

# The Chinese automotive components industry

2007 edition



*Just-auto*

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September 2007

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Published by

**Aroq Limited**

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# Chapter 1 The Chinese automotive market

## China market growth

The dramatic growth of the Chinese automotive market is the biggest story in the 21<sup>st</sup> century motor industry. The world's most populous nation is riding a sustained wave of economic growth, with gross domestic product (GDP) rising by an annual average of x.x% in the past 25 years.

Despite a veneer of free market economics, China remains a planned, communist economy, and the Government has set a goal of developing its automotive industry into a key industry of the national economy by 2010, and car ownership is actively encouraged. Road infrastructure is undergoing constant improvement, with motorways being added at the rate of around xxxxxxkm a year, and automotive financing, retailing and distribution networks are being improved.

Since 2000, the automotive market has exploded, with sales growing by an average of more than xx% year-on-year. China overtook Japan in 2006 to become the world's number two automotive market to the US, and it was the world's number three automotive producer behind the US and Japan in 2006. China is forecast to become the world's second-largest market in terms of production by 2013, when it is expected to build more cars than Japan.

Total auto production reached x.xxm units in 2006, a year-on-year increase of xx% on 2005, while sales grew xx% to x.xxm units; including xm passenger cars, of which xxx,xxx were luxury vehicles. In 2007, a new record of x.xm vehicles is expected to be sold, of which 6m will be passenger cars.

## Consolidation within Chinese vehiclemakers

The market has consolidated to some extent. There are still close to 120 registered vehiclemakers in China – 40 of which make cars – but only 30 manufacturers had an annual production greater than xxxxx units in 2006, and the ten largest manufacturers accounted for xx% of total sales. Vehicle

## Chapter 2 Size and scale of the Chinese automotive components industry

In 2006, official Chinese data stated that China had xxxxx automotive enterprises, divided into five sectors: motor vehicle manufacturing, vehicle refitting, motorcycle production, auto engine production and auto parts manufacturing. This included more than xxxxx auto parts and accessories companies, of which around half are very small companies. The bulk of these companies' business is linked to the booming sales of the domestic manufacturers. Nearly xx% of the revenue for the auto parts and accessories market is from OEM supply for new vehicle manufacturing.

Most component suppliers are small and medium size companies-only about x% of companies have sales exceeding US\$xxm per year, and only x% have sales above US\$xxxm per year. Even these larger companies are minnows compared with the global Tier 1s, whose turnover is measured in billions of dollars.

Research and development (R&D) capabilities among Chinese components companies are very weak, with many spending less than x% of their budget on R&D, compared to a typical figure of x-xx% among foreign companies.

Estimating the value of the Chinese components industry is not easy due to the sprawling scale of the market, the proliferation of grey market components and the rapid growth rate. A 2005 report by BCC Research, entitled *China's Role in the World Auto Components Market*, estimated the Chinese automotive components industry to be worth US\$xx.xbn in 2004, growing to US\$xxbn by 2009 at an average annual rate of xx%.

A separate study by the US Department of Commerce suggests that the BCC estimate is accurate. The US DoC claims that China's automotive component market was estimated to be worth US\$xxbn in 2006. This still makes China a relatively small player in global terms – only around x.x% of the estimated US\$x.xtn global components industry.

## Chapter 3 International trade

### Import-export balance

Between 2002 and 2006 China's imports of automotive components almost tripled from US\$*x.xbn* to US\$*xx.xbn*. This import figure is roughly in balance with the total value of exported components, which was US\$*xxbn* in 2006. However, exports are growing even more rapidly, with a combined annual growth rate (CAGR) of *xx.x%* between 2002 and 2006, compared to *xx%* CAGR for imports over the same period. If those rates are maintained, the value of Chinese components exports will overtake the value of imported parts in 2007.

However, the types of product imported are very different from those exported. Most imports are high-tech or critical components which are difficult to source locally as, apart from component JVs, local suppliers do not have the technology or quality levels to produce them.

However, imported parts are expensive – despite moves to reduce tariffs in the wake of China's WTO membership, these duties, plus shipping and transport charges, contribute to higher production costs that can exceed those in Europe and the US by up to *xx%* despite the low labour rates available in China.

The majority of exported components still tend to be more basic, labour-intensive components such as wheels and tyres, wiring harnesses, brakes and engine components, as well as by-products of China's electronics industry such as low-cost in-car entertainment products and instruments.

Exports are also growing at a faster rate than imports for a number of reasons. An increasing number of international Tier 1 suppliers have established facilities in China. These produce parts for supply to Chinese JVs, but also for export overseas, which means they have to meet more stringent quality requirements. This has a spin-off on the Chinese JV partners, which are increasingly able to narrow the technology gap versus foreign suppliers and make improvements in product quality.

