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The Rise of China's Auto Industry and Its Impact on the U.S. Motor Vehicle Industry

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The Rise of China's Auto Industry and Its Impact on the U.S. Motor Vehicle Industry

Abstract
[Excerpt] The automobile industry, a key sector in China's industrialization and modernization efforts, has been developing rapidly since the 1990s. In recent years, China has become the world's fastest growing automotive producer. Annual vehicle output has increased from less than 2 million vehicles in the late 1990s to 9.5 million in 2008. In terms of production volume in 2008, China has surpassed Korea, France, Germany, and the United States, trailing only Japan. A disproportionate share of China's output was heavy vehicles in the 1990s. However, since 2000 China's growth has been led by an increase in passenger cars, which now account for more than 65% of its vehicle production.

China's automobile industry has continued to expand despite the global economic downturn. From January to October 2009, more than 10 million vehicles were sold in China. If such growth continues, China is on its way to becoming world's largest auto market.

Unlike Korea or Japan, China's automotive industry has developed extensively through foreign direct investment. This investment has come in the form of alliances and joint ventures between international automobile manufacturers and Chinese partners. The international automobile manufacturers are unlikely to promote Chinese exports that compete with their own products in other markets. As a consequence, the Chinese companies that have expressed a strong interest in exporting cars have not had strong ties to foreign car producers and that, consequently, may struggle to meet safety and emission standards in industrialized countries. However, if independent producers, such as Geely, can achieve much higher standards, they could prove to be a strong international competitor. Ford's proposed sale of Volvo to Geely may help the Chinese company improve its products.

China exports and imports few motor vehicles. Exports are growing much more rapidly than imports and are mostly light trucks and passenger cars shipped to developing country markets. By contrast, Chinese auto parts exports are already making inroads into the United States and other developed markets. While U.S. motor vehicle trade with China was insignificant in 2008, the United States imported more than $5.5 billion in parts from China, while it exported about one- eighth of that amount. 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 brake parts, electrical and electronic parts, and seating and interior trim. But with high rates of investment and strong growth in China by the leading U.S. manufacturers of both cars and parts, major motor vehicle companies are likely to increase sourcing from China.

There have been a significant number of trade disputes with China ranging from implementation of obligations that were made when China joined the WTO, China's exchange rate policy, lax trade law enforcement, and alleged subsidies to industrial producers. With a bilateral U.S. trade deficit that rose to more than $268 billion in 2008, representatives of the Obama administration, as well as many Members of Congress, would like to achieve more balance in U.S.-China trade relations.

Keywords
automobile industry, China, investment, exports, trade, United States

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Congressional Research Service

The Rise of China's Auto Industry and Its Impact on the U.S. Motor Vehicle Industry

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November 16, 2009

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Prepared for Members and Committees of Congress

Summary

The automobile industry, a key sector in China's industrialization and modernization efforts, has been developing rapidly since the 1990s. In recent years, China has become the world's fastest growing automotive producer. Annual vehicle output has increased from less than 2 million vehicles in the late 1990s to 9.5 million in 2008. In terms of production volume in 2008, China has surpassed Korea, France, Germany, and the United States, trailing only Japan. A disproportionate share of China's output was heavy vehicles in the 1990s. However, since 2000 China's growth has been led by an increase in passenger cars, which now account for more than 65% of its vehicle production.

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Introduction[1]

Within the Chinese industrialization process, no development may be more important than the growth of China's automotive industry, which is a catalyst for many other linked sectors of the economy. In particular, China's focus on the auto industry and the supporting infrastructure and development patterns that accompany it may have the potential to upset many existing manufacturing and trade relationships in significant ways that are, at present, unclear. Although Chinese domestic automotive assembly firms appear unlikely to become significant exporters of automobiles to the United States in the short term, the Chinese government appeared, in its March 2009 three-year plan for the auto industry, "Automotive Industry Readjustment and Revitalization Plan," to be taking a long-run view of the sector's development.[2]

