China’s Impact on the U.S. Automotive Industry

Updated April 4, 2006

Stephen Cooney
Industry Specialist
Resources, Science, and Industry Division
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Summary

China is both the fastest growing motor vehicle market and the fastest growing vehicle producer. Output and sales have grown from less than two million vehicles annually before 2000 to nearly six million vehicles in 2005. In the number of vehicles that it manufactures China has passed Korea and France, is on pace to overtake Germany, and would then trail only the United States and Japan. A disproportionate share of China’s output has always been heavy vehicles, but since 2000, China’s growth has been led by the increase in passenger cars. They now account for about half of China’s production.

China exports or imports few motor vehicles: less than 200,000 of each. Exports are growing much more rapidly than imports and are mostly light trucks shipped to developing country markets in Asia, Africa and the Middle East. China’s industry has developed extensively with the aid of foreign direct investment, unlike those of Korea and Japan. This investment has been from major international automobile manufacturers, led by General Motors (GM), that are unlikely to promote Chinese exports in competition with their own products in other markets. As a consequence, the Chinese companies that have expressed an interest in exporting cars are those who are less dependent on such cooperation and may struggle to meet safety and emission standards in industrial countries. Most experts do not see a high volume of exports from China into these markets in the near future.

By contrast, Chinese auto parts exports are already making inroads into the United States. While U.S. motor vehicle trade with China was insignificant in 2005, the United States imported $5.4 billion in parts from China, while it exported about one-tenth of that amount. China accounted for about 6% of U.S. auto parts imports in 2005, but the amount has quadrupled since 2000. Many of these imports are aimed at the aftermarket, as most of what China now exports to the U.S. market are standard products such as wheels, brake parts and electronics. But with high rates of investment in China by the leading U.S. manufacturers of both cars and parts, major companies such as GM look to increase sourcing from China.

The Bush Administration has noted that the new Chinese auto policy announced in 2004 eliminated practices not compatible with China’s commitments as a member of the World Trade Organization (WTO). However, this policy maintains a limit of no more than 50% ownership by any foreign investor in a motor vehicle manufacturing joint venture in China. Moreover, the Administration has filed a WTO case alleging discriminatory Chinese application of tariffs on automotive parts.

Congress has been concerned with broad policies giving Chinese exporters unfair trade advantages. The Senate approved a bill, added as an amendment to other legislation, that would place a high tariff on Chinese imports unless China revalues its pegged exchange rate (S. 295). Further action has been postponed on this measure. Legislation to allow U.S. producers to bring countervailing duty cases against Chinese firms subsidized by their government has been approved in the House (H.R. 3283), and a new law has tightened rules against trade in counterfeited goods (P.L. 109-181). This report will not be updated.
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Introduction

The modernization of China’s economy may be the world’s most transforming development in the early twenty-first century. Within this process, the growth of China’s automotive industry may be the most important development in the automotive sector since Henry Ford developed the assembly line process for manufacturing cars and changed the product from a convenience item for wealthy consumers to a nearly essential component of everyday life in industrial economies.

There have been three key aspects so far to the evolution of the Chinese automotive industry:

- The spectacular growth in volume of the Chinese automotive industry in recent years. In 2005, China produced nearly five times as many motor vehicles as in the early 1990s. With annual production nearing six million vehicles, it is on pace to overtake Germany as the third largest national vehicle producer, and would trail only the United States and Japan in total vehicle output.

- Partnerships with major industrial country motor vehicle manufacturers. Chinese products are increasingly sophisticated because of this technological cooperation. An active government policy has economically liberalized the Chinese automotive industry in some key respects, but it requires foreign manufacturers to undertake joint ventures with Chinese partners in order to obtain market access. The stated goal of the Chinese government is to achieve a market dominated by a limited number of internationally competitive joint venture assemblers, supplied by local parts manufacturers, producing to world standards.

- The most significant impact on domestic U.S. industry may be in automotive parts. While U.S.-China trade in motor vehicles is very limited, and likely to remain so, U.S. exports and imports of automotive parts to and from China have grown rapidly since 2000, albeit from a very low base.

Congress and the Bush Administration have not taken any steps to impede the growth of China’s automotive sector or U.S.-China automotive trade. However, Congress and the Administration have expressed concerns about the conditions under which U.S. manufacturers must compete with Chinese firms in China and in global
markets, including the domestic U.S. market. The concerns have focused on such issues as:

- Chinese currency policy, which continues to maintain a virtually fixed exchange rate;
- Chinese implementation of its commitments as a member of the World Trade Organization, especially with respect to protection of non-Chinese firms’ intellectual property;
- The extent to which Chinese firms are subsidized or otherwise supported by government when they compete with foreign companies.

In 1988, after a visit to China and its fledgling automotive industry, then-Chrysler Corporation CEO Lee Iacocca is said to have reflected that China’s modernization process would be, “A long haul. A very long haul.”\(^1\) It is now clear that the process has picked up considerable speed.

**China Becomes a Major Motor Vehicle Producer**

Figure 1 illustrates the speed with which China has become a major automotive manufacturer. China first produced more than two million vehicles, of all types, in the year 2000. Since then, it surpassed South Korea (2002) and France (not shown on graph, in 2003). With 5.2 million units of total production, China drew close to the production level of Germany, Europe’s largest national producer and number three in the world, in 2004. China was on pace to overtake Germany in total vehicle production in 2005.

Moreover, among the leading vehicle producers, China is the only one showing substantial growth in its production level since 2000. The European Union (including only the 15 members before 2004) and North America each produce more than three times as many vehicles as China. But, between 2000 and 2004, total U.S. production dropped by a net 800,000 units and the two leading producers, General Motors (GM) and Ford, registered losses in production and domestic market share in 2005. Both Canada and Mexico also registered net declines, so that the total North American output declined by 1.3 million units, despite large increases in North American production by some internationally owned manufacturers. Similarly, production levels in Europe were virtually flat or even declined, not only in Germany, but also in the other four leading car-producing countries in western Europe (France, Spain, Britain and Italy, in descending order of production).

The countries of central and eastern Europe, including both new EU members and non-member countries, have been touted as the “new Detroit” of Europe. Low wage levels and easily trainable industrial work forces have attracted major assembly operations from virtually all major manufacturers. However, by comparison with China, the expansion of output in these countries is still largely prospective. Total

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vehicle output for central and eastern Europe, including Russia and Ukraine, increased only from 2.9 million units to 3.0 million between 2000 and 2004.

