much is made of the potential demand for pharmaceuticals due to China's large population and the current low per capita demand. Changes that are occurring in China including rapid urbanisation, increasing incomes, rural development trends, healthcare system reforms, an epidemiological shift in disease patterns, and a growing proportion of elderly within China's demographic profile. These all bode well for the European pharmaceutical industry.

Development of Health Care Spending in China 1990 2005



Source: Accenture, Brückner et al (2005)

Opportunities are also emerging due to increasing self-medication trends in China which will open up a growing line of direct customer service and delivery options. Taking into account trends in European markets, such as the emergence of pharmacies within retail chains, this may become a blue-print for similar innovative approaches in China, where European retailers are rapidly developing their networks and internet penetration is high.

Obstacles to Trade and Investment

In addition to genuine market driven competitive challenges posed by Chinese operators in this sector, European companies face a more important competitive threat as a result of non-tariff or 'behind the border' barriers. These barriers include:

- **Pricing and Reimbursement:** Transparent protectionism in the form of tariffs by Chinese authorities has been reduced since WTO-entry but more subtle barriers have increased - primarily in the form of drug price controls. This is done directly via price cuts or indirectly using the mechanism of reimbursement list or hospital bidding. The recent price control mechanism applied by the Chinese government and authorities have left manufacturers with little room to manoeuvre. The drug procurement system in China is assumed to be a fair-bidding process, yet in practice, both hospitals and provincial governments still favour local producers.

Voices from Industry:

> *"Recently there has been another price-cut wave where prices were cut by 23%. These price-cuts will hurt all pharmaceutical operators in China, including hospitals who sell drugs."*

- **Registration (Drug Launch):** The regulatory procedure is unnecessarily long and complicated compared with European procedures with the time lag resulting in delays in drug introductions, favouritism to domestic drug companies, and IPR challenges. Registration procedures change frequently and unexpectedly. There is usually limited dialogue with the regulators, and announced changes are often unclear and sometimes not even implemented.

- **IPR Infringement:** Currently, numerous foreign companies operating in China face significant challenges with regard to the protection of their IPR, including a lack of proper data exclusivity protection, absence of patent term restoration, counterfeiting, inconsistent administrative protection, and other difficulties in enforcement.

- **Drug Distribution System:** Though it is technically possible for foreign pharmaceutical manufacturers to distribute their products directly across the country, the requirements needed to obtain a distribution license are difficult to meet. In order to sell in hospitals, manufacturers are often obliged to offer a significant margin to middlemen or distribution companies. Moreover, local competitors often offer some form of incentive (often of questionable legality) to hospital officials and doctors to prescribe their drugs at the expense of alternatives.

- **Regulatory Environment:** A discrepancy exists between what is happening at the central government level and what occurs at the provincial level in China. While central government institutions are more accommodating to foreign investments, provincial governments tend to favour domestic companies. The Chinese regulatory bodies have attempted to address the situation but reform in this area tends to be only gradual.

Voices from Industry:

> *"Our distribution partners are unreliable, and we would like to have more freedom to distribute our products ourselves."*

A quantification of non-tariff barriers to trade reveals that these obstacles cost European-based pharmaceutical producers up to US$ 416 million in lost business opportunities.

Policy Recommendations

For European research-based pharmaceutical companies to continue to invest in new medicines and be able to operate in key markets like China, it is important to strengthen the implementation of (announced or agreed) provisions for IPR protection while adopting other provisions in line with international standards. European authorities are encouraged to adopt a firm position in this respect.

The EU should lobby the Chinese government to adopt pricing and reimbursement policies based on transparent, predictable, and non-discriminatory criteria. Furthermore, a clear-cut legal framework which outlines conditions

under which pricing obligations are imposed should be promoted.

Voices from Industry:

"Since it is difficult for individual companies, especially smaller sized companies, to liaise with relevant Chinese ministries, further facilitation from the EU would be highly appreciated."

Further regulatory reforms and deregulation are needed in order to achieve a level-playing field and an internationally competitive pharmaceutical industry. In order to promote further regulatory reform, dialogue and technical exchange should be enhanced between business and government. At the same time, close monitoring of developments in China is suggested, perhaps in the form of an annual "trade barriers report", as is done in other countries.

Recommendations for Competitiveness

- European companies should increase their R&D activities due to the large cost differentials between developing new drugs in China and advanced economies. In addition, further outsourcing of non-core/ back office activities could also be facilitated. However, it must be noted that the degree of such developments would be conditional to parallel developments in China's enforcement of IP.
- European companies should be first movers when changes in China's pharmaceutical retail sector emerge, and therefore an active dialogue with the retail sector is encouraged. In addition, European pharmaceutical companies should look for opportunities to offer value added services in the Chinese market, starting with providing free information for Chinese consumers and medical practitioners.
- When raising issues with the Chinese authorities, European industry should speak with a single voice. This can be facilitated across a range of industries, for example in IPR protection issues which affect most industries, or can involve the pharmaceutical industry singularly.
- European phytopharmaceutical companies should build on their strengths in the international market for plant medicine (in which Europe already accounts for 30% of global sales) to bring an increasing global demand for TCM to the consumer. When exploring opportunities in this area, European companies must be aware of the difficulties that currently exist for herbal exports to China as well as for imports into the EU, making the development of regulatory obstacles a key strategic consideration.

The full, in-depth, report into the *Pharmaceutical Sector* can be found on the CD-Rom attached to this publication.

STUDY 5: ICT EQUIPMENT

China's overall electronic and communications equipment industry is, in terms of output, the third largest in the world after the United States and Japan - worth RMB 3.84 trillion (US $480 billion) in 2005. In 2004, China became the world's leading exporter of high-tech goods such as laptop computers, mobile phones and digital cameras. However, it is foreign companies that dominate China's ICT sector, accounting for 77% of gross output (mostly for export). In 2003, for example, Foreign Invested Enterprises accounted for as much as 90% of all computer exports.

China's statistical yearbook suggests that industry profitability in 2004 was around €5bn. However, anecdotal accounts suggests profit margins are very low or even negative and China's major producers are struggling in the face of overseas competition. Despite this, China is moving ahead by adopting a macro-economic perspective on the development of ICT equipment that places an emphasis on consolidating its position as a cheap mass producer for world markets, and identifies areas of opportunity aimed at positioning China's leading enterprises at the highest value added points on the supply chain. A contender for the top of the list is China's determination to build wafer fab foundries to reduce dependency upon high-value foreign products and to create the basis for China's own supremacy in the field of chipsets. The extent of state involvement in China's ICT-equipment industry is further apparent by the extent to which domestic manufacturers rely on "spill-over" from public-funded research, operating only limited R&D capabilities themselves, most R&D is conducted in research institutes, universities or large state owned enterprises.

Competitive Strengths and Market Opportunities

In contrast, the EU ICT manufacturing sector is heavily dependent upon markets driven by domestic demand. This means that the main elements of the sector are industry and services oriented, related to consumer electronics, avionics, telecommunications, computer-related equipment, space and defence, and energy. The high-value aspect is an important strength of the European ICT industry since there are many industrial sectors that are ready market segments for high-tech ICTs. The use of radio frequency identity tags in warehousing and supermarkets is one example of customised industrial applications of ICTs. Therefore, future export competitiveness of European ICT companies should be considered with particular regard to those industries where the EU has an established comparative advantage. With high R&D expenditure, leveraging these investments should be a priority for European ICT companies. The low cost advantages of China can in this regard provide a higher return for companies' investments and also, an opportunity to develop products customised to local standards.

In some market segments, such as Telecommunications Equipment, European companies currently occupy strong positions of up to 30% of the market (see Table below). This share will diminish as Chinese ICT-equipment manufacturers build their indigenous R&D capabilities and brands, permitting them to move up the value chain (although some argue the overarching involvement of the state may eventually hamper this process). As today's higher value-added equipment becomes commoditised, local companies will gain market share due to their low cost base. Nonetheless, even with a reduced share in a market that some analysts expect to grow more than 45% over the next five years, European ICT manufacturers will remain active participants.

Market Share by Leading Vendors Telecommunications Equipment

Company Name	Market Share (%)
Huawei (CN)	13.5
ZTE (CN)	12
Ericsson (EU)	12
Alcatel Shanghai Bell (EU/CN)	7
Motorola (US)	6.9
Nokia (EU)	6.2
UTStarcomm (US)	6.1
Siemens (EU)	5.3
Lucent (US)	4.7
Nortel (US)	4
Cisco (US)	4
Others	18.3

Source: CS Market Research (2005)

The business-to-business market in particular remains largely underdeveloped in China and foreign vendors can often compete with better quality equipment and service-level agreements, especially for companies with international or global operations.