The automobile industry has been a major driver of the U.S. and other industrial economies since Henry Ford applied assembly line techniques for manufacturing cars and changed the product from a luxury item for wealthy consumers to a nearly essential component of everyday life. The automobile industry is already a major force propelling the Chinese economy and its workforce; the main question is whether China will mainly consume automobiles in its own market, take a more aggressive export-oriented approach similar to that of Japan and Korea, or create some mixture of these two. Indicators suggest that China, already far more open to foreign investment than either Japan or Korea, may take a hybrid approach that focuses on domestic consumption while also building vehicles for export in order to induce Chinese companies to produce world class cars. Additionally, China's automotive parts manufacturing sector is export focused, increasingly complex, and rapidly moving from low-cost to more value-added production.

While the global economic downturn has had a major impact on the U.S. automotive sector, China's rapidly growing auto industry has been a bright spot—especially for foreign firms with a presence in China. In 2008, China produced nearly eight times as many motor vehicles as it did in the mid-1990s. With annual production of 9.5 million vehicles in 2008, it surpassed the United States for the first time, as the second largest national vehicle producer, trailing only Japan in total vehicle output. From January to October 2009, about 10.89 million vehicles, reportedly, were sold in China.[3] If China can sustain this level of growth, it will overtake the United States to become the largest auto market in the world.

Chinese vehicles have become increasingly sophisticated since the 1980s, as a result of partnerships with major foreign automakers (Volkswagen, GM, Toyota, Honda, Nissan, Mazda, Hyundai and Kia) designed to foster "technological cooperation." An activist government policy has liberalized the Chinese automotive sector in some key respects, but it requires foreign manufacturers to undertake joint ventures with local partners in order to obtain market access. The stated goal of the Chinese government in the 1980s was to create a market dominated by a limited number of internationally competitive joint venture assemblers, supplied by local parts manufacturers and, producing to world standards.

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[1] John Williamson of the CRS Knowledge Services Group assisted in the preparation of the data for this report, especially the trade data.

[2] *China News Wrap*, "State Council publicly releases steel and automobile stimulus plans," March 21, 2009. http://chinanewswrap.com/2009/03/21/state-council-publicly-releases-steel-and-automobile-stimulus-plans/; *China View (Xinhua)*, "China aims for 10 million units in vehicle production, sales in 2009," March 21, 2009. http://news.xinhuanet.com/english/2009-03/21/content_11048035.htm.

[3] *The Wall Street Journal*, "Auto Sales in China Increase Sharply Amid Stimulus Measures" (November 10, 2009).

After two decades of rapid economic growth, the domestic Chinese auto industry has made substantial progress. Many independent domestic automotive manufacturers have emerged and have ambitions to make cars for developed countries. Although they have to overcome hurdles, such as creating their own designs and meeting world standards in terms of product quality, safety, and environmental features, the domestic manufacturers are expanding their market share and moving up the value chain. Some major Chinese auto makers are shown in **Figure 4**.

In November 2008, the Chinese government unveiled a fiscal stimulus package worth Rmb (¥) 4 trillion (US$586bn), to spur domestic demand and avert an economic slowdown. And in early 2009, the government announced a sales tax cut on smaller cars and offered incentives to promote vehicle sales in rural areas.

In March 2009, the Chinese government issued the latest automotive industrial policy, which encourages the industry to consolidate and restructure. The plan raises eight development goals for the auto industry in the next three years (from 2009 through 2011). All of the objectives seem to be designed to ensure the steady growth of automobile production and sales in China. The policy also supports growth of domestic auto firms, both commercially and technologically. Meanwhile, China is pouring resources into alternatively powered vehicles research, aiming to leapfrog the U.S. and Europe with new, more efficient and environmentally-friendly vehicles.

As China becomes a major player in the global auto market, its impact on the domestic U.S. industry is also expected to increase. Thus far, the most significant impact may be in automotive parts. While U.S.-China trade in motor vehicles is very limited, and likely to remain so for the short- to medium-term, bilateral trade in auto parts has grown significantly since 2000, albeit from a very low base.