Japan, the second-largest producing country and the largest motor vehicle exporter, also has shown little or no overall growth in production, in part because of the “lost decade” of slow economic growth in the 1990s. Its total output has stagnated around 10 million vehicles per year. Strengthening exports, including to China and the United States, led to an increase to about 10.5 million units of production in 2004.

**Figure 1. Leading Motor Vehicle Producers**

![Graph showing annual production of leading motor vehicle producers from 2000 to 2004.]

* EU-15 only.

**Source:** *Automotive News. Market Data Book, 2002; and, Global Market Data Book, 2005.*

China’s increase in volume output has also placed it far ahead of other developing countries that are considered in the industry as actual or potential major automotive producers. Production in Thailand has actually increased at a faster rate than in China, from 300,000 units in 2000 to 900,000 in 2004, and probably more than one million in 2005. Brazil’s production was stable from 2000 through 2003, then increased by 400,000 units to 2.2 million in 2004. India, viewed by some sources as being comparable to China in terms of its potential as both an automotive market and a location of production, saw its annual assembly volume increase from 900,000 units in 2000-02 to 1.2 million in 2004. The combined net growth of these
three leading developing country producers in 2000-04 was thus about one-third of the total volume growth in China.²

**Figure 2. Chinese Motor Vehicle Production**

![Chinese Motor Vehicle Production Graph]

* Light trucks, heavy trucks and buses reported together in source, 1994-2001.

**Source:** *Ward’s Automotive Yearbook*, 1995-2005.

Equally significant is the product composition of Chinese motor vehicle output, which appears to be evolving toward meeting growing domestic consumer demand for personal vehicles, notably passenger cars. This is closer to the pattern of production in a mature industrial producer than in a developing economy, such as

² For a more detailed comparative analysis of growth and change among major motor vehicle-producing countries, see CRS Report RL32883, *U.S. Automotive Industry: Recent History and Issues*, by Stephen Cooney and Brent D. Yacobucci.
Thailand, which is the world’s second-largest producer of pickup trucks, trailing only the United States, despite assembling only about one million vehicles per year.\(^3\)

In the mid-1990s, out of total output of 1.2 million vehicles, China produced 300,000 passenger cars, with the remaining output accounted for by more utilitarian products, namely trucks and buses (Figure 2). The data in the source for the figure do not distinguish among different types of vehicles in the latter category, as trucks and buses are grouped together through 2001. The United States in the 1990s also produced more trucks than passenger cars, but in the U.S. case “trucks” overwhelmingly consisted of minivans, SUVs and pickup trucks that were generally considered products for personal consumer use. In China the “truck” category in the 1990s was much more oriented toward heavy duty and mass transit equipment. Ward’s Automotive Yearbook, for example, notes that in 1998, “[China] produced 1.6 million vehicles, state figures show, including 610,000 heavy-duty trucks ...”\(^4\) That would be nearly 40% of all vehicles, compared to less than 10% of U.S. output. Similarly, the data for 2002-2004, for which Ward’s breaks out truck and bus entries separately, indicate that annual production of each type of vehicle was more than one million units annually. As late as 2004, combined truck and bus production in China was still slightly higher than output of passenger cars.\(^5\)

The pattern had begun to shift decisively after 2000. Prior to that year, China’s leading automakers were joint ventures with foreign partners, with product mix and output subject to bureaucratic intervention and negotiations — a process well-documented in the book Beijing Jeep, cited above. But this began to change, as noted in Ward’s annual review:

> Although the products were often ill-suited to market conditions, multinational automakers agreed to build them in order to get a foothold in the potentially high-volume Chinese market ... In 2000, China granted the wishes of many global automakers, allowing them to build small, affordable vehicles — known as “people’s cars” — for the domestic market.

The liberalization of product regulations undoubtedly positioned China for long-term growth in the private car ownership market. The country’s pending entry into the World Trade Organization (WTO) was expected to open the market even

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\(^3\) Even though Thailand has a much higher per capita national income than China, its automotive economy is evolving more as an export platform for light utility vehicles, assembled by nameplate manufacturers and distributed throughout Southeast Asia; see Reuters, “Car Jobs in High Demand in Thailand as Output Grows,” in Detroit News Autos Insider (Dec. 23, 2005). This article notes the preference of international manufacturers for Thailand over China as a regional export base, in part because of the lack of bureaucratic interference with development of the industry.

\(^4\) Ward’s Automotive Yearbook 1999, p. 72.

\(^5\) However, in Chinese data the “truck” category includes light trucks, while the “bus” category appears to include at least some types of minivans. Thus, the key variable would appear to be the rise of the share of production devoted to passenger cars, which indicates rising demand among middle-class consumers.
further for private consumers and ensure a big payoff for companies waiting to tap China’s boundless potential.6

Passenger car output, increased slowly from a quarter of motor vehicle production in 1994 to about 30% in 2000-01. After that, it was the expansion of passenger car output that drove rapid motor vehicle production growth. As overall output increased from an annual range of 600,000-700,000 vehicles to upwards of five million annually by 2004, nearly 50% of total production was passenger cars by that year (Figure 2). Moreover, exports have played a very small role so far in China, unlike the pattern that developed in the other major Asian producers, notably Japan and Korea. China only become a net exporter for the first time in 2005. But exports were still less than 200,000 units, perhaps 2-3% of total production. The vehicles were mostly destined for Russia, Ukraine and markets in the Middle East.7

Foreign Investors in Chinese Motor Vehicle Industry

General Motors Now the Market Leader

American automotive manufacturers were among the earliest international companies who sought to take advantage of the opening of the Chinese market to foreign investors in the 1980s. After tedious and difficult negotiations, American Motors Corporation (AMC) in 1983 signed a joint venture agreement with China’s Beijing automotive factory, the first such major manufacturing deal reached by a western industrial company in China. Despite this early initiative, American companies lost out in the early period of growth in the Chinese automotive market, first to Japanese imports, and then to European investors, particularly Volkswagen (VW). The Tiananmen Square incident of June 1989 had a chilling effect on investment by U.S. companies and their development of the Chinese market.8

Despite the early lead gained by AMC, and the successful follow-up by Chrysler Corporation in managing the Beijing Jeep factory after it acquired the U.S. parent company, General Motors (GM) is the U.S. automotive manufacturer that has made the biggest investment and achieved the most success in the Chinese auto market. GM states that it had 13,000 employees in China by the end of 2005. They participate in a 50-50 joint venture with the Shanghai Automotive Industry Corporation Group (SAIC) to manufacture passenger vehicles, and as a minority shareholder in joint ventures with SAIC and the Wuling Automobile Company in joint ventures to manufacture minivans, “mini-trucks,” and the Chevrolet Spark minicar, a product based on designs from GM’s Korean subsidiary, Daewoo. While GM generally uses the Chevrolet and Buick nameplates in China, many of the vehicles are based on products of Daewoo or GM’s European subsidiary, Opel. Vehicles are re-engineered for China at the PanAsia Technical Automotive Center, another GM

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6 Ward’s Automotive Yearbook 2001, p. 72.
8 Mann, Beijing Jeep, esp. chs. 2,4,11,24 and epilogue.
joint venture with SAIC. “Though the Chinese government allowed joint ventures in the 1980s, the joint venture between General Motors and SAIC in the mid-1990s is considered the beginning of the major opening of the Chinese market to foreign manufacturers.”