In 2006, China exported vehicles and components worth US\$*xxbn*. The majority of CBU and CKD vehicle exports are destined for other emerging

## Chapter 4 Chinese suppliers

### Are Chinese suppliers ready for export?

Chinese suppliers have featured at European and US auto components trade shows such as SAE and Automechanika over the years, but the parts on offer have tended to be basic parts – fasteners, electrical connectors, pipes, hoses, wiring and so on. These components are not generally safety-critical, and enter western supply chains at a low level – Tier 2 or 3. They offer savings at a very basic level – tiny fractions of dollars or euros, made meaningful by large volumes.

Breaking in to supplying at a higher level – as a Tier 1 systems supplier – is more difficult. There are the issues of product quality, IPR and the risk carried by the extended supply chain, as previously discussed. There is also the inherent problem that the Chinese companies do not understand how western markets operate, or how to satisfy their more stringent demands.

Nevertheless, the bigger and more ambitious Chinese suppliers are starting out on this path. Large numbers of domestic companies exist, and have grown in tandem with the vehicle makers. The two case studies here present companies that have parallels within the vehicle makers:

- Wanxiang Group is a large, well-established player that is looking to expand by traditional means – including making overseas acquisitions. Its strategy is broadly similar to SAIC, for example.
- China Automotive Systems (CAS), by contrast, is a newer, ‘tiger’ company that has focused on the Chinese domestic independent vehicle makers and concentrates on one product group – power steering systems. Its equivalent would be Chery or Geely – both of which it supplies. It even has a JV with Chery.

Both Wanxiang and CAS can make progress on the path to becoming international suppliers – though both accept that progress will be slow.

# Chapter 5 Components industry dynamics

## **Global Tier 1s drive components sector up the value chain**

Chinese vehiclemakers – both independent and foreign JVs – are still geared largely to domestic demand. So far, most completed vehicle exports have been destined for other emerging markets, mainly in Asia, Eastern Europe, the Middle East and Africa. Quality has not been the number one priority, and thus wide technology and quality gaps still remain between the products produced by domestic suppliers and international market needs.

However, this needs to change. Global vehiclemakers increasingly are looking to source from low-cost countries, and China offers the lowest cost base of all in terms of labour costs. Meanwhile, increasing domestic competition is making quality more of an issue for domestic consumers.

The arrival of increasing numbers of global Tier 1 suppliers in China has started to force up component quality, and to force components companies into more complex areas of componentry, such as electronics and ABS brakes. And companies such as Honda, which has opened an export-only plant in China, are demanding locally-made components of comparable quality to parts sourced in established markets.

The drive for improved quality is being led by global Tier 1 suppliers which have built strategic manufacturing bases in the country, and which are introducing more advanced technology in line with other global plants owned by the same suppliers.

The arrival of the global Tier 1s has spurred many local Chinese components suppliers to invest in manufacturing technologies in order to improve product quality. Greater sophistication of components requires greater levels of factory automation, and this is largely to the benefit of foreign companies that specialise in factory equipment. Rockwell Automation Inc, which makes equipment and software to run factories, has seen its China business grow by more than xx% a year since 2003. *“There’s a big push right now to make*

## Chapter 6 Geographical distribution of the Chinese auto industry

The bulk of China's auto production is concentrated along the country's east coast, notably around Shanghai, Tianjin, Beijing and Changchun, down to Guangzhou and Shenzhen in the south. Other major production centres exist in Central China, mainly in Hubei province and its capital Wuhan, and further west around Chongqing. There are calls for consolidation within the market, creating automotive 'hubs' – but demand is so great it's unlikely that any of the existing regional production centres will disappear. The industry is likely to remain concentrated in six major regions:

- the Shanghai/Nanjing region on the east coast, where around 300 suppliers serve SAIC and other local vehicle makers;
- Wuhan province, home of Dongfeng Motor, which boasts more than suppliers;
- Beijing/Tianjin, where around suppliers serve the Beijing Automotive Industry Corporation and Tianjin Automotive;
- Guangdong province in the south, around the cities of Guangzhou, home of Guangzhou Automotive, and Shenzhen, close to Hong Kong;
- Jilin province in the north-east and its capital, Changchun, where there are around 220 large suppliers serving First Automotive Works; and
- Chongqing in Western China, earmarked to help facilitate the development of inland China and the home of ChangAn Motor.

### East China – Shanghai and Nanjing

East China is the single biggest centre for automotive component manufacturing, representing around xx% of national production. The regional centre is Shanghai, home of SAIC and its substantial JVs with Volkswagen and GM. Industrial growth around the city and its surrounding provinces (Zhejiang, Anhui and Jiangsu) has been rapid.

This region accounts for roughly xx% of China's total GDP, and in 2004 this area attracted over xx% of China's foreign direct investment worth an estimated US\$xx-xxbn. Shanghai City's GDP has posted xx years of double-

# Chapter 7 The aftermarket

## Disorganisation of the aftermarket

The Chinese automobile parc is expected to reach xxm vehicles by 2010. By that time, around xx% of vehicles in China will be at an age where they require a higher level of service and maintenance.