Congress and the Bush Administration did not take direct measures to address the growth of China's automotive sector or U.S.-China automotive trade. However, as China becomes a top automotive manufacturer and a major consumer market, there are concerns about the conditions under which U.S. manufacturers must compete with Chinese firms both in China and in the global market, including the domestic U.S. market. These concerns have focused on such issues as:

- Chinese currency policy, that 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 rights; and
- The extent to which Chinese firms are subsidized or otherwise supported by the government when they compete with foreign companies.

China as a Major Auto Producer and Consumer

China Becomes a Top Motor Vehicle Producer

China's automotive industry was established in the 1950s, under the guidance of the Chinese Communist Party Central Committee and with assistance from the former Soviet Union. Although the automotive industry has always been viewed as a strategically crucial sector to

move the country into the modern industrial age, it did not substantially develop until the late 1980s, after Chairman Deng Xiaoping came to power and moved the country toward economic development.[4]

In 1988, after a visit to China and its fledging 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."[5] It is now clear that, after building up considerable speed, China's automotive industry has achieved a substantial measure of success.

Figure 1 illustrates the speed with which China has become one of the world's top automotive manufacturers. China first produced more than 2 million vehicles, of all types, in 2000. Since then, it surpassed South Korea (in 2002) and France (not shown on graph, in 2003). With nearly 5.8 million units of total production in 2005, China approached the production level of Germany, Europe's largest national producer and then-number three in the world, and eventually, overtook Germany for third place in 2006. Since then, China's vehicle production has accelerated, passing the 7 million mark in 2006 and approaching 9 million units in 2007.

In 2008, when the global economy became mired in recession, world vehicle production was down 4.1% from the record of over 72 million units built the previous year. The impact of the downturn was particularly pronounced for U.S. automakers, with two major U.S. companies, GM and Chrysler, fighting to stay afloat by year's end. China's automotive industry, however, showed considerable strength and continued to grow, albeit at a slower pace. With an output of 9.5 million vehicles, for the first time, China overtook the United States in total vehicle production and became the second largest motor vehicle producer, trailing only Japan, which produced 11.6 million vehicles in 2008.[6]

During the first 10 months of 2009, China's auto sales picked up considerable speed, responding to the economic stimulus measures from the central government. If this momentum can be sustained, China is on pace to displace Japan as the world's largest motor vehicle producer. Some have already projected that China could overtake Japan as the world's largest automaker as early as 2009.[7]

[4] "About FAW, History," entry at China First Automobile Works (FAW) Group Corporation website, http://www.faw.com/webcontent/aboutfaw.jsp?pros=history_forword.jsp&phight=550&about=History, as viewed on August 17, 2009.