Obstacles to Trade and Investment

European ICT companies are concerned over a number of obstacles hindering their future operations in the Chinese market. These obstacles include unnecessary regulation,

complicated type approvals, unnecessary national standards (overlapping with similar international standards), difficulties in introducing new services, unclear government procurement practices and lack of IP protection.

Voices from Industry:

“State-driven promotion of indigenous innovation and standards is a threat because it may stimulate local innovation in areas where natural business opportunities do not exist and we may be mandated in future to use only local instead of global solutions.”

A quantitative analysis of these obstacles reveals that due to these non-tariff barriers to trade, the European ICT Equipment industry misses out on up to US $1.5 billion per annum in lost business opportunities

Policy Recommendations

- The European Commission (EC) should consider programmes to strategise market entry.
- The EC should set up an ICT Office in Beijing, and possibly in Shanghai, to collect and collate ICT industry policy and regulatory information on a regular basis.
- The Commission should continue to expand lobbying activities to ensure that China signs the WTO Agreement on Government Procurement.
- Encourage the Chinese government to introduce transparent and independent regulations.
- The EC should greatly increase the number of exchange students and researchers between China and the EU.
- The European Patent Office should be granted access to the SIPO Chinese patent office database to improve the transparency of patent administrations and minimise potential barriers to trade.
- The European ICT industry and standards organisations should be encouraged to have direct contact with their Chinese counterparts, and vice-versa. A constructive approach to the development of new standards in the ICT sector would be to stimulate joint research between the EU and China in developing new standards which can be commonly shared, avoiding the use of standards as trade and market access barriers.

Recommendations for Competitiveness

- European companies should consider using China as a base for selected low-cost investments in R&D which will provide more capital to increase competitiveness. In addition they should compete on design and innovation rather than commoditised goods.

Voices from Industry:

“Simply trying to localise and compete on price is not sustainable. It is better to work closely or even buy local manufacturers to serve the lower-end segments so not to risk brand deterioration.”

- Strengthen distribution channels in China, which entails finding reliable and knowledgeable local partners.
- European companies need to be flexible enough to respond to local demand conditions. Chinese telecom companies, particularly when operating in rural areas, do not always need the most sophisticated equipment because the markets are not yet there.
- Intellectual property (IP) should be protected through the use of cautious technology transfer policies.
- Establish a China office with local staff that are committed to a long-term presence.
- In third country markets, establish long-term relationships that stress customer care and long-term service level agreements where relevant.
- To pass on uneconomic deals unless absolutely certain of their strategic value.

The full, in-depth, report into the *ICT Equipment Sector* can be found on the CD-Rom attached to this publication.

STUDY 6: AGRICULTURE

Agriculture has always played a significant role in China's economy. However, since the start of reforms, it is evident that the role of agriculture is slowly changing and its contribution in terms of employment, gross value added, capital accumulation, urban welfare, poverty alleviation, and foreign exchange earnings is diminishing.

Prior to 1980, agriculture accounted for more than 30% of total GDP and around half of its export earnings. Today, agriculture's contribution to the economy stands at less than 13% of GDP. In the past, China's agriculture production has always exceeded population growth but this trend has now slowed significantly. Thus, despite the fact that China has been able to maintain approximate self-sufficiency in agricultural products, high input levels in many Chinese regions and diminishing marginal returns mean greater difficulty in maintaining self-sufficiency may be encountered in the future. Factors that are likely to limit the growth of agricultural production in China include a limited arable land base, increasing pressures on water quality and availability, environmental concerns, and urban encroachment.

Competitive Strengths and Market Opportunities

China's demand for agricultural products has so far been met predominantly from domestic sources. However, the rapid economic growth and urbanisation that has occurred in China over the past number of decades has brought about profound changes in the demand for agricultural products. There has been a strong trend away from traditional diets that are heavily oriented toward starchy staples (characteristic of low income developing countries) to one that is characteristic of more developed countries. In particular, there has been a change toward more varied diets incorporating markedly increasing quantities of animal products (meats and fat), fruit and vegetables, vegetable oils and dairy products but lower quantities of food grains. Increasing incomes has also led to greater demand for value-added products such as foreign wines, spirits and dairy products such as yoghurt and ice cream.

These changes in Chinese eating habits and consumer preferences make China the world's most dynamic market for agricultural products, and perhaps the most important driver in world agricultural trade as the sheer size of the population means that changes in the Chinese market could have repercussions in global agricultural markets. Farmers as well as agricultural and food-related businesses that can keep up with the rapid pace of change will be the best prepared to make further inroads in the Chinese market.

Per-person Consumption of Foodstuffs (Urban China 1995 and 2004)

Item		1995	2004
Grain	(kg)	97.00	78.18
Vegetables & Fruit	(kg)	161.43	178.77
Edible Vegetable Oil	(kg)	7.11	9.29
Pork	(kg)	17.24	19.19
Beef and Mutton	(kg)	2.44	3.66
Poultry	(kg)	3.97	6.37
Fresh Eggs	(kg)	9.74	10.35
Milk	(kg)	4.62	18.83

Source: China Statistical Yearbook (2005)

As one of the leading agricultural production areas in the world, Europe has much to offer China in terms of exports, particularly of meats and edible offal, cereals, as well as value-added products such as dairy, wines and spirits. The EU has long established itself as a producer of high quality products with a strong image and marketing expertise.

Voices from Industry:

“Our main advantages over our Chinese competitors include strong brands, quality of the products, modern image of the product categories, and marketing expertise”

The EU has also gained first-hand experience in sustainable rural land management, organic production methods, agro-tourism and regional food marketing (i.e. certified geographical labels). As a provider of high quality agricultural products and services, Europe has built a strong competitive basis on which it can rely on for further innovation and specialisation. Thus, given China's enormous size and catch-up potential, and Europe's experience and skill base, the mutual gains for both China and Europe can be significant.

Obstacles to Trade and Investment

China has made significant progress in reforming its trade policies, particularly in reducing the tariff barriers to trade. While tariff measures overall may not significantly hamper EU exports of agricultural and food products to China, non-tariff barriers still impede trade with China. European agricultural exporters and investors are facing an increasing number of unjustifiable non-tariff barriers in the form of:

- **Sanitary and Phytosanitary (SPS) Measures:** SPS measures in China are often implemented in a non-transparent manner and not in accordance with internationally accepted scientific protocols and standards. Varying interpretations of SPS standards can be burdensome and lead to different (often high) compliance costs being borne by exporters as well as delays for business.

Voices from Industry:

"*The Chinese sanitary and phytosanitary measures contain requirements that are often not consistent and irreproducible, serve as the most severe market access obstacle for us.*"

- **Trading Rights:** China has undertaken initiatives to progressively liberalise the scope and availability of trading rights for foreign-invested enterprises. However, the granting of trading rights to all enterprises in China still does not entitle importers to distribute goods within China.
- **Import Licensing Registration:** All importers are required to obtain an import license. The procedures in China for obtaining import licenses is often lengthy and arbitrary with processing times ranging from two weeks to four months
- **Allocation of Tariff-Rate Quotas (TRQ):** The issues that arise in China regarding TRQ administration include a general lack of transparency by the government in the re-allocation of unused quota at the end of each year, and whether imports that are designated as inputs into re-exported products can comprise a set portion of the tariff quota.
- **Labelling Requirements:** Labelling specifications in China are inconsistent with international standards, and are often very difficult to comply with. Even when companies are able to comply with such strict labelling standards, compliance leads to further costs.
- **Lack of Transparency:** A lack of transparency in the regulatory environment remains one of the largest cross-cutting obstacles to doing business in China. For example, it is not uncommon for drafts of new laws and regulations to be circulated only to Chinese partners of joint-ventures.
- **Intellectual Property Rights (IPR):** Issues hampering the enforcement of IPR in China include: a lack of a strong coordinating authority at central level with a clear strategy; local protectionism of infringing industries and corruption; a lack of trained officials at all levels; little or no deterrent punishments for infringers; and, a lack of implementation of basic tools to aid the infringed rights owners.
- **Value-Added Tax (VAT):** Application of VAT in China impedes imports into the country and is not applied with equal force on domestic producers. VAT restricts trade to China as a result of its associated complexity and its application to imports has been and remains an effective component of Chinese border protection for domestic producers.
- **State-Trading Enterprises (STEs):** The government retains its influence on imports and exports of key commodities through the state-trading system. STEs are able to restrict China's imports of certain agricultural goods through their exclusive rights to import a large proportion of China's total imports of particular products.

Voices from Industry:

"*One problem in entering in competition with Chinese companies is that they are clients at the same time. So, as an exporter to China, you have to tread as gently as possible.*"

The quantification of market access obstacles undertaken in this study reveals that as a result of tariff and non-tariff barriers to trade, the costs to the European food processing industry[3] alone are up to US $751 million in lost business opportunities.