A report by JLJ Analysis estimated that the aftermarket grew by about xx% to reach a value of US\$xxbn in 2006. It is expected to continue growing at xx% annually to reach almost US\$xxbn by 2008. The top three firms in the aftermarket (Bosch, Delphi and Visteon) captured a combined xx.x% market share in 2005.

China has belatedly recognised the importance of the aftermarket. One of the important directions stated in the 2005 new automotive plan was the development of the aftermarket, with a target ratio of x:x.x between the size of OEM market and aftermarket. However, this has not yet been achieved, and many structural obstacles must be overcome if this is to happen. In particular, counterfeiting remains a major issue.

The Chinese automotive aftermarket is structured in a complex and haphazard way. Vertically integrated Chinese OEMs such as SAIC and FAW remain major players in the aftermarket, supplying from their components subsidiaries, and this is an important source of revenue for them. The highly competitive nature of the new car market means profits from car sales are becoming pressured, so the fact that aftermarket sales and services make up an estimated xx% of these vehicle makers' income is highly significant. Clearly, these vehicle makers cannot afford to lose this income.

## Grey market challenge to OES aftermarket supply chain

In the current market structure, two distinct supply chains supply parts and services to the aftermarket. The 'official' supply chain is called the original equipment supply (OES) chain, and this is controlled by the vehicle makers. In this supply chain, the companies that supply OEM parts to the vehicle makers – either independent suppliers or subsidiary companies – also supply to the dealer networks and service chains controlled by the vehicle maker.

## Chapter 8 Global Tier 1 strategies for China

### Business structure – JV or wholly owned?

In the past 15 years, major global Tier 1s such as Bosch, Delphi Automotive Systems, Valeo, Visteon, and Denso have made major investments in the Chinese components industry, largely through joint ventures with Chinese companies, though there has been an increasing trend toward wholly-owned subsidiaries built on greenfield sites.

Opinion is divided as to the best way forward. Components facilities are not subject to the same restrictions as car plants – plants do not have to be JVs with local firms, regardless of whether they serve local companies or are export-oriented. Indeed, many Japanese suppliers have gone down the wholly-owned route – there are around xxx wholly-owned Japanese suppliers in China, while European and US JVs have tended to favour the JV route, believing the local partner brings local knowledge and market access.

By 2004, xx% of the Japanese components manufacturing projects are sole capital enterprises rather than joint ventures. Only xx% of the US and European components projects were wholly owned by the foreign company. In 2005, xx% of foreign auto parts companies chose to invest wholly in China, but by 2007, investment had swung back toward JVs.

Visteon Asia Pacific International marketing director Yang Weihua said that Visteon's strategy in China was to set up joint ventures rather than xxx% owned subsidiaries: *"Chinese partners have a good command of local culture and consumer demand and taste while Visteon has the advantage of technologies, capital and experience in globalisation."*

Among JVs announced so far in 2007 are:

- Mahle Tri-Ring Valve Train (Hubei) Co, Ltd, a Sino-German JV set up in January, with Mahle holding xx% and Hubei Tri-Ring Valve Train Co, Ltd holding the remainder;

## Chapter 9 Conclusion

China is still the land of opportunity for the global auto industry – for vehicle makers and component companies alike. But it is still fraught with problems, and although labour costs are still the lowest on offer, China perhaps does not represent the best option for companies looking to source from low-cost countries.

It's difficult to export to China. Taxes and duties are complex, and often illogical. China's WTO commitments should have eliminated punitive duties on components imports. But the EU has been forced to take legal action to enforce these agreements at the highest level.

Sourcing from Chinese suppliers is also fraught with difficulties. Quality remains an issue – aside from the most basic mechanical parts, few Chinese companies have the R&D capability to engineer complex parts – though the larger local suppliers are starting to develop these skills. Some are even opening local offices in Europe and North America to help communications. In any case it would seem essential to have a representative office in China in order to keep closer contact with suppliers.

The issue of intellectual property rights also has not gone away. China may have moved past outright design piracy of entire cars, but design theft of components is still rife, appears to be culturally acceptable, and is almost impossible to police.

And despite the low labour costs, other Chinese costs are not so advantageous. Raw materials can be cheaper – or they can be more expensive. And logistics infrastructure is poor, so the supply chain can be long, expensive and prone to hold-ups. This requires extra buffer stocks of parts in order to provide a safety net against disruption – further costs in terms of warehousing and inventory that needs to be factored in.

So from a low-cost sourcing point of view, China's cost advantages are perhaps not as great as they are generally perceived to be. One can find greater cultural empathy from sourcing in, say, India, where English is spoken and IPR is respected, or Eastern Europe, where supply lines are that much