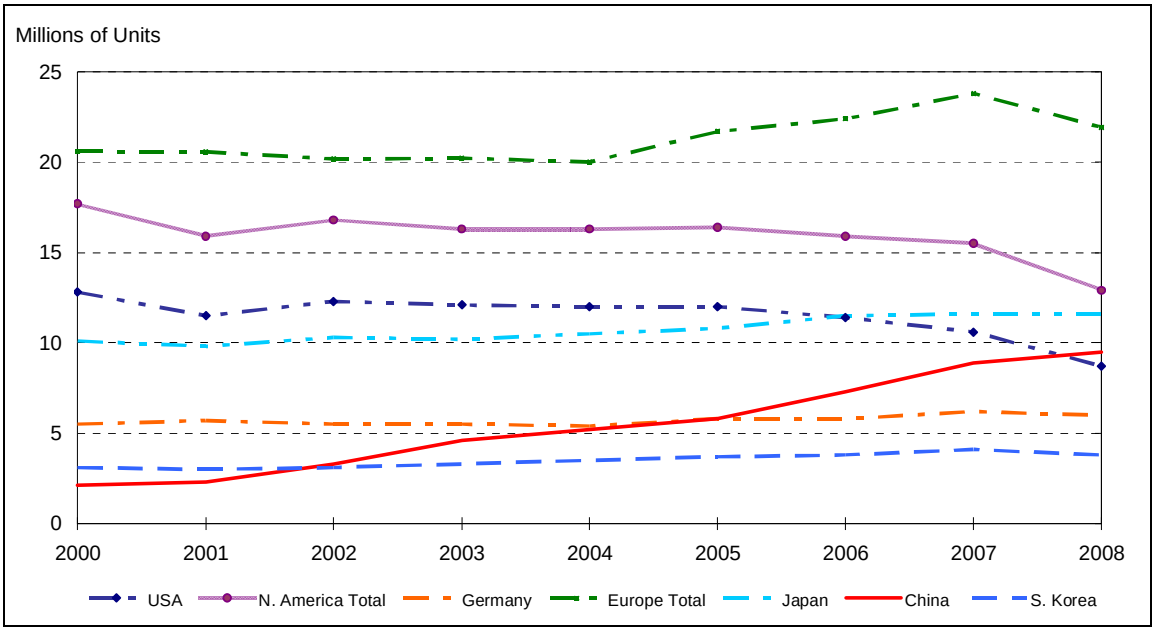
[5] Quoted in Jim Mann, *Beijing Jeep: A Case Study of Western Business in China* (Boulder, CO: Westview Press, 1977 ed.), p. 296.

[6] *Ward's Automotive Yearbook 2009*, p. 5.

[7] *Washington Post*, "As Detroit Crumbles, China Emerges as Auto Epicenter" (May 18, 2009).

Figure 1. Leading Motor Vehicle Producers

Total Annual Vehicle Production, 2000 - 2008



Source: Automotive News. Market Data Book, 2002; Global Market Data Book: 2004, 2005, 2007, 2008. *Ward's Automotive Yearbook*, 2009 (for 2008 data).

Notes: N. America Total includes USA vehicle production; Europe total includes Germany production.

Moreover, among the leading vehicle producers, China has been the only one showing substantial and continuous growth in its production level since 2000. In 2005, North America and western Europe each produced more than three times as many vehicles as China. But, between 2005 and 2008, total U.S. production dropped by over 3.2 million units. Canada also registered a net decline of over half a million units. Mexican production, on the other hand, did see a slight increase of nearly half a million units from 2005 to 2008. But this was far from enough to offset the overall decline in total North American production of nearly 3.4 million units.

For carmakers in Europe, after an increase in production between 2004 and 2007, overall production dropped by nearly 2 million units from the previous year. One notable trend is that, starting around 2002, vehicle production in West Europe has been declining, albeit at a moderate rate. However, output in eastern and central Europe has been rising steadily—between 2004 and 2008, total vehicle production in eastern and central Europe has doubled to over 6.5 million units.

Central and eastern Europe, emerging as a bigger player in the capacity expansion plans of western European vehicle manufacturers, have been touted as the "new Detroit" of Europe. Low wage levels, less stringent benefits rules, and easily trainable industrial work forces have attracted major assembly operations from virtually all manufacturers. However, in terms of continuous production growth coupled with surging domestic demand, China is still, clearly, the leading force.