[3] Due to the limited availability of data for the overall agricultural sector, the partial equilibrium model used in this study for the Agricultural sector study was limited to exploring the impact on the Food Processing sub-sector (HS codes 10-24)

Policy Recommendations

- Improved administration of the European market access database, which among other issues, refers to SPS measures in third countries, and would help exporters and investors alike.
- Support EU exporters and investors by providing public market information through a support platform (i.e. online) to provide extensive, specific and free market information. In addition, academic research on the Chinese agricultural market should also be strengthened.
- Improve capacity building for EU exporters and investors to/ in China by developing technical-assistance "tool boxes".
- Given Europe's unfavourable transport links to China, strong efforts should be made to facilitate physical access to the Chinese market as well as within China.
- The Commission should continue multilateral lobbying efforts to phase out the Chinese designated cereal trader system and to adjust the recently adopted national standard on labelling.
- Increase EU coordination and negotiation capacities in the agriculture sector by establishing an EU institution that centrally communicates with relevant Chinese authorities.
- Protect European intellectual property by ensuring China's commitment to the enforcement of related legislation. This can be achieved by establishing direct contact between the affected industries and the Chinese authorities.

Recommendations for Competitiveness

- European producers should concentrate on targeting new niche markets for exports associated with the growth in disposable incomes and hyper/supermarkets.
- European producers should leverage China's low-cost production advantages by investing in production facilities in China for the domestic and greater Asian markets.
- Given the Chinese government's aim of significantly upgrading modern agriculture, European companies with substantial experience in organic production and sustainable land management should seek to increase exports in agricultural services to China.
- European producers should develop value-added products building on their technological, quality and marketing strengths.
- China based executives should build and maintain relationships with regulatory bodies to facilitate clarification of related issues.

Voices from Industry:

"*Industry has so far relied on the EU as a negotiator with China, but it may be more effective to establish direct contact between the affected parties from industry and Chinese government with the EU serving more as a mediator/contact maker.*"

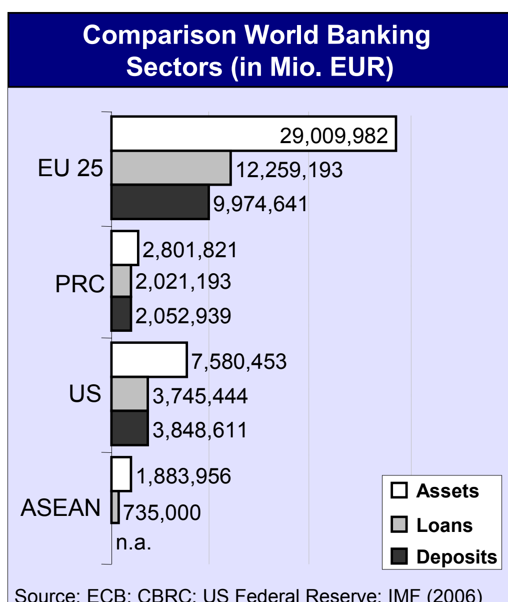
- Effective cooperation should be developed between businesses across sub-sectors and EU authorities to allow sub-sector industries to speak with one voice to the Chinese government.

The full, in-depth, report into the *Agriculture Sector* can be found on the CD-Rom attached to this publication.

STUDY 7: FINANCIAL SERVICES

The **banking sector** in China is comprised of around 30,000 financial institutions with over 2.8 million employees in more than 500,000 banking units and by strictly physical measures, has to be considered as one of the world's largest financial sectors. However, when comparing total banking sector assets (€2,801 billion) with that of the EU (€29,010 billion) or the US (€7,580 billion) this gives a more sobering perspective. Still, the Chinese banking sector by assets is considerably larger than that of the whole of ASEAN put together (€1,884 billion).

Comparison World Banking Sectors (in Mio. EUR)



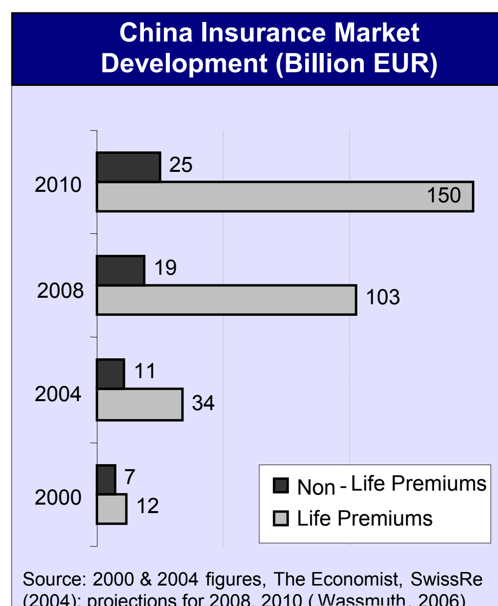
Source: ECB; CBRC; US Federal Reserve; IMF (2006)

The Chinese **insurance sector**, comprised of about 80 institutions, is small but developing quickly. An annual growth rate, at around 12% as measured by premiums, shows that this sector will become a significant market within the next few years if regulation allows for it. China has adopted a protective regulatory regime in insurance, under which limits are placed on product and price competition. Strategically, the China Insurance Regulatory Commission (CIRC) aims to nurture the development of an insurance sector that is much stronger financially and more competitive domestically and internationally than at present. The CIRC views the proper role of foreign insurance companies as that of assisting in this development.

Competitive Strengths and Market Opportunities

The strong growth of the Chinese financial sector (estimated at 10% per annum until 2010) and the increasing financing needs of the growing economy, means foreign investors look to increase business volumes in most, if not all, market segments. The individual consumer business, for example, is expected to see up to 20% growth per annum in the consumer loan business and 50% in credit card business, while corporate business is expected to see increases of 15% in areas such as standard lending transactions, securitisation and so on. In addition, with increased trade activity of their home country customers, the trade finance business will continue to grow. Due to these trends, most foreign banks have already realised substantial returns within their first years of operation, cumulatively reaching to US$ 991 million. In terms of overall growth perspective, most foreign banks predict around 30% annual growth for their own activities, while a few banks even expect to grow by at least 100% by 2008.

China Insurance Market Development (Billion EUR)



Source: 2000 & 2004 figures, The Economist, SwissRe (2004); projections for 2008, 2010 (Wassmuth, 2006)

Due to the need for the former SOE-based social security system to be substituted by private social security, foreign financial institutions see future opportunities in the Chinese insurance sector, and hope to raise their market share from their current 2% to 10%, with growth mainly coming from the life insurance sector.

Voices from Industry:

"The need to develop a social security system for 600 million city and rural workers will drive forward the insurance market. Currently 50% of these people are not covered by any type of life insurance, presenting a large opportunity for us."

The market proportions of life and non-life insurance has changed but at the same time, both markets have grown rapidly. Between 1999 and 2004, the life insurance sector grew from US$ 10.7 billion to US$ 38.8 million annual

premium income while the non-life sector grew from US$ 6.3 billion to US$ 13.2 billion.

Obstacles to Trade and Investment

- **Excessive Prudential Requirements:** Excessive capital requirements of between RMB 100 million (€12.3 million) and RMB 600 million (€73.8 million) are placed on each branch to be licensed. This differs significantly with the €5 million capital requirements for a bank to operate in Europe.

- **Unconsolidated Calculation of Capital Adequacy Ratio:** Foreign banks have to hold a ratio of capital to risk-weighted assets of minimum 8%, both for RMB and foreign currency loans, thus in principle in accordance with international standards (Basel I). However, this ratio must be calculated for branches separately and fulfilled individually by each branch.

- **Excessive Liquidity Ratios:** The foreign currency lending operations of foreign banks are also indirectly restricted via excessive liquidity ratios. Foreign banks have to hold at least a quota of 25% of their foreign currency assets in liquid foreign currency assets.

- **RMB Funding Restrictions:** Due to their smaller branch networks, foreign banks have a natural funding disadvantage since they find it much more difficult to tap the RMB deposits of the population. Therefore, they must try to fund themselves through wholesale operations, i.e. by borrowing in RMB from Chinese banks who hold huge deposits (interbank market). A planned new regulation to be phased in for foreign banks over the next five years however would restrict such interbank borrowing to a maximum of 40% of the respective foreign bank's branch liabilities, and would limit the maximum tenure of such interbank borrowing to 3 years. Together with the discrimination in expanding the branch network, these restrictions could, in practical terms, render the full RMB business licenses useless due to lacking RMB refinancing possibilities.