Table 1. Motor Vehicle Sales in China (Selected Manufacturers)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>2005</th>
<th>2004</th>
<th>2003</th>
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<tbody>
<tr>
<td></td>
<td>000s</td>
<td>000s</td>
<td>000s</td>
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<tr>
<td>GM-Shanghai</td>
<td>252</td>
<td>201</td>
<td></td>
</tr>
<tr>
<td>GM-SAIC/Wuling-Trucks</td>
<td>44</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>GM-SAIC/Wuling-Buses</td>
<td>181</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>GM-TOTAL</td>
<td>665</td>
<td>477</td>
<td>381</td>
</tr>
<tr>
<td>VW-First Auto Works</td>
<td>277</td>
<td>300</td>
<td>298</td>
</tr>
<tr>
<td>VW-Shanghai</td>
<td>287</td>
<td>355</td>
<td>396</td>
</tr>
<tr>
<td>VW-TOTAL</td>
<td>564</td>
<td>655</td>
<td>694</td>
</tr>
<tr>
<td>HONDA-GUANGZHOU</td>
<td>256</td>
<td>202</td>
<td>117</td>
</tr>
<tr>
<td>HYUNDAI-BEIJING</td>
<td>234</td>
<td>144</td>
<td>52</td>
</tr>
<tr>
<td>CHERY</td>
<td>190</td>
<td>87</td>
<td>90</td>
</tr>
<tr>
<td>TOYOTA-FAW</td>
<td>82</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>TOYOTA-TOTAL*</td>
<td>179</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>FORD*</td>
<td>200</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>FAW-XIALI</td>
<td>180</td>
<td>131</td>
<td>167</td>
</tr>
<tr>
<td>NISSAN*</td>
<td>166</td>
<td>89</td>
<td>103</td>
</tr>
<tr>
<td>GEELY*</td>
<td>140</td>
<td>97</td>
<td>80</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5,920</td>
<td>5,071</td>
<td>4,391</td>
</tr>
</tbody>
</table>


Sources, except as noted above: Ward’s Automotive Yearbook, 2005; all 2005 data from press sources noted in text. Totals include sales of other manufacturers not listed.

According to press reports, GM overtook VW as the leading foreign-owned motor vehicle manufacturer in China, in terms of market share of vehicle sales (Table 1). The table combines data from Ward’s, a standard industry source, with press reports of sales totals for 2005. The Chinese automotive market has been
extremely atomized, with at least fifty different manufacturers shown in early lists of producers.\footnote{11} 

GM’s alliances with SAIC and Wuling gives it a broad position across the market, including SUVs and minivans. VW, which sold more than half the passenger cars in China in the late 1990s, has recently struggled as competition increased in that segment.\footnote{12} “... [I]n China, now the second-largest market behind the United States, GM became the leading brand,” stated CEO G. Richard Wagoner, in announcing the company’s annual results for 2005. GM’s success in China and the Asia-Pacific region included a $524 million net profit in 2005, although that was lower than the $729 million profit for the region in 2004, in part because of “higher costs associated with GM’s growth initiatives in China.” The net earnings in Asia contrasted with GM’s $5.6 billion loss in North American operations in 2005.\footnote{13} This positive performance is making some in the company hopeful that earnings in Asia can help offset and pay for a period of difficult restructuring at home.\footnote{14}

Among other companies, Hyundai has been moving up the vehicles sales list fast, in part because changes in Chinese government policies led consumers to buy smaller vehicles after 2004.\footnote{15} After a late entry into the market, Hyundai in the first quarter of 2005 actually took the lead for a period as the number-one seller.\footnote{16} The table also illustrates rapid gains in total sales by Honda, and a growing position after a late start for Toyota.\footnote{17} Among the U.S. Big Three producers, Ford has gotten off to the latest start in China, but its sales also increased dramatically in 2005. Ford-brand sales were up 41% to 82,000 units for the year, while total annual sales of affiliated brands, including Ford Transit vans produced for the Chinese commercial market by its joint venture partner Jiangling, nearly doubled from 120,000 to

\footnotetext[11]{Listings in the 2001 edition of Ward’s Automotive Yearbook, for example, show production by 68 different plants and sales by 71 different manufacturers, without further classification or identification. In only a few cases does that source indicate foreign company affiliation. More recently, Ward’s has focused on the more significant manufacturers, and classified their sales by passenger cars, trucks, and buses (the latter may include minivans). Production data are also available, but as currently almost all production in China is for the domestic market, sales and production are closely linked.}

\footnotetext[12]{Detroit News Autos Insider, “GM Becomes Top-Selling Foreign Automaker in China” (Jan. 5, 2006), which also provides most of the individual company figures for 2005 in Table 1. Total sales figures for 2004-2005 from People’s Daily Online, “China Stands as World’s 2nd Largest Auto Market” (Jan. 31, 2006).}


\footnotetext[14]{Detroit Free Press, “GM Top Foreign Brand in China: Workers Hope It’s Start for Success Back Home” (Jan. 6, 2006).}

\footnotetext[15]{Financial Times, “Brake Goes on Chinese Car Sales Growth” (Jan. 13, 2005).}


\footnotetext[17]{On Toyota’s strategic business problems in China, see Automotive News, “Toyota Stumbles in Race for China” (Aug. 22, 2005), p. 1.}
Meanwhile, the U.S. Chrysler Group and Beijing Automotive in 2002 had renewed their joint venture agreement to manufacture Jeep products and other utility vehicles through 2033. However, total DaimlerChrysler sales in China remain small, and most of the output from the famous Beijing Jeep factory are vehicles designed by the company’s former global partner, Mitsubishi.