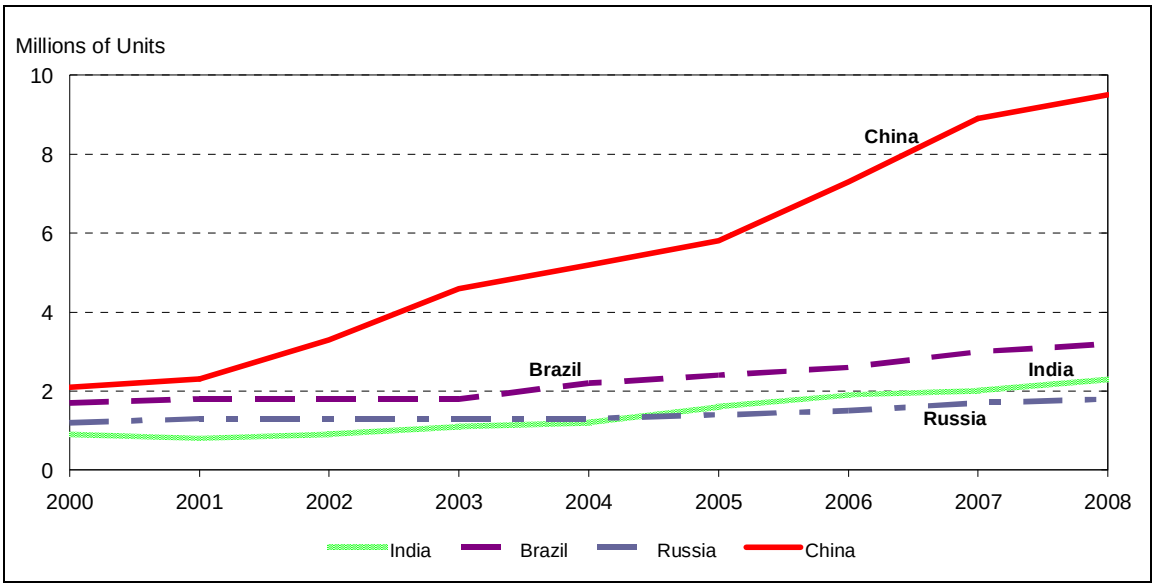
Japan, the largest motor vehicle producer, has shown relatively little overall growth in production, in part because of an economic slowdown that has lasted for nearly two decades, the strengthening of the yen, and increased production in overseas manufacturing plants. Its total output has stagnated at around 10 million vehicles per year between 2000 and 2003.

Strengthening exports, including to China and the United States, led to an increase to about 11.6 million units of production each in 2007 and 2008.

China's increase in volume output has also placed it far ahead of other developing countries that are considered as actual or potential major automotive producers. In the so-called BRIC countries (Brazil, Russia, India, and China), which showcase emerging economies, there has been considerable growth in automotive production (see **Figure 2).**

Figure 2. BRIC Countries Motor Vehicle Production

Annual Vehicle Production, 2000-2008



Source: Automotive News, *Market Data Book, 2002*, and *Global Market Data Book*: 2004, 2005, 2007, 2008; *Ward's Automotive Yearbook*, 2009 (for 2008 data).

- Brazil's production was stable from 2000 through 2003, and then increased by 400,000 units to 2.2 million in 2004, and further to 3.2 million in 2008.
- Production in Russia remained flat from 2000 through 2004 and then grew, albeit at a relatively slow rate, to 1.8 million units in 2008.
- 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 vehicle production volume increase from 900,000 units in 2000-02 to 2.3 million in 2008.

Nevertheless, the combined net growth of auto production in these other three BRIC countries between 2000 and 2008 was only slightly over a quarter of the total volume growth in China.