- **Limitation to Open One Branch per Year:** The rule that foreign banks may only open one new branch per year is another way of limiting the branch network expansion of foreign banks in China.

- **Discrimination in Foreign Currency Lending Operations:** Although foreign banks may in principle lend in foreign currency to every Chinese company, the Chinese company requires state permission to open an account and receive a loan from a bank in foreign currency. Thus, the state ultimately remains in control to decide which Chinese companies foreign banks can lend to, which is strictly against the spirit of the WTO agreement.

Voices from Industry:

> *"Not being able to freely offer sophisticated financial derivatives not only limits our own business scope, but at the same time limits the competitiveness of China-based companies on the international market by not having the same set of strategic financial tools at their disposal as competitors in other places."*

- **Branching Restrictions (Non-Life Insurance):** A foreign Insurance Company must apply to and maintain a representative office for two years before being allowed to open a branch office, which can then conduct insurance business. For motor insurance, the most important segment of non-life insurance, additional restrictions remain. Branches of foreign non-life insurance providers are licensed by the CIRC "consecutively", whereas in practice Chinese insurance companies can obtain new licenses for several branches at the same time.

- **Ownership Restrictions (Life Insurance):** Foreign insurance providers are only allowed to do business in joint ventures (JVs) with Chinese companies, may not hold more than 50% of the share of the JV and must share the management of the JV company with their Chinese partner.

- **Representative Office Restrictions:** Until recently, foreign insurance companies had to have a successful business experience of at least three years abroad before being allowed to open a representative office in China. Recently, this period has been prolonged to 20 and now to 30 years. Thus, younger international insurance companies will be barred from the Chinese market.

- **Restrictions to Multimode Operations:** Under Chinese Insurance Law, insurance companies may either provide non-life or life insurance, but may not work in both business fields under the same legal entity. This regulation fits well with the specialised Chinese insurance companies but restricts international insurance companies, who in their home market often provide both life and non-life products.

Quantitative Impact Market Access Obstacles

- In the retail RMB deposit business, European banks could face a progressive loss in potential business volume (on average about 70%). This would, under the assumptions made in this paper, create progressive opportunity costs due to foregone business opportunities amounting to as much as €1.8 billion by 2010.
- In the RMB lending business, this lost market share is estimated at 25% in the first years and could amount up to 50% by 2010 or €1.2 billion in opportunity costs for European banks.
- Opportunity costs for European insurers of non-access to motor insurance in non-life insurance business and costs due to not allowing stand-alone life insurers will amount to over €472 million by 2010.

Policy Recommendations

If the EU intends to confront China on market opening issues in the financial sector, be it under the WTO umbrella or in other forms, the EU should take an "integrated approach". Since China has no major stakes in the European financial sector yet, and is not expected to do so in the near future, the EU would have to discuss the opening up of the financial sector with the opening of other sectors with China in order to achieve concessions in further financial market opening. Pure "retaliatory (tit-for-tat) measures" against Chinese financial companies planning to operate in the EU would therefore be ineffective; since China has no significant stakes abroad in the financial sectors, the EU has little leverage here. Where possible, the European Commission should:

- Continue to work towards a level playing field for financial institutions in the banking and insurance sectors.
- Build platforms for joint representation of interests of EU financial institutions (not Member State by Member State). To improve leverage vis-à-vis the Chinese government, European financial institutions should approach issues with one voice.
- Increase the quantity of dialogue between industry practitioners and EU representatives in the formulation of policy issues.
- Discussions with the regulators in China should be aimed at the ministerial level to ensure greater effectiveness.

Recommendations for Competitiveness

Recent rapid increases in returns seen by foreign financial institutions can be attributed to innovation and the introduction of new banking products not previously available in the Chinese market and the ability to provide better financial services than those offered by Chinese financial institutions.

However, such success might only be of a short- to mid- term nature. Once Chinese banks accomplish their reforms, and have acquired better banking expertise on a broader scope, partly assisted by their foreign investors, their competitive position might become much stronger in future. This could impact on the profitability and growth rates of foreign banks in the long run. In response, some foreign banks will attempt to increase their economies of scale. However, given the restrictions for foreign banks in achieving larger volumes of business combined with a highly competitive environment, an alternative, and perhaps more sustainable approach for foreign banks would be, where possible, to compete by adopting a niche approach in "differentiation and excellence".

Voices from Industry:

"*Since we have established ourselves in our niche we are in a much better state, both financially and operationally.*"

- European Bank

With an increasing share of enterprises and households concentrated in the bigger cities requiring differentiated banking services, this is a strategy more closely aligned with the strengths and weaknesses of foreign banks. Due to the disregard of Chinese banks for adequately valuing risks, foreign competitors' cannot compete in gaining market share if they apply sound banking practices. A precondition for success would seem therefore, the continuous development of highly innovative, differentiated and even exclusive financial products, targeting the upper level income segments.

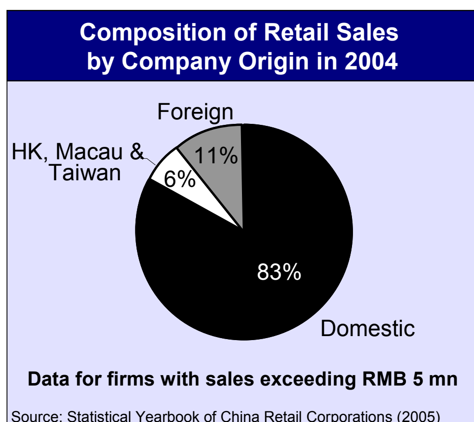
The full, in-depth, report into the *Financial Sector* can be found on the CD-Rom attached to this publication.

STUDY 8: DISTRIBUTION/ RETAIL

China represents a great opportunity for international retailers and offers a greater potential than many other service sectors due to a relatively liberal investment environment. The dual attraction of a large and fast-growing domestic market, together with the extensive sourcing opportunities, makes China an indispensable part of any international retailer's global strategy. Hence, there has been no shortage of international retailers entering the Chinese market in recent years, particularly since the 2005 reforms, which in effect threw open the doors of the domestic retail and distribution sector. This is reflected in the increase of foreign investment projects approved by the Ministry of Commerce (MOFCOM). Since May 2005, 1,027 foreign investment projects in retail and distribution have been approved by MOFCOM, as compared to only 314 approved for the 12 preceding years.

At an initial glance, it seems that foreign retailers have gained a solid foothold in the China market, with non-Chinese firms holding about 11% of total retail sales in 2004. However, bearing in mind that data collected in China only accounts for companies with sales in excess of RMB 5 million, it is clear that if smaller retail outlets were taken into account the overall retail sales figures would be much higher. Estimates vary therefore on the sales share of foreign retailers in China, though it is likely to be between 3-4%.

Composition of Retail Sales by Company Origin in 2004

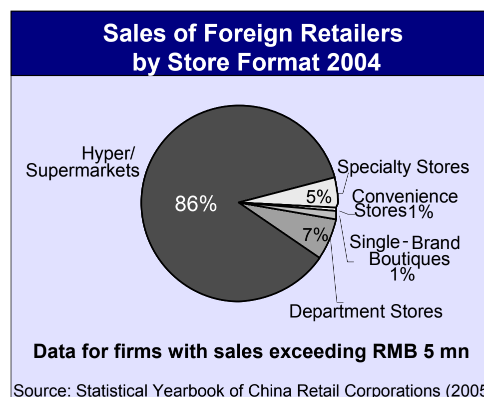


Data for firms with sales exceeding RMB 5 mn

Source: Statistical Yearbook of China Retail Corporations (2005)

More non-European foreign retailers, however, are entering the market. While the present position of Europe-based retailers remains dominant, it still constitutes a decline from the position held by Europe-based retailers in 2003, when they held over 50% of sales by foreign retailers in China. As for store formats, the Hyper/Supermarket format is the preferred choice for foreign retailers in China, comprising 86% of sales of foreign retailers in 2004. Sales of foreign-invested Hyper/Supermarkets accounted for 21.5% of sales of all Hyper/Supermarkets in China for the same year.

Sales of Foreign Retailers by Store Format 2004



Data for firms with sales exceeding RMB 5 mn

Source: Statistical Yearbook of China Retail Corporations (2005)

In terms of geographic expansion, foreign retailers have established a solid presence in first-tier cities and have already began to move into second- and third-tier cities, the populations of which have soared due to urbanisation.

Competitive Strengths and Market Opportunities

For European retailers, the future potential in the Chinese market is positive. Chinese retail and wholesale sales of consumer goods are expected to reach more than €618 billion by the end of 2006. Of this figure, approximately 4% of sales (€24.7 billion) are by foreign retailers. Assuming current growth trends continue, the total value of sales in the Chinese market could increase to around €916 billion by 2010.