### Independent Production vs. Foreign Cooperation

Overall, “the story of the year” for 2005, according to one Chinese-based industry source, was, “the quiet but determined march of the Chinese brands in their home market.” GM might have been the leading motor vehicle seller in China, and Hyundai the fastest-growing single brand. But in the fastest growing market segment, passenger cars, Japanese brands as a group led with 27.4% of the market, closely followed by Chinese domestic brands, which claimed a 26% share. The leading single Chinese brand domestically was the Charade, produced by the First Auto Works Xiali plant, with 180,000 in sales. This is based on a micro-car model originally licensed from Daihatsu, a Japanese small car specialist now owned by Toyota. The number-two local brand was the Chery QQ, a minicar design that GM claimed was copied from a Daewoo model, and whose sales more than doubled to 116,000 units in 2005.

It is also significant that the two companies with stated ambitions to export vehicles to the United States, Chery and Geely, are independently owned, without direct ownership or joint venture ties to the major international producers, though they are in many cases actively supported by local governments in China. This is in contrast to the larger operating companies such as Shanghai Automotive, Beijing Automotive, First Auto Works, Dongfeng and Jiangling, all of whose automotive operations are subsidiaries of central government-owned and -controlled companies. The current efforts to promote the export of Chinese-made motor vehicles to the United States will be reviewed in more detail in the next section of the report.

The joint IBM-University of Michigan study of the Chinese auto industry, which focused on the perspective of Chinese participants themselves, indicates a key dilemma in China becoming a major independent force in international automotive markets. The Chinese government itself does not foresee that its own industry can independently create a globally competitive automotive manufacturing base. Its latest plan for the development of the automotive sector foresees about six large and

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20 Financial Times, (Feb. 11-12, 2006), p. 9. The quote is from Michael Dunne of Auto Resources Asia, an industry consultancy based in Shanghai.

21 Inside China, Fig. 7.
comprehensive automotive joint ventures, each no more than 50% controlled, as a matter of policy, by a major foreign nameplate automotive manufacturer, which will become the leaders in bringing automotive technologies to China. These companies will work with local suppliers to produce parts, components and equipment that meet international automotive standards, according to this plan.\footnote{Ibid., p. 10; People’s Republic of China. State Development and Reform Commission. Order no. 8, \textit{Automotive Industry Development Policy} (May 21, 2004). See Art. 48 for the limitation on foreign ownership in large automotive groups.}

But some Chinese in the industry have a number of doubts about the effectiveness of the joint venture approach in assisting development of the national automotive industry. From the foreign joint venture partners’ perspective, China’s intellectual property rights (IPR) regime provides insufficient protection for foreign partners’ IPRs, as will be discussed in the section on trade below. From the Chinese perspective, however, operating through joint ventures has been least satisfactory in terms of the perceived benefits for local research and development activities. Moreover, they assert, cooperation through joint ventures inherently restrains the Chinese partner from independently developing its own export market outreach. In this view, support and planning for global vehicle sales must be coordinated within the sales and service network of the international partner.

The \textit{Inside China} report reveals a widespread belief that the approach undertaken in the government’s 2004 Auto Policy, leading to a consolidation of major producers, all operating within foreign joint venture arrangements, probably will not work if the goal is a competitive, independent Chinese industry. In this view, the evolution of the industry’s development under this framework may be too slow. On the other side, the report says, foreign-based companies will be reluctant to withdraw from the market, if they are not among the leading companies, because of China’s vast market potential (for example, see above the efforts being made by Ford and Toyota in China, after their respective late starts). The report concludes that both government restrictions on foreign ownership of vehicle manufacturing companies and the government’s significance as a direct participant in the industry may fade away.

It may be noteworthy, as an example, that government planning and support in Japan and Korea did not lead to the industrial outcomes envisioned by bureaucrats. Two major Japanese companies fell under effective foreign control (Nissan and Mazda), while another developed outside the system (Honda). Korea today is left with just one locally owned and controlled motor vehicle producer (Hyundai, which also controls Kia).

Two Chinese-owned firms, one of them SAIC, which maintains partnerships with GM and VW, are seeking to obtain advanced automotive technology and manufacturing capacity directly through the acquisition of the failed British company, MG Rover. The latter is the remains of BMW’s efforts to become a volume producer by acquiring the last major independent British producer. When that effort was not profitable, BMW kept the Rolls-Royce and Mini brands and production facilities, but sold the major production plant in Longbridge, England (near Birmingham) to a
private British group, which reorganized the business as MG Rover. MG Rover soon failed. SAIC had entered a technical cooperation agreement with MG Rover, and now plans to produce vehicles in China based on MG Rover plans and technology. The other Chinese company, Nanjing, has acquired the Longbridge plant, and may produce vehicles in Britain.\(^{23}\) At least one U.S. source has commented that the episode could serve as a model for how Chinese and other foreign manufacturers could establish or expand footholds in the United States through acquisition of parts of GM and Ford (as Daimler has already acquired the entire Chrysler Group, the smallest of the U.S. Big Three).\(^{24}\)

A diversity of other strategies may be adopted by Chinese automotive suppliers, including direct relationships with foreign automotive suppliers. With no government restrictions on joint venture ownership rules, such as those that affect nameplate vehicle assembly operations, some international suppliers have established manufacturing operations in China. Another option is outright purchase of technology from international suppliers. One uniquely aggressive approach was the effort in early 2006 by a Chinese independent motorcycle manufacturer, based in Chongqing and supported by the local Communist Party, to purchase outright a BMW-Chrysler joint venture engine plant in Brazil. The idea is to disassemble the plant and move it physically to China, thus giving the country its first independently owned automobile engine plant, with up-to-date manufacturing technology.\(^{25}\)

With U.S. auto parts suppliers suffering financial distress with declines in Ford and GM production, Chinese parts manufacturers could gain direct access to the U.S. automotive supplier market as well as to improved technology through “reverse investment” in U.S. firms. One Chinese parts manufacturer, Wanxiang of Hangzhou, has reportedly indicated an interest in buying some of Delphi Corporation’s U.S. operations out of bankruptcy. Wanxiang has also reportedly been contacted by Ford as a possible buyer for economically troubled Visteon’s U.S. plants that were taken back by Ford in 2005.\(^{26}\) A former Assistant U.S. Trade Representative is reportedly specializing in trying to develop such investment links between Chinese and small, U.S. family-owned auto parts suppliers.\(^{27}\)

But even such strategies rely on tapping into expertise already developed in the industrial countries. As one Chinese interviewee from a supplier company is quoted in the IBM-Michigan report:

> Years of accumulated knowledge is available in large international corporations. Giant gaps exist not only in the technology but also in system and product

\(^{23}\) *Financial Times*, “Nanjing Auto Signs Lease on Longbridge Plant” (Feb. 21, 2006); and, “Shanghai Automotive to Make Rover-Based Cars in China” (Feb. 24, 2006).


knowledge, which are reflected in our sales. We are not on the same level of scale as our partners.