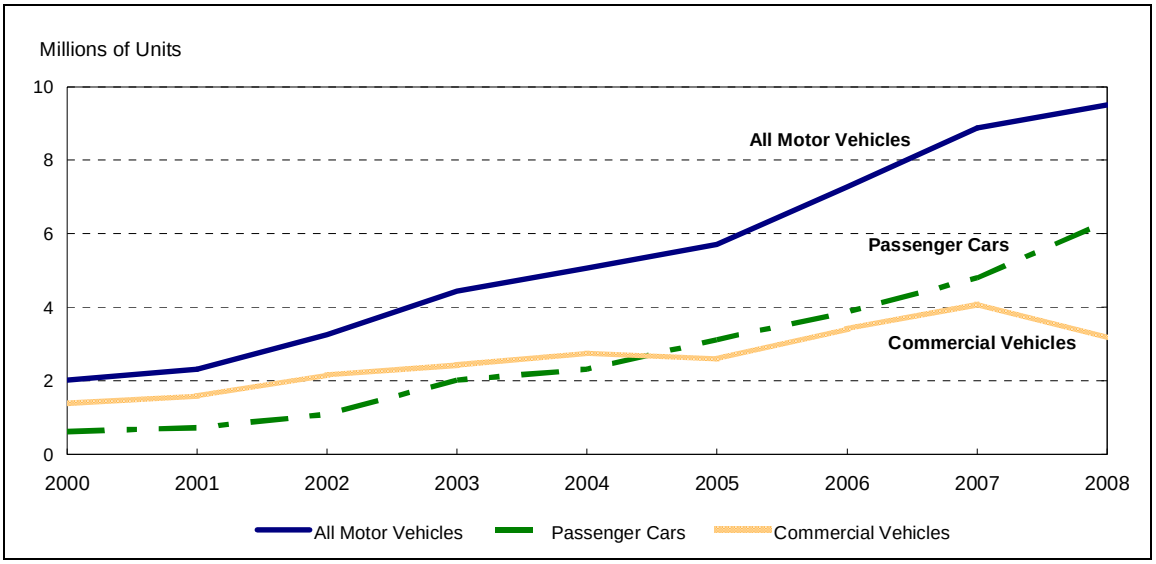
Equally significant is the product composition of Chinese motor vehicle output, which appears to be evolving primarily toward meeting growing domestic consumer demand for personal vehicles, notably passenger cars. This is closer to the model of production seen in a mature industrial market than in a developing economy. It is also an indication that, as per capita national income grows rapidly, especially in the coastal regions and big inland cities, personal vehicles are no longer luxury items exclusively for the privileged few.

In the mid-1990s, out of a total output of 1.2 million vehicles, China produced 300,000 passenger cars, with trucks and buses accounting for the remaining output. 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, which were generally considered being more for personal use. In China, however, the "truck" category in the 1990s was much more oriented toward heavy duty and mass transit equipment, while the "bus" category appears to include at least some types of minivans. As late as 2004, combined truck and bus production in China was still slightly higher than output of passenger cars.[8]

Although there are differences in vehicle categorization, a key indicator for China's auto industry is the rise of the share of production devoted to passenger cars, which is usually generated by rising demand among middle-class consumers. **Figure 3** shows that production of passenger cars started to rise consistently after 2000.

Figure 3. Chinese Motor Vehicle Production

Annual Vehicle Production, 2000-2008



Source: Ward's Automotive Yearbook, 2001-2009.

Notes: Commercial Vehicles include trucks and buses, a category that includes light trucks, SUVs, and minivans.

Prior to 2000, China's leading automakers were joint-venture partners with foreign automobile companies, with product mix and output subject to bureaucratic intervention and negotiations—a process well-documented in the book *Beijing Jeep*.[9] But this began to change at the turn of the century, as noted in Ward's 2001 Automotive Yearbook:

[8] Chinese data for the "truck" category combines "light" trucks and heavy trucks, while the "bus" category appears to include at least some types of minivans, which, in the United States, are considered "light" trucks. Production and sales data for the United States typically combine cars and light trucks to yield total vehicle sales. During most of this decade, light truck production and sales in the U.S. were greater than that for passenger cars. Because Chinese data do not distinguish between heavy truck and light trucks, the key variable would appear to be the share of production devoted to passenger cars.

[9] Mann, *Beijing Jeep*.

> In years past, the Chinese government would decide what product would best suit a proposed automotive joint venture, usually a 50/50 partnership between a global automaker and a state-run Chinese firm. Although the products often were 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 further for private consumers and ensure a big pay-off for companies waiting to tap China's boundless potential.[10]

China's passenger car output increased slowly from a quarter of total motor vehicle production in 1994 (not shown in **Figure 3**) to about 30% in 2000-01. After that, passenger car output drove rapid motor vehicle production growth. As overall output increased from an annual range of 600,000 to 700,000 vehicles to over 5 million annually by 2004, nearly 50% of total production was passenger cars by that year (see **Figure 3**).