European retailers should be able to capture a significant portion of these sales. China's comparative advantage lies in leveraging its vast pool of surplus unskilled labour through labour-intensive manufacturing. Competitiveness in retail, however, is gained by focusing on lean operations, supply chain management, integrated procurement, effective quality controls and management flexibility as well as the ability to identify with local consumer preferences. Due to the weaknesses of Chinese competitors in these areas, predictions based on current market trends suggest that the foreign-owned market share could double by 2010.

Recent surveys suggest that a new type of consumer is emerging in China, one that does not mind paying up to 20% more to ensure product quality, particularly when it comes to food safety. Foreign retailers are in a prime position to take advantage of the increasing disposable incomes of China's inhabitants. European companies have been among the most pioneering in ensuring food safety, helping to build consumer trust and boost the competitiveness of food retailers as well as increasing productivity for distributors.

In addition to the domestic market, China

provides a valuable opportunity to international retailers in the form of sourced goods. While exhaustive data on sourcing by retailers is not available, some indication of the scale can be given by looking at figures made available by individual retailers. Wal-mart, Carrefour and Metro together exported US$ 23.8 billion worth of goods from China in 2004, which exceeded total domestic retail sales of foreign invested enterprises in China for that year. The largest exporter is Wal-mart with US$ 18 billion worth of exports. This has led some commentators to remark that if Wal-mart was a country, it would be China's 7th largest export market, ahead of Taiwan and Russia

Obstacles to Trade and Investment

While challenges to European and other foreign retailers largely remain operational in nature (e.g. recruitment and retention of talented staff, streamlining fragmented and old-fashioned distribution networks, etc.) there still remains some regulatory challenges which restrain foreign retail expansion. While many regulations are not, strictly speaking, in conflict with China's WTO commitments, they are often not implemented transparently and involve excessive red tape for foreign retailers. These include limits on total store outlets a foreign majority owned company can open up, limits on store size, and limits on the sale of certain products.

Voices from Industry:

"It is clear from regulations that the Chinese government does not want big retailers to expand too fast. There are a number of extra approval requirements for larger chains, and restrictions on foreign ownership."

Even though local authorities can now authorise the opening of new stores, some provisions stipulate that central-level approval must still be sought after certain thresholds have been surpassed (e.g. number of stores in China). A number of other non-regulatory obstacles also exist, such as difficulties in obtaining land-use rights, and a lack of transparency, particularly in sub-sectors such as media. Counterfeiting is also a problem, particularly for brand-reliant products.

Voices from Industry:

"Our domestic rivals get big discounts in land and better store locations from local government. Our estimated operating costs are approx 10-15% higher than those for local businesses"

Policy Recommendations

- Lobby the Chinese government for equal regulatory treatment of foreign retailers including:
  a. Removing the conditions on foreign majority ownership;
  b. Removing the conditions for central-level approval;
  c. Removing the remaining product restrictions;
  d. Clarifying or abolishing city planning requirements.
- Improve and enhance the use of methodologies to assess impacts of proposed EU anti-dumping measures, which can often hurt European retailers (and consumers) sourcing goods from abroad.
- Support Chinese customs reform to ensure uniform implementation of the WTO Customs Valuation Agreement, and reduce customs formalities.
- Establish inquiry points for market entry, which can be especially helpful for small and medium enterprises as they navigate the complex administrative infrastructure.

Recommendations for Competitiveness

Since European retailers already find themselves in a competitive position vis-à-vis domestic retailers, few radical changes in the current direction of European retailers are recommended. Nonetheless, a few important key principles are emphasised.

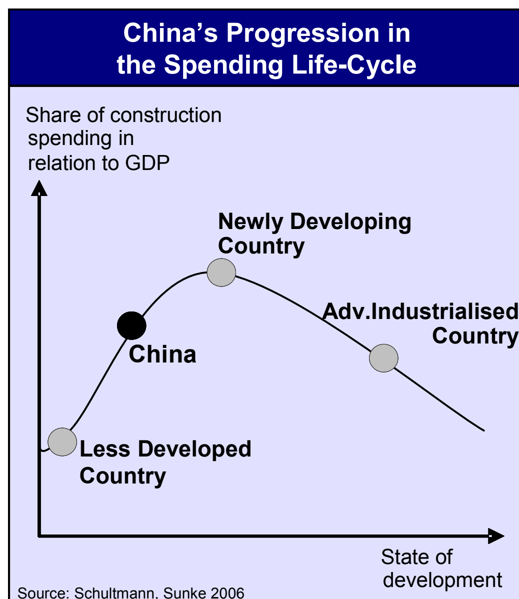
- Build scale. Currently, no single retailer in China is large enough to leverage cost-cutting logistics capabilities in procurement, inventory management and distribution.
- Be involved in local/community policies. For an industry where each new store requires approval, good relations with both the central and local government are arguably the most important asset for expansion in China.
- Be flexible. China houses a kaleidoscope of different consumer preferences and regulatory environments.
- Aggressively manage supply chains. As retailers cut production costs by sourcing from China, problems remain with rising costs from supply chain impediments.
- Be actively involved in the development of trade policy in Europe and lobby on behalf of consumers.

The full, in-depth, report into the *Distribution Sector* can be found on the CD-Rom attached to this publication.

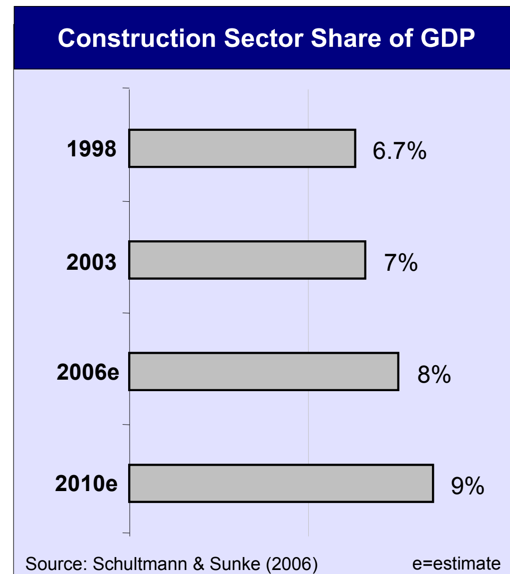
STUDY 9: CONSTRUCTION

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 and investment-driven economy, offers great growth potential in infrastructure and building projects. The in-depth construction sector study covers the sub-sectors of 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.

Generally, the amount of activity in the construction sector of a country is closely related to economic growth and development. The economic development associated with the transformation of a less developed country to an advanced industrialised country lead to a change in the role of construction in that country. In this regard, China is progressing from a less developed to a newly developing country and therefore, a high level of activity will continue for the foreseeable future.



To illustrate, 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. The current urban population of 500 million is officially forecasted to reach 800 million by 2020. The need to construct more than 10 million new apartment units every year is as true today as it has been for the past 20 years. This makes China the world's largest building and construction market consuming huge amounts of building materials and energy for heating and cooling.



Competitive Strengths and Market Opportunities

For the European construction industry, China should be seen more as an opportunity than a threat. Most Chinese construction companies operate in the less sophisticated segments of construction characterised by high volume and low margin activities. Chinese companies in general are low-cost 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 formerly state-owned enterprises.

European companies can continue to retain their competitive advantage in the high value segment of project design and management and areas of niche specialisation.

Voices from Industry:

"Environmental sustainability and energy efficiency is something we could become market leaders in - globally as well as in China."

European construction companies should take advantage of the opportunity presented by the 11th FYP and seek 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. The 11th FYP also offers opportunities for European industry in applying cutting-edge technologies in sustainable building systems with high fire resistant qualities and sustainable solutions.

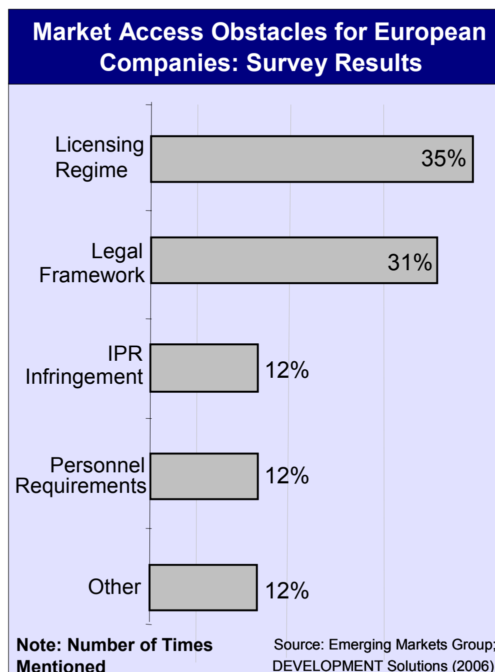
European companies should explore opportunities to offer services throughout the entire life-cycle of a building or construction project. These are usually integrated and especially during the phase of use or reuse, product and facility management, opportunities exist for European enterprises to enlarge their business activities by offering integrated services.