While acknowledging the advantages accruing to China, not only because of its large potential market, but also because of its low-cost labor, the report notes that “Chinese companies foresee ten years or more to reach world-class levels.”

Impact of China on the U.S. Automotive Market

Chinese-Made Vehicles Not Imminent Factor

The number of vehicles produced in China annually more or less equals the number of vehicles sold there, with both exports and imports at minimal levels. China became a net motor vehicle exporter in 2005 — a notable milestone — as exports more than doubled to 172,800 units, and imports increased modestly to 161,000. Total production and sales each totaled nearly 6 million units. One analysis calculates that 59% of exports were pickups and other light trucks, mainly destined for markets in the Middle East, Southeast Asia and Africa; 16% were passenger cars. Imports were mainly medium-size and larger luxury vehicles, which are coming under increasing pressure from higher-end domestic production.

Another auto industry source stated that, “It will likely be five to 10 years before China is exporting cars in significant quantities.” Furthermore, “China’s biggest state-run auto makers don’t have big export plans,” according to this speaker, “since they are in joint ventures with big multinationals such as GM.” Consequently, the most active Chinese companies with export plans aimed at North America are the producers without major joint-venture tie-ups with the large international automobile companies.

American entrepreneur Malcolm Bricklin in 2005 undertook widely publicized efforts to create a 200-dealer network (“Visionary Vehicles”) aimed at selling 250,000 Chery-made vehicles in the U.S. market by 2007. The up-front contributions by franchise awardees were supposed to fund the $200 million necessary to engineer a competitive vehicle able to meet U.S. safety and fuel-economy standards. By early 2006, Bricklin had signed up one confirmed prospective dealer, according to Automotive News, a trade newspaper, which labeled the initiative as one of the “Ten Big Blunders” of 2005. However, subsequent

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28 These conclusions are drawn from data presented in Inside China, pp. 10-18. Research and development cooperation ranked as the least successful of 11 subject areas of collaboration in joint ventures, as rated by Chinese respondents (see Fig. 10 in the report).

29 Financial Times (Feb. 11-12, 2006), p. 9.


32 Automotive News, “Lack of Cash Stalls Chery’s U.S. Plan” (Oct. 31, 2005), p. 3; and, “10 (continued...)
reports are that Bricklin has secured $225 million in funding for research and development work at Chery from an investment banking firm located in Greenwich, Connecticut. He hopes to compete directly against the major Japanese producers in the U.S. market.  

A different and lower-key approach has been taken by Geely Automotive, a motor manufacturing operation started by independent Chinese entrepreneur Li Shufu. His company brought over one of its sedans for display at a press-only news conference prior to the January 2006 North American International Auto Show in Detroit. Geely hopes to re-engineer a vehicle to meet U.S. technical requirements by 2008. It would then seek to sell between 2,000 and 5,000 units in the U.S. market for a price under $10,000 in that year — starting with a focus in Puerto Rico, not the mainland United States. While these beginnings seem quite modest, the Wall Street Journal quoted Li Shufu as saying that, “By 2015 ... the company is aiming to make two million cars a year, with two-thirds of them sold outside China.”

This is not to say that the major auto producers have no current participation or interest in car exports from China. The leading foreign manufacturer using China as an export platform is Honda. One of its operations is a joint venture producing sedans in which it is allowed an exceptional 65% ownership position, because the output is solely for export. In 2005, this operation accounted for 25% of China’s passenger car exports, including 9,700 Honda Jazz subcompacts going to Europe. GM’s SAIC-Wuling joint venture in 2005 exported 2,000 small commercial vans, and will nearly double that total in 2006. These vans do not meet U.S. or European emission standards, however, and are to be exported elsewhere.

China has played little role in the growth of the overall U.S. automotive trade deficit, which in 2005, topped $100 billion. The United States actually had a surplus with China in motor vehicles, although total trade in both directions was modest: $261 million in U.S. exports, versus $125 million in imports (Table 2). Moreover, 96% of U.S. imports from China were vehicles with engine capacities less than 1,000 cc. In the other direction, the U.S. Government Accountability Office, in a survey of U.S. exports to China, reported that motor vehicles and parts comprised one of the...
groups for which China was an insignificant export destination, at less than 1% of total exports of such products.38

Table 2. U.S.-China Automotive Trade

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Bodies &amp; pts.</td>
<td>43</td>
<td>41</td>
<td>57</td>
<td>59</td>
<td>62</td>
<td>74</td>
</tr>
<tr>
<td>(US exps.)</td>
<td>207</td>
<td>237</td>
<td>272</td>
<td>365</td>
<td>456</td>
<td>612</td>
</tr>
<tr>
<td>(US imps.)</td>
<td>27</td>
<td>32</td>
<td>47</td>
<td>72</td>
<td>114</td>
<td>100</td>
</tr>
<tr>
<td>Chassis/Drivetrain pts.</td>
<td>356</td>
<td>439</td>
<td>602</td>
<td>778</td>
<td>1,089</td>
<td>1,609</td>
</tr>
<tr>
<td>(US imps.)</td>
<td>650</td>
<td>598</td>
<td>688</td>
<td>770</td>
<td>1,044</td>
<td>1,302</td>
</tr>
<tr>
<td>Electrical/Electronic pts.</td>
<td>38</td>
<td>37</td>
<td>63</td>
<td>56</td>
<td>61</td>
<td>84</td>
</tr>
<tr>
<td>(US imps.)</td>
<td>650</td>
<td>598</td>
<td>688</td>
<td>770</td>
<td>1,044</td>
<td>1,302</td>
</tr>
<tr>
<td>Engines &amp; pts.</td>
<td>15</td>
<td>19</td>
<td>26</td>
<td>39</td>
<td>75</td>
<td>73</td>
</tr>
<tr>
<td>(US imps.)</td>
<td>54</td>
<td>66</td>
<td>78</td>
<td>97</td>
<td>134</td>
<td>197</td>
</tr>
<tr>
<td>Misc. Auto Parts</td>
<td>85</td>
<td>116</td>
<td>136</td>
<td>257</td>
<td>292</td>
<td>257</td>
</tr>
<tr>
<td>(US imps.)</td>
<td>150</td>
<td>200</td>
<td>260</td>
<td>315</td>
<td>514</td>
<td>630</td>
</tr>
<tr>
<td>Auto Parts - Total</td>
<td>210</td>
<td>246</td>
<td>330</td>
<td>483</td>
<td>608</td>
<td>593</td>
</tr>
<tr>
<td>(US imps.)</td>
<td>1,617</td>
<td>1,750</td>
<td>2,196</td>
<td>2,704</td>
<td>3,798</td>
<td>5,309</td>
</tr>
<tr>
<td>Motor Vehicles - Total</td>
<td>20</td>
<td>24</td>
<td>36</td>
<td>77</td>
<td>99</td>
<td>261</td>
</tr>
<tr>
<td>(US imps.)</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>19</td>
<td>60</td>
<td>125</td>
</tr>
</tbody>
</table>

Note: Domestic exports, U.S. imports for consumption. Totals include categories not shown.