More passenger cars were produced in China in 2005 than commercial vehicles, roughly at a 55/45 split. This composition held through 2007. In 2008, production of passenger cars surged to more than 65% of the total vehicle output that year, even as automobile sales growth slumped to 6.7% from an average annual rate of 25% over the previous seven years. Vehicle production and purchases in 2008 were affected by falling stock markets and real estate values, shrinking GDP, rising commodity and fuel prices, and a serious decline in exports.[11]

During the first 10 months in 2009, auto sales in China continued to accelerate and reportedly, reached 10.89 million units, making China the world's largest auto market for this time period. The month of October, alone, registered vehicle sales of 1.23 million units, a 72.5% year-on-year increase. Such rapid growth was partly, if not completely, helped by government stimulus measures that include rural subsidies and a purchase tax cut on small vehicles, which are scheduled to expire at the end of 2009. However, if these incentives are extended, the China Association of Automobile Manufacturers (CAAM) projected that China's auto market could expand by another 10% in 2010.[12]

China's motor vehicle market has indeed grown at an unprecedented rate in recent years, with new vehicle sales and production in lockstep growth. The first wave of car buyers appeared in China's large cities along the prosperous eastern seaboard, where vehicle ownership surged around 2000. Five years later, the car market took off in the smaller coastal urban areas and major inland cities. In 2008, China became the second largest motor vehicle market with total sales of 9.38 million units (excluding imports), just behind the United States.[13]

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[10] *Ward's Automotive Yearbook 2001*, p. 72. China joined the WTO in 2001, upon which automotive import tariffs were cut.

[11] *Ward's Automotive Yearbook 2009*, "China Sales Growth Slows on Global Slump," p. 36.

[12] *Financial Times*, "BMW plans to boost China output after demand surge" (November 13, 2009).

[13] *Ward's Automotive Yearbook 2009*, p. 249. The U.S. total vehicle sales was 10.1 million units, excluding 3.4 million imports.

With the onset of the global economic and financial crisis in 2008, growth in China's vehicle sales slowed, reflecting the weakened state of the domestic economy and low consumer confidence. In response to weakening demand, the Chinese government introduced several policy measures, including the aforementioned economic stimulus, to boost car sales.[14] In January 2009, the government halved sales taxes for smaller cars with engine capacities of no more than 1.6 liters. Further, ¥5 billion (U.S. $732 million) has been allocated to subsidize farmers who want to upgrade three-wheel tractors and small trucks.

China's auto market continued to grow in the first half of 2009. According to the China Association of Automobile Manufacturers (CAAM), as many as 6.1 million vehicles were sold in the first half of 2009, in part helped by the incentives. This strong growth is in stark contrast to the sluggish market in other parts of the world, and moreover, China's surging car market still has considerable growth potential.

A number of factors are set to drive market demand in the next few years.

First, market potential arises from China's relatively low rate of car ownership, which stood at about 22 cars per 1,000 people in 2008. This ratio is low compared with a global average of 120 per 1,000 and over 600 per 1,000 in the United States.[15] China's rapid economic growth and rising personal income, particularly in big cities, have been fueling the demand for personal motor vehicles. Second, since 2002, both foreign and domestic carmakers have expanded production capacity in the country in anticipation of continued strong demand growth. This generated significant competition and falling vehicle prices. In 2007, average car prices across China dropped by nearly 6% from 2006, while the per capita income of urban residents increased by 12.2%, to $1,942.[16] With more products available at competitive prices, car ownership is spreading rapidly among the expanding middle-class. Another factor resulting in greater demand for cars is the improvement and expansion of China's road network. China has been investing heavily in improving its highway network. According to an industry report by the Economist Intelligence Unit, by the end of 2008 China had just over 60,000 kilometers (km, approximately 37,282 miles) of high-speed roads, double the length of the network in 2002, making it one of the largest motorway systems in the world, just behind the interstate system of 75,000 km (46,603 miles) in the United States. Most of China's road network, however, was built within the past 15 years.[17]