Obstacles to Trade and Investment

Voices from Industry:

"Bureaucratic operating procedures from government in enforcing legislation takes up 20% of the management time of the top 3 managers (myself included) at the office here."

European companies operating in the construction sector rate market access obstacles as very high, exerting a big influence on competition in the Chinese market. This situation is not expected to greatly improve for the foreseeable future and foreign invested enterprises (FIEs) will continue facing obstacles and market access barriers favouring Chinese competitors.



Expectations of a liberalised regulatory environment in line with WTO membership have not been met so far. In fact, since China's WTO accession, new regulations released seem to have made it more difficult to enter and operate in the Chinese market. Whereas before WTO entry, Decree 32 allowed registered foreign contractors to work on a project-by-project basis, this has since been repealed.

Voices from Industry:

"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."

In its stead, post-WTO Decree 113 (pertaining to construction implementation) and Decree 114 (design & engineering) places them at a disadvantage to local competitors with requirements of minimal registered capital and assets, minimum yearly turnover, minimum permanent personnel and that only qualifications obtained inside of China are accepted as references. The result has been that 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-by-project basis and offer cross-border services), the value of European construction companies' market share would be US $5.2 billion higher than it is under current conditions.

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, as well as overall improvement in quality. In particular the Chinese government should be encouraged to:

- 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.
- Achieve greater flexibility in the application of capital and asset requirements.

Voices from Industry:

"The EU would have better leverage over China if it agreed to a reciprocal recognition of qualifications. This would not be an issue for us as any Chinese construction firm competing in Europe would have to adopt the same cost structure as ourselves."

- 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) in order to arrive at a more transparent bidding process for publicly tendered construction projects. This will result in better valued and higher quality construction services provided to public authorities constituencies.

Recommendations for Competitiveness

- Development of niche markets especially possibilities from the 11th FYP. This includes the design, construction and maintenance of high speed railways, power plants, bridge construction, water treatment construction, and sustainable infrastructure and technologies in general.
- Target superior service and quality and maintaining high standards in construction. It is not advisable to participate in sheer price competition, as the low prices of Chinese competitors are linked to quality deficiencies and subsidised work.

Voices from Industry:

"[Dealing with] the unsustainable mentality of local competitors to expand production and gain market share through cut throat competition solely based on price is a big challenge for us."

- Enlarge scope of construction services to ensure fully integrated services and support in all phases of the life cycle of a building or infrastructure.
- Foster innovation, research and development to stay competitive in value added areas.
- Assess market potential and risks for introducing know-how and services in China; new types of cooperation or localisation; and alternative investment locations to broaden portfolio.

The full, in-depth, report into the *Construction Sector* can be found on the CD-Rom attached to this publication.

STUDY 10: TELECOMMUNICATIONS SERVICES

In the late 1980s, the incumbent fixed line network of the old Ministry of Posts & Telecoms was split into China Telecom and China Mobile. China Unicom, a second mobile operator that was started in the early 1990s by the Ministry of Electronic Industries (now the Ministry for Information Industry or MII), is one of China Mobile's main competitors. There are also fringe players, such as China Railcom and China Satcom which provide retail as well as wholesale services.

Competitive Strengths and Market Opportunities

China's telecommunications market is huge and still growing. Total revenue in 2005 reached US $ 79.7 billion with a compound annual growth rate of 15-25%. Growing incomes and accumulation of wealth by China's emerging middle class has driven consumer demand and will drive the demand for new services such as 3G (3rd generation mobile) and Internet protocol television (IPTV).

The European telecommunications market is the largest in the world, accounting for 46.6% of global turnover, or €967 billion in 2005. European telecoms companies are seeking to expand from their strong domestic base to tap into the largest market in the world in terms of users.

However, high market-entry barriers make it unlikely that any high levels of competition or cooperation between Chinese and European service providers will take place. To date, in China only two nationwide joint ventures with foreign participation have been approved in the Value Added Services market and these ventures currently only hold 7.5% of the market in terms of value. Increasingly however, direct competition may be found in third markets.

This latest development is often viewed more as an opportunity than as a threat. The view of foreign international carriers is that at their current stage of development, China Telecom and China Netcom have too little experience in dealing with the very exacting demands of multinational companies, have insufficient products to offer, lack global all-IP (Internet Protocol) networks that will define the next stage of international telecom services, and lack brand names and the flexibility to compete in increasingly sophisticated markets. What Chinese carriers can offer are services at the commodity end of the market, such as cheap bandwidth and carrier services. The strengths of European companies in offering comprehensive services including advanced applications, high quality of customer relations as well as management and marketing skills, will undoubtedly benefit those Chinese companies seeking strategic alliances.

Voices from Industry:

> "*We are superior in terms of technology and skills, Chinese operators could [learn] from us, [for example] we could help them integrate the Eastern European market into their business portfolio in exchange for them to open their market.*"

Unlike the equipment market, the services market is easy to enter and exit if policies and regulations permit. The fact that China does not permit access to any great extent may mean that China's operators will face similar roadblocks overseas. This means that in the longer term perspective it would be in China's interests to open its own markets. For their part, European carriers and service providers will be looking towards China reaching the point when their own carriers are sufficiently strong so as not to fear opening their door to foreign network and/or services competition.

In the meantime, market restrictions mean that, the activities of major European carriers are limited to offering related Information Technology (IT) services, some R&D and outsourcing only. This implies that currently real opportunities lie only in:

- China opening its markets, for example offering the right to provide backhaul;
- the right to market services to China's domestic enterprise sector;
- China's carriers looking for strategic alliances to acquire advanced service applications, customer relations, quality of service management and marketing skills.

Obstacles to Trade and Investment

China's entry into the WTO included signing the Basic Agreement on Telecommunications and the conditions that accompany it, including setting up an independent regulator, the adoption of transparent policies and regulations, national treatment, equal access to radio spectrum, and so on. To date, none of these commitments have been fully implemented, either in word or in spirit. Foreign carriers and investors interested in entering China's telecom services market have been frustrated over recent years by the lack of a comprehensive Telecommunications Law that establishes an independent regulator and transparency.

Voices from Industry:

> *"There is unprecedented potential in the Chinese market. However, the situation remains bleak for the time being because of severe restrictions on foreign activity in this sector. We don't think that any large concessions will be made in the near future."*

In China, all potential foreign investments are classified as allowed, restricted or prohibited. In 2002, Telecom was moved into the restricted category. Under current regulations, foreign carriers are limited to 25% equity in basic service joint ventures in Beijing, Guangzhou and Shanghai. Under WTO obligations, the ownership ceiling will rise to 49% across all of China in mobile services by the end of 2006 and rises to the same level for fixed line services by year-end 2007. This is unlikely to make a large impact on foreign participation.

According to the MII's Regulations document, the minimum capital requirements for foreign investors to obtain a licence are: RMB 2 billion to offer inter-provincial basic services, and RMB 200 million to offer these services within a single province. The requirements for value-added services are RMB 10 million and RMB 1 million respectively. Investments over US $30 million require MOFCOM approval.

Financial barriers are just one of a series of barriers to trade facing EU carriers and service providers in China. Others include the following.

- No new licences being issued in basic services for foreign companies to apply or bid for.
- It is not possible to seek partnerships with Chinese operators without effective endorsement from the Chinese state authorities, such as SASAC, MII, etc.
- Grey areas of service, such as re-sale, MNVOs, and trunked services are treated as basic and therefore subject to severe entry restrictions
- Impediments on the importation or certification of telecom equipment for service providers. These include costly and time consuming equipment type approval procedures, despite China's endorsement of APEC's Mutual Recognition Arrangement (MRA) principles, and confusing customs certification procedures that require harmonisation across the country.
- Potentially, the use of 'national' standards, such as TD-SCDMA which apparently have little prospect for the foreseeable future of being adopted outside China.
- China has yet to sign the WTO's Government Procurement Agreement (GPA) which would open government service contracts to foreign providers.

Policy Recommendations

- Push for clarification of the forthcoming Telecommunications Law.
- Lobby for the right of international carriers to build or lease their own backhaul to serve their clients in China's major cities.
- Foreign companies should be allowed to bill their customers in China directly.
- Expand lobby activities to ensure China signs the WTO GPA.