Major Chinese Impact in Automotive Parts

China is playing a more significant role in parts, for which U.S. imports from China had increased from $1.6 billion in 2000 to $5.3 billion in 2005 (compared to $593 million in U.S. exports to China in the latter year, as shown in Table 2). The resulting deficit of about $5 billion is still a small part of the overall U.S. deficit of $37 billion in auto parts ($55 billion in exports, mainly to Canada and Mexico, and $92 billion in imports). The NAFTA countries supplied $46.5 billion in auto parts to the United States in 2005. Most of the rest came from Japan ($16.4 billion) and Europe ($10.5 billion), reflecting the roles of Japan and Germany as leading exporters of cars to the United States. Surprisingly, though, China does export twice as much in parts to the United States as Korea, even though that country is also a major exporter of cars and light trucks to the U.S. market ($8.8 billion in 2005).

Nearly all of the auto parts imports from China are in the major product groups shown in Table 2:

- The largest category is *chassis and drivetrain parts* ($1.6 billion in 2005). Out of this total, about one-third (more than $500 million) was aluminum wheels. Another $400 million consisted of brakes and brake parts.

- *Electronic and electrical parts* accounted for the second-largest category ($1.3 billion). More than 40% of this type of imports consisted of car radios/CD/DVD players ($561 million). The second-largest product group ($227 million) was ignition and other wiring sets, though this definition also includes such items for aircraft and ships. Visteon Corporation, the former automotive parts unit of Ford, has announced that it is moving the headquarters for its global electronics group to China, while GM is moving its worldwide electronics purchasing group there.\(^{39}\)

- A varied group of *miscellaneous auto parts* accounted for $630 million in 2005 imports. The leading identifiable products within this category were trailer parts and automotive radiators, each in the $80-90 million range.

- *Auto bodies and parts* also accounted for more than $600 million in imports. This title is perhaps somewhat misleading, as the leading imported product in the category was car seats for children ($171 million). Various vehicle seat parts and safety belts accounted for about another $100 million in this category.

- *Engines and parts* accounted for the smallest of the major categories, with imports of less than $200 million. This mostly consisted of assorted small quantities of parts. However, the small total is misleading. The 3.4 liter V-6 engine for the Chevrolet Equinox, a crossover utility vehicle sold in the United States, is manufactured in China. This product does not show up as a U.S. auto parts import, probably because the Equinox is assembled at the GM-Suzuki joint venture plant in Ontario. The finished vehicle may appear in U.S. trade data as an import from Canada.\(^{40}\) Canadian trade statistics indicate that Canada imported US$314 million in engines from China in 2005.\(^{41}\)

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\(^{39}\) Though GM also emphasized that, “Much of the electronics that GM buys in China are destined for its Asian assembly lines ...” *Automotive News*, “GM Picks China for Electronics;” and, ““Visteon Moves Electronics to China” (Feb. 27, 2006).

\(^{40}\) Thomas H. Klier and James M. Rubenstein, “Competition and Trade in the U.S. Auto Parts Sector,” *Chicago Fed Letter* (no. 222, Jan. 2006). All other detailed import data is from USITC *Trade Dataweb*.

While China is growing rapidly as an exporter of auto parts to the U.S. market in many categories, sheer distance may limit China’s role as a supplier for original equipment manufacturers. “Just-in-time” inventory control and supply techniques are a key component of “lean production” now widely used in North American vehicle production. In current practice, major vehicle parts, components and systems must be produced no more than several hours’ transport distance from final vehicle assembly — and delivered not only “just in time,” but also “just in sequence” for different styles and models built to order off the same vehicle platform. “Just-in-time” manufacturing differentiates essentially between discrete, standardized parts that may be used in many different vehicles and large, bulky parts and systems or modules that may only be installed in specific models, such as front ends or “cockpit” units. Smaller, standard parts may be produced globally and sourced from anywhere, based on low labor and other production costs. Major system modules may be built up in part by integrating standard parts and components.

Thomas Klier and James Rubenstein, analysts writing for the Federal Reserve Bank of Chicago, report:

In ... what was imported from China, we find that the rapid increase was overwhelmingly in aftermarket parts (sold to retailers not manufacturers) rather than original equipment. For example, 29% of all imports from China during the first half of 2005 were wheels and tires. China passed Canada as the leading source of wheels in 2002 and has expanded its share of the market since then. Producers of aftermarket parts face more pressure to minimize price than to maximize quality.

The manufacture of “aftermarket” parts is the smaller share of the U.S. auto parts industry, about 30% of the total. The Commerce Department has cited a private sector report predicting that the fastest-growing product group in the aftermarket will be electrical and electronic products, particularly sound systems. Trade data cited above indicated this is one of the major strengths of Chinese automotive exports to the U.S. market.

But beyond the aftermarket, as international automakers increase their manufacturing investment and sourcing in China, they will be seeking ways to

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42 This production model and its implications for parts suppliers are discussed in CRS Report RL32883. See Graeme Maxton and John P. Wormald, Time for a Model Change (Cambridge, UK: Cambridge Univ. Press, 2004). Thomas H. Klier, “Agglomeration in the U.S. Auto Supplier Industry,” Chicago Federal Reserve Bank Economic Perspectives, XXIII:4 (1st qtr., 1999), pp. 18-34, stresses the day’s drive limitation as the major constraint for supplier operations.

43 Klier and Rubenstein, “Competition and Trade in Auto Parts.”

integrate parts supply capacity, from their own operations or from third parties, into their global business. Already, as noted above, the V-6 engines for the Chevrolet Equinox was produced in China. More than 130,000 of these vehicles were sold in the United States in 2005. Klier and Rubenstein note that many U.S. OE supplier companies have located operations in China, and it is to be expected that they will export more to nameplate manufacturers from their capacity there. And in a controversial move, GM announced that it “expects to increase its original equipment parts purchases from China ... from $200 million in 2003 to $4 billion in 2009 ... while spending around $5 billion on sourcing for its China production.” More recent comments from a GM spokesman raised the 2009 target for sourcing from China to $10 billion by the latter date.