Recommendations for Competitiveness

- Consider China as a low-cost R&D base, in particular for localised standards, to increase competitiveness in Chinese and global markets.
- China based executives should build and maintain relationships with regulatory bodies. This will facilitate clarification of related issues and ensure that information provided in official notifications is not misinterpreted.
- Stimulate joint research between European and Chinese sectors in the development of new standards which can be commonly shared avoiding the use of standards as trade and market access barriers.
- Effective cooperation should be developed between businesses and EU authorities to allow the industry to speak with one-voice to the Chinese government.
- Utilise the international expansion of Chinese telecom companies to increase opportunities for cooperation and partnerships which may provide a 'back-door' entry into China's closed Telecom markets.
- Highlight European experience and best practice in achieving objectives set out in telecommunications services under the 11th Five Year Programme and the National Informatisation Development Strategy

The full, in-depth, report into the *Telecommunications Services Sector* can be found on the CD-Rom attached to this publication.

STUDY 11: SUSTAINABLE TECHNOLOGIES AND SERVICES

Since the initiation of market reforms in 1978, the Chinese economy has grown rapidly, achieving an average GDP annual growth rate of 8.2% per annum. While China's economic boom has increased incomes, reduced poverty, and improved the health and quality of life for most citizens, these improvements have come at the cost of severe environmental and natural resource degradation.

China's list of environmental challenges range from air and water pollution, desertification and water shortages, refuse accumulation, loss of biodiversity, cropland, wetlands and grasslands, to increasing frequency and scale of human-induced natural disasters. Furthermore, as China continues on its path of development, energy availability and efficiency are becoming causes for concern. These problems are not only environmental and energy related, but also spill over to other areas, causing serious economic losses, social conflicts and health costs within China.

Economic Costs of Air Pollution in China

- Sandstorm damage costs China over US$ 540 million per year.
- Losses of crops and forests due to acid rain amount to about US $730 million per year.
- The 'green wall' of trees being built to shield Beijing against sand and dust costing US $6 billion.

Source: Liu & Diamond (2005)

Due to China's sheer size and the extent of environmental degradation and energy demand, the current environmental dilemmas are no longer restricted to China's borders. It is now widely accepted that China's environmental problems are also the world's environmental problems.

Global Implications of China's Coal Use

High emissions throughout Asia have led to the formation of a phenomenon called the Asian Brown Cloud - a dense blanket of air pollution about 3 kilometres thick and stretching over parts of South, South-east, and East Asia. The major contributor to this haze is sulphate, and it can largely be traced back to China's dependence on energy derived from burning sulphur-rich coal. The Asian Brown Cloud has already been responsible for many deaths p.a. from respiratory disease, and further threatens the lives of millions in the region.

IISD (2006)

Competitive Strengths and Market Opportunities

Aware of the vital need for environmental protection, the Chinese government has identified sustainable development as an important priority. China's 11th Five Year Programme (2006-2010), contained many references to sustainable development and places energy efficiency, environmental protection and innovation throughout all sectors at the forefront of Chinese policy.

China's Environmental Targets for 2010

- Increase resource productivity per tonne of energy, iron and other resources by 25%.
- Decrease energy consumption per unit of GDP decreased by 18 %.
- Improve average water use efficiency for agricultural irrigation by up to 50%.
- Raise re-use rate of industrial solid waste above 60%.
- Increase recycle and reuse rate for major renewable resources by 65%.
- Reduce total discharge of all major pollutants by 10% in five years.

Note: all targets use 2003 figures indicators as baseline

Source: China State Council (2005)

Currently, China's demand for reliable, affordable and effective sustainable technologies and services remains unsatisfied through domestic means. Though the Chinese environmental sector is projected to develop rapidly, most enterprises (95%) are small companies that manufacture primary treatment equipment. This is a low-end, highly competitive market segment in terms of technology and many products are of poor quality, unreliable and costly to operate. Furthermore, the potential users of such equipment lack access to necessary finances and the management skill and know-how needed to use this domestic technology effectively.

Voices from Industry:

"Very important new opportunities are emerging in China. This has led us to take new initiatives, such as promoting novel energy-friendly products."

In contrast, the European sustainable technologies and services industry, with a high concentration of engineers, scientists, planners and other professionals, is a strong, innovative sector, and a major global player. The industry is considered particularly competitive in areas such as the installation of water and wastewater treatment infrastructures, waste management infrastructures and operations, air pollution control technologies, and renewable energy technologies. European companies are also global leaders in the field of environmental services (i.e. collection and treatment of domestic and hazardous waste, air pollution monitoring, remediation of polluted soil and water, etc), with increasing possibilities to set up operations and offer environmental technologies and services to emerging economies.

Voices from Industry:

> *"Innovation is our advantage. Despite the risk of losing our technical advantages due to copying, the [Chinese] market is too full of opportunities for not taking the risk."*

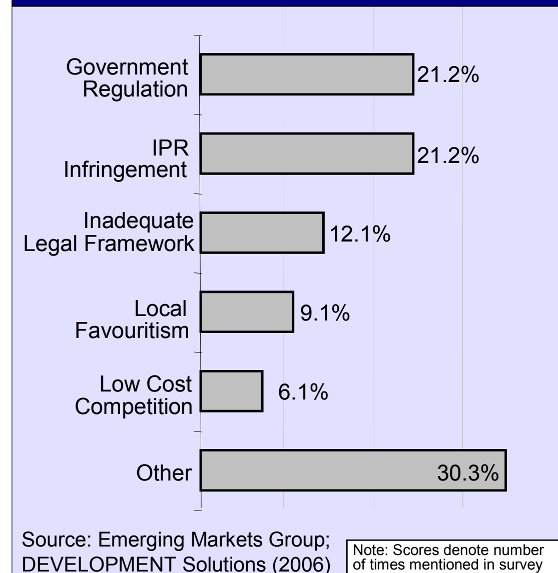
European companies have a strong competitive position in emerging markets provided they leverage their competitive advantages which include:

- Significant experience in the field of efficient environmental technologies and management techniques that can allow enterprises to simultaneously protect the environment and save or even generate money.
- The ability to provide superior technologies and effective management strategies, enabling them to achieve an adequate balance between production and distribution investments.
- Lengthy experience and depth of knowledge in the provision of services, the development of customer relationships, as well as consulting, which give considerable advantages for projects where sustainability is built-in and product longevity is required.

Currently, China's market for sustainable technologies and services is estimated to be worth approximately €25.6 billion annually and is expected to source at least 12% of sustainable technologies and services from EU suppliers by 2010. The majority of this investment is planned for the renewable energy and energy efficiency sectors, followed by water resources and sanitation. China's State Environmental Protection Agency (SEPA) has indicated that the government will spend around €140 billion in environmental protection from 2006 to 2010 focusing on the improvements of water and air quality.

Obstacles to Trade and Investment

Due to the importance of sustainable development to both the European and Chinese governments, it has featured strongly in EU-China cooperation activities. A significant step forward in terms of EU-China cooperation has been the formation of a strategic partnership in sustainable trade and development. The EU and China have been collaborating on sustainability issues for many years and have continued to develop their aligned interests in energy and other environmental issues. However, collaboration in this area has presented difficulties, particularly with regard to market access obstacles such as government regulations and a lack of protection for intellectual property rights (IPR).



- **IPR Infringement:** Weak implementation of regulations, unsound judicial interpretations, procedural barriers, and poor enforcement continues to frustrate the efforts of companies as they endeavour to protect their IP in China.
- **Legal Framework:** While China's environmental legislation is becoming more progressive, significant problems exist, namely: lax enforcement, fragmentation of the system, lack of transparency and government favouritism.
- **Unfair Commercial Practices:** Local protectionism, sectoral protectionism, and sectoral monopoly are serious issues in the Chinese environmental industry. Due to such practices European companies have limited access to the Chinese market and do not compete on an equal footing with Chinese companies, for example in the public tendering system.
- **Government Regulation:** Government regulations governing business in China that are affecting foreign enterprises include: regulations regarding formation of a JV with local companies, patent issues product approval regulations, regulations that specify that only majority-owned domestic companies are able to benefit from revenue generated by Certified Emissions Reduction schemes, and regulations governing local content requirements (i.e. 70% for any wind

project). In addition, in areas such as wind power generation, administrative measures pricing determined through a public tendering system artificially lowers prices.

- **Local Price:** Domestically produced equipment is often favoured as it makes up for its shortcomings in quality by being cheaper and domestically produced. Local companies are able to lower their prices due to the fact that they compete with lower capital costs (they enjoy huge loans from the Government often under favourable conditions) and require a lower return on investment than any conventional foreign investor.