If the analysis of this section is correct, the news is not necessarily comforting for U.S. automotive workers. While the press and public opinion focuses on the nameplate manufacturers, about three times as many people in the United States work for auto parts suppliers — about three-quarters of the million-plus workers in the total industry. These are the jobs that could be directly impacted by Chinese parts imports, even if imports of motor vehicles from China remain at essentially zero. The farther down the “tiers” of automotive supply that a worker’s job is, the more likely that worker is going to compete with product from China, particularly in factories that produce standard parts for assembly plants, or for “Tier 1” suppliers that integrate standard parts and components into customized modules for final assembly.

**Competitive Labor Costs**

Many outside China express interest or concern with China’s labor costs, which are assumed to be China’s key competitive advantage in manufacturing. Unquestionably, the U.S. dollar rate of Chinese wages and salaries is extremely low. Even a Chinese currency rate appreciation of 25-40% against the U.S. dollar, as sought by some U.S. industries and Members of Congress, would do little to equalize them with equivalent U.S. wages and salaries.

For example, Canadian-based Magna International, the world’s third-largest auto parts manufacturer, operates 18 plants in China and has a wide range of experience with salary levels at a variety of types of plants and locations. It has reported the following data on Chinese wage and salary levels:

- Annual salary levels for general production workers range from less than $1,000 to a high of $3,000.
- For technical staff, the range is from about $1,200 to $5,000.

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46 *Automotive News,* “As Labor Costs Rise, the ‘China Price’ Isn’t Quite as Nice” (Nov. 21, 2005).

47 See CRS Report RL32883.
• Office employees’ salaries generally range from $1,200 to $4,000 per year, with Shanghai and Nanjing employees receiving $6,000.
• Executive-level salaries for local employees are similarly low, with the top annual pay for general managers at $30,000, most closer to $10,000, and some as low as $3,000-4,000. Among department managers, in only one location (Suzhou) is the annual salary level higher than $9,000.

However, it should also be noted that labor costs are increased substantially by a high level of benefits, which generally range from 30% to more than 50% of salary for the company. This money must be paid to the government on behalf of employees. The leading items are pension benefits, medical coverage, and a housing fund allowance. Other companies in China also report similarly high benefit costs, while wage levels have increased at near-double-digit levels in the most developed parts of the country.48

U.S. Policy Issues in Economic Relations with China

In view of the increase in total U.S. imports from China and a bilateral U.S. trade deficit that increased to more than $200 billion in 2005, representatives of the Bush Administration, as well as many Members of Congress, are seeking what they consider a more level playing field in U.S.-China trade relations. From the perspective of Congress, the initiatives which have received the most support to date are those which seek to address factors that underlie the basis of trade, such as exchange rates and alleged government subsidies to industrial producers. From the perspective of the Administration, the main effort, besides a focus on exchange rate issues, has been on ensuring that China lives up to the spirit, as well as the letter, of trade policy commitments that it has made, including in the auto sector.49

Administration Focus on Chinese Auto Sector Commitments

The United States and other members of the World Trade Organization (WTO) had been highly critical of China’s 1994 Industrial Policy for the Automotive Sector. This policy was replaced by a new one announced in May 2004. The U.S. view is that it is important that China fairly treat imports of end products, as well as parts, that can be exported competitively to its market. To support this view, the U.S. government filed its second WTO case ever against China on March 30, 2006, over the issue of import tariffs on auto parts.


49 See CRS Issue Brief IB91121, China-U.S. Trade Issues, by Wayne M. Morrison, for a full summary of issues and pending legislation.
The new Chinese auto policy of 2004 abolished many formal restrictions and domestic content rules. However, the U.S. Trade Representative (USTR) is concerned about the vague and unclear nature of many statements in the 2004 policy (such as how China plans to regulate imports in keeping with its new registration system for auto manufacturers, and whether China will effectively allow imports of complete knockdown kits). Moreover, as cited above, the new policy still requires foreign-owned manufacturers in China to operate through joint ventures, in which their ownership is limited to no more than 50%.

The United States and other countries believe that the Chinese government may be seeking to establish de facto policies that would restore or maintain local content rules that it had to give up as part of its WTO Accession Agreement. With respect to formal tariff rules, China agreed to reduce its duties on imported cars and parts from much higher levels to a unified rate of 25% on imported vehicles and 10% on parts by July 1, 2006. According to the Commerce Department, it has kept to the staged reduction agreement that it negotiated in 1999; tariffs on cars and light trucks were down to 28% as of January 1, 2006 from starting levels of 51% or 61%, depending on engine capacity for vehicles. However, China has subsequently established a regulation, “Measures on Importation of Parts for Entire Automobiles,” which may effectively re-establish discrimination in favor of local content. Motor vehicle manufacturers are required to register their parts. If more than 60% of the value of a vehicle is accounted for by imported parts, the manufacturer must pay duties of 25% on all imported parts in the vehicle. The United States, the European Union and Japan expressed concern with this policy at the October 2005 WTO review of China’s implementation of transitional measures. On March 30, 2006, the United States and the EU requested consultations with China on this issue, the first step in a WTO trade case.

Another issue that has been of persistent concern has been protection of intellectual property rights in China. In April 2005, after a special review of Chinese efforts to comply with its commitments under WTO IPR rules, the Office of the U.S. Trade Representative placed China on its “Priority Watch” list for insufficient IPR enforcement. The United States has not been alone in these complaints. Later in 2005, the U.S. government, in addition to those of Japan and Switzerland, formally sought consultations with China on its IPR enforcement activities. IPR was the first

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subject listed under “implementation and compliance” issues in USTR’s February 2006 “Top-to-Bottom” review of U.S.-China trade relations.\textsuperscript{53}

IPR issues have created problems for U.S. and other foreign automotive manufacturers operating in China. The most notable case was the GM case against Chery, alleging that the local manufacture’s QQ model was a copy of the Chevrolet Spark, a minicar designed by GM’s Korean subsidiary Daewoo. After a Chinese court in September 2005 found that the design of the Spark was never patented in China, GM and Chery reached a separate settlement of all issues. Terms of the agreement are private, but reportedly Chery has agreed not to use its company name when marketing cars in the United States, because of its similarity to the well known Chevy trade name.\textsuperscript{54}

The general attitude of China’s manufacturers is expressed by Geely founder Li Shufu, who “studied” foreign-made vehicles by disassembling them in order to learn about fit, finish and assembly procedures. The \textit{Inside China} report, quoting from a press source, states, “Li, by his own admission, was not concerned with intellectual property rights in his initial efforts to start his company.”\textsuperscript{55} While the USTR is seeking to address IPR issues directly with the Chinese government, the next section includes a discussion of action taken by Congress to tighten the law against U.S. imports of counterfeit auto parts and other manufactured goods.

\textbf{Congressional Concerns with Competition from China}

While the Bush Administration has focused on market access in China, the emphasis in Congress has been on defending U.S. producers against what is perceived to be unfair competition from China. These efforts, which have increased in the 109\textsuperscript{th} Congress, have not been specific to the automotive industry, but have instead focused on the broader aspects of economic competition. The issues that have generated the most attention and that have led to bills that have made progress in Congress are the exchange rate question and U.S. trade remedies against Chinese government subsidies.

China’s government has maintained a fixed exchange rate against the dollar, leading many U.S. manufacturers to claim that in two-way trade this is unfair, because China’s currency value does not reflect the country’s growing industrial competitiveness. S. 295, co-sponsored by Senators Charles Schumer and Lindsey Graham, would add a 27.5% tariff to all imports from China unless the President could certify within six months that China is no longer manipulating its exchange rate. It was included as an amendment to the Foreign Affairs Authorization Bill (S. 600, Title XXIX) on April 6, 2005, when the Senate voted 67-33 not to table the


\textsuperscript{54} \textit{Inside China}, pp. 13-14; \textit{Detroit News AutolInsider}, “GM Settles Piracy Dispute with Chinese Automaker” (Nov. 18, 2005); and, “GM and Chery Agree to Settle Legal Claims” (Nov. 19, 2005); \textit{Wall St. Journal}, “GM Settles Legal Feud with Chinese Auto Maker” (Nov. 18, 2005).

\textsuperscript{55} \textit{Inside China}, p. 18.
amendment. The sponsors agreed to withdraw the amendment, provided they were guaranteed a floor vote within six months on S. 295. In July 2005 the Bank of China announced a new exchange rate policy, which tied its currency to an international currency “basket,” rather than directly to the dollar — a policy change that had the effect of a slight upward revaluation. The Senate subsequently agreed further to postpone floor action in consideration of other steps that the Chinese government might take.56

Legislation has also moved that would allow U.S. producers to bring countervailing duty (CVD) cases against exporters alleged to be receiving subsidies from governments of countries that are designated nonmarket economies, such as China. Current Commerce Department enforcement policy is not to bring CVD cases in these circumstances, but rather to require U.S. producers to seek trade relief exclusively through antidumping laws.57 On July 27, 2005, the House passed, by a vote of 255-168, H.R. 3283, a bill introduced by Representative Philip English, that would apply U.S. countervailing law to nonmarket economies (such as China), require extensive monitoring of China’s commitments on trade and intellectual property rights, and require the Treasury Department to report on China’s new currency mechanism.58

A number of Members, especially in the House, have voiced concerns that protection of the U.S. steel industry through trade remedy laws has hurt automotive parts producers. During the period of U.S. safeguard tariffs on a wide range of steel imports in 2002-03, they argued that higher domestic steel prices were hurting U.S. auto parts producers in competition with imported parts from China. But the price of steel has actually risen substantially since the safeguards were terminated. Therefore, some Members have turned their attention to the continuing impact of U.S. antidumping (AD) tariffs, which are applied to the importation of many steel mill products used in the automotive industry. Representative Joseph Knollenberg introduced a bill (H.R. 4217), which would amend U.S. AD/CVD law to require that the U.S. International Trade Commission take into account the harm that may result to industrial users when it considers the imposition of trade remedies. This bill has gained 40 co-sponsors. It has been referred to the House Ways and Means Committee.

Representative Knollenberg also sponsored legislation aimed at aiding U.S. auto parts manufacturers and other manufacturers concerned about imports of counterfeit products, especially from China. Legislation that he introduced in the early days of the 109th Congress sought to make illegal the production and trafficking

57 For details on this issue, see CRS Report RL32371, Trade Remedies: A Primer, by Vivian C. Jones.
58 CRS Issue Brief IB91121, China-U.S. Trade Issues, by Wayne M. Morrison.
Conclusion

There appears to be a consensus among observers of both the global automotive industry and the industry in China that China is not yet ready to challenge the major international producers of fully assembled vehicles in their home markets. Most of the sources reviewed in the context of the present report talk about a competitive Chinese industry in a five-to-ten year time frame — or even longer.

The British experts Graeme Maxton and John Wormald rate China, among countries still trying to develop an independent auto industry, as having the best chance of doing so. But they are skeptical that China, with a state-developed plan for the industry and the world’s largest market potential, can achieve this goal within the near term. Each additional one million vehicles sold per year in China, they noted, is the equivalent of one week’s worth of sales in the advanced industrial countries. Even if China succeeds in creating an export industry, its greatest impact in the markets of industrial countries may be in small, low-priced vehicles, which many companies already import rather than producing locally.

China’s impact on the automotive parts industry is much more at hand. Already China is a major supplier of parts to the United States, and the only one (if the European Union is counted as a single entity), whose parts exports are not linked to the export of vehicles. Many U.S. companies, both nameplate automotive manufacturers and parts suppliers, have set up operations in China, and parts from those operations are increasingly being circulated in global trade. Moreover, Chinese companies themselves have become active in this business, especially in the aftermarket. Beyond the aftermarket, however, Chinese-made parts and equipment are being used by original equipment manufacturers in assembled vehicles. The pressure to use Chinese parts will likely increase as the major international vehicle manufacturers increase their commitment to production in China for the sake of the local market there. It is thus likely that Chinese production will be increasingly integrated into international motor vehicle and parts production and distribution networks.

This gives Chinese firms direct access to the U.S. “just-in-time” automotive manufacturing market, but also allows them firsthand access to and experience with modern U.S. technology. The Chinese government has a plan to use this knowledge and skill base ultimately to create an independent, world-class motor vehicle industry, including a presence in export markets. Japan and Korea, it will be noted, also had such government plans. Their countries did succeed in creating modern


60 Maxton and Wormald, Time for a Model Change, pp. 127-36; see the discussion on China in CRS Report RL32883.
industries, though in many ways different from the original plans of the government bureaucracies. The Chinese plan is different from those of Korea and Japan, and there is no guarantee that it will be a success. But beyond the immediate horizon of most business plans, observers predict that Chinese vehicles will someday also be a presence in the U.S. market, though it is difficult to predict how extensive that presence will be.