Voices from Industry:

> *"Obstacles are slowing down our overall activity. Therefore the situation is not 'we are still doing business but in a more costly way', the situation is 'we cannot do business'."*

Policy Recommendations

- The European Commission and the business community should join forces to find solutions to the IPR problem and strengthen the enforcement of existing laws. The EU should also continue its dialogue with the Chinese government and provide sound technical assistance in areas where the Chinese are having difficulties.
- The European Commission, together with foreign companies, should encourage China to reduce constrains on creations of JVs and FIEs, and to issue and enforce international best practice guidelines at all levels of bidding to achieve fairness and transparency in the bidding environment for the energy and environmental sector.
- Technology transfer in the field of environmental technology and services has huge potential. To help European companies benefit fully, EU programmes that facilitate technology transfer to China should be promoted.
- The European Commission should demonstrate the potential advantages of CDM in China (increasing renewable energy generation and bringing in additional tax revenue) and encourage China to amend its "Measures for the Administration of the Operation of CDM Projects" to allow foreign companies a greater share of ownership.
- Given the high priority of both the EU and China in developing this sector it is proposed that a general agreement on sustainable trade is established. This could be used to address one or more sub-sectors (e.g. Clean Development Mechanism projects) to meet the concerns of both sides regarding trade rules.

Recommendations for Competitiveness

- When trading and investing in China, it is important to remain flexible and be able to adapt to the changes in the regulatory environment. European companies are encouraged to design activities that will increase the knowledge of Chinese language, business and cultural environment.
- European companies need to find innovative solutions and to develop affordable and cost-effective technologies. In the medium to long-term, companies should look at selling higher value activities such as design and service capabilities as well as manufactured goods, which are cost effective and help improve the competitiveness of their client's business.
- Institutional links between representative business organisations of the EU and China may be beneficial as a closer and more systematic cooperation would facilitate the exchange of knowledge and information.
- As a response to the risk of losing competitive advantage, European companies should look to innovative technology security measures (e.g. 'total product package').
- It is recommended that companies seeking to operate in China look into employing the growing number of Chinese industries and international private consultants that are available to provide market analysis, partner facilitation, legal consultation, and numerous other commercially-oriented services.
- In the long run, European companies should consider relocating design or manufacturing activities to China. This can reduce price, allow companies to better cater for the domestic market, and allow for greater export potential to third markets.

The full, in-depth, report into the *Sustainable Technologies and Services Sector* can be found on the CD-Rom attached to this publication.

STUDY 12: EXPLORING CHINA'S IP ENVIRONMENT

China, for centuries a nation of innovation and inventiveness, missed the Industrial Revolution that founded the development of western countries during the 19th century. Its socialist experience, during the 20th century deepened the technological gap between China and the developed countries. From 1978 onwards, China felt the need to fill the gap and realised that Intellectual Property (IP) protection was crucial to drive its future developments.

For more than two decades the People's Republic of China has promulgated laws and regulations covering almost every important area relating to intellectual property rights. China is a member of the World Intellectual Property Organization and a signatory to all major IP treaties including the agreement on Trade Related Aspects of Intellectual Property (TRIPS), the Paris Convention for the Protection of Industrial Property (Paris Convention), and the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention). All three require China to provide an equal treatment to the nationals of all signatories. China has drafted or revised all of its IPR statutes to meet these requirements. Despite all the efforts made, IP violations in China have been worsening in recent years.

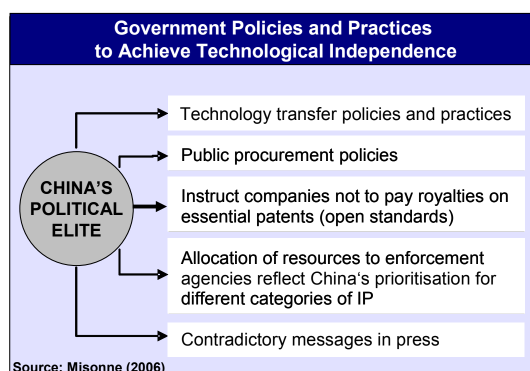
Patent & Technology Secret Violations

China has increasingly resorted to policies that aim to absorb technology from foreign rights-holders for the benefit of domestic operators. While the objectives of the Chinese authorities are perfectly understandable and welcomed, the means used to achieve this end are not always legitimate. Methods employed by the Chinese government can be both direct and indirect. Direct absorption of foreign IP includes the flat refusal to pay royalties to foreign patent owners and the forced disclosure and dissemination of secret data. The more indirect method on the other hand, relies on the use of government procurement practices where foreign companies are selected initially in order to pass their technological know-how to a joint venture partner and are then excluded from successive rounds.

Voices from Industry:

"[Local] competitors do not follow any rules when it comes to IPR. Our registered trademarks have all been copied including our logo and our brochures. Copied products even appear with our batch numbers on them !"

Unfortunately, such questionable methods seem to be considered as fair by public opinion in China. There have been instances where foreign companies have attempted to protect their IP in China only to be described by the press as *"abusing their rights, threatening Chinese firms and their economic security"*. As the Chinese media is strictly controlled by the State, the sentiment inherent in the messages can be assumed to reflect the opinion of the Chinese government.

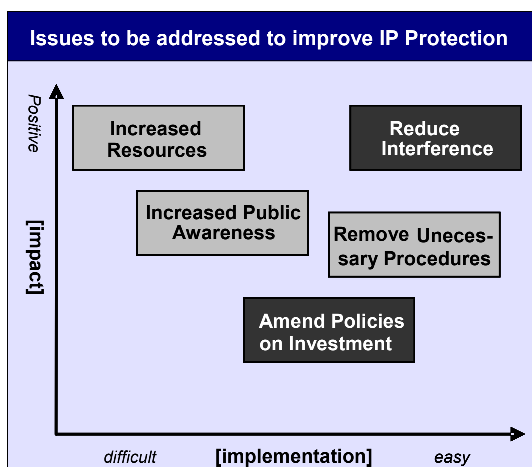


Counterfeiting of Trademarks & Piracy of Copyright

According to national statistics, Chinese IP owners constitute the large majority of the victims of such violations. And yet, it seems that counterfeiting of trademarks and piracy copyright are not a priority issue for the PRC. Instead of concentrating their efforts on improving the efficiency of their action, Chinese authorities prefer to launch periodic campaigns, thus addressing the symptoms rather than the root cause. The main weaknesses of the IP environment in China include:

- Weak deterrence for IP infringers;
- Complexity of the administrative organisational structure: a lack of cooperation between and within enforcement agencies, ultimately leads to competition between agencies; lack of involvement for the right holder, etc;
- Burdensome procedures for right holders to initiate and proceed a case in courts;
- Lack of financial and human resources allocated to administrative enforcement agencies responsible for trademark (Trade Mark Office and State Administration of Industry and Commerce) and copyrights (National Copyright Administration of China);
- Regulatory framework and enforcement at the local level and local protectionism (i.e. developing economy, maintain employment, serve the interests of local

consumers, etc), resulting in the discrimination of foreign rights holders.



It is essential that the Chinese authorities agree to enter into constructive discussions with IP stakeholders to resolve these issues:

- Increase deterrence (revise conditions under which a case qualifies as a crime, impose deterrent sanctions, etc);
- Simplify administrative organisational structure and address the problems they cause by concentrating efforts on the core issues rather than on symptoms (e.g. administrative and judicial authorities should cooperate rather than compete on dealing with IP infringements, right holders should be involved in the procedure of solving a case, etc);
- Eradicate burdensome and discriminatory procedures for foreign right holders to enforce their rights;
- Take measures to consolidate the political will for IPR enforcement locally;
- Increase resources available to actors involved in registering and enforcing IPR, and increase public awareness in a strategic and systematic manner.

Policy Recommendations

- **Strategic Dialogue:** Maintain a strategic dialogue on the IP issues identified and build a strategic agenda of recommendations and measures to be taken.
- **Monitoring:** Closely monitor China's implementation of its IP Action Plan and other IP commitments in the form of comprehensively designed industry questionnaires and thematic studies.
- **Trade Related Technical Assistance (TRTA):** Support China's transition by sharing experiences and best practices in the form of strategically designed cooperation activities.
- **Warn:** Strengthen messages to the Chinese authorities; highlight the seriousness of the issues at stake as well as the danger and risks they pose to all businesses operating in China. Corporations may review their investment plans in China and seek business opportunities in other emerging markets.
- **Inform Industry:** Supply information to industry, in particularly small and medium size enterprises concerning the genuine risks they may face when deciding to invest their technologies into the Chinese market by setting up an official public IP warning system.
- **Prepare a WTO Case:** Gather all evidence necessary for bringing a WTO dispute against China and sensitise the industry on the importance to provide all required data to support the case.
- **Initiate Case:** Ultimately, initiate a WTO dispute against China if it fails to respond to the final warnings.

The full, in-depth, report into *The IP Environment in China* can be found on the CD-Rom attached to this publication.