Foreign and Domestic Producers in the Chinese Motor Vehicle Industry

American automotive manufacturers were among the earliest international companies to move into China with the opening of the market to foreign investors in the 1980s. In 1983, after tedious and difficult negotiations, American Motors Corporation (AMC) signed a joint-venture (JV) agreement with China's Beijing Automotive Works, the first such major manufacturing deal reached by a western industrial company in China. Despite this early initiative, American

[14] *Economist Intelligence Unit*, "Country Report China - Main report: February 1, 2009."

[15] *Economist Intelligence Unit*, "Industry Report: Automotive, July 2009."

[16] *Automotive News*, "2008 Guide to China's Auto Market," April 14, 2008, p. 3.

[17] Ibid.; *Financial Times*, "Rule of the Iron Rooster," August 24, 2009.

companies largely 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).[18]

Despite AMC's early entry, and Chrysler's subsequent purchase of AMC and its successful management of the Beijing Jeep factory, 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. In 1997 GM established a 50-50 joint venture with the Shanghai Automotive Industry Corporation Group (SAIC) to manufacture passenger vehicles. GM also participates as a minority shareholder (34%) in a joint venture with both SAIC (50.1%) and Wuling Automotive Company (15.9%) to produce minivans, "mini-trucks," and the Chevrolet Spark mini-car, the latter a product based on designs from GM's Korean subsidiary, GM Daewoo Auto and Technology (GM Daewoo). To supply the emerging market in China's inland region, SAIC-GM-Wuling also intend to assemble a new economy vehicle, reportedly to debut in 2011, which will be "built on a platform no longer needed by Buick."[19]

In 2009, GM had nine joint ventures in China, a wholly owned parts distribution center, and a wholly owned investment subsidiary in Shanghai that houses GM's local staff and invests in GM's vehicle joint ventures in China. GM employs more than 32,000 employees in China.[20] In July 2009, GM announced that it was relocating its international operations from Detroit to Shanghai. GM International Operations (GMIO) replaces the regional operating structure that characterized GM's operations before bankruptcy. The new organization is to have functional and geographic control of all GM international operations worldwide, with the exception of GM North America.[21]

GM and its various joint-venture partners manufacture Buick, Cadillac, Chevrolet, Saab, Opel, and Wuling vehicles. Buick and Chevrolet are GM's volume brands in China. Many of these vehicles are based on designs by Daewoo or GM's European subsidiary, Opel. Vehicles are re-engineered for China at the Pan Asia Technical Automotive Center (PATAC), a GM joint venture with SAIC.[22]

In contrast to its experience in the challenging environment in North America, GM expanded rapidly in China and became the top carmaker in the world's most populous country. The automaker, which sold its first car in China in the 1920s, expects to double annual Chinese vehicle sales to more than 2 million over the next five years.[23] According to General Motors, it sold 1.46 million vehicles during the first 10 months of 2009, an increase of 60% over the first 10 months of 2008.[24]

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[18] Mann, *Beijing Jeep*, esp. chapters. 2,4,11,24 and epilogue.

[19] *Automotive News*, "2009 Guide to China's Auto Market," (April 27, 2009), p.10.

[20] GM China website, "About GM China", http://www.gmchina.com/english/corporate_info2/company_gmchina.jsp, as viewed on October 20, 2009. Saab and Cadillac were introduced in China in 2004 but do not command significant sales.

[21] GM. GM Communications. "General Motors Makes Leadership Appointments for New Shanghai-Based International Operations." Shanghai, July 24, 2009. http://media.gm.com/servlet/GatewayServlet?target=http://image.emerald.gm.com/gmnews/viewmonthlyreleasedetail.do?domain=797&docid=55835.

[22] GM China website, http://www.gmchina.com, "GM Communications: General Motors Sets Company Sales Record in China in 2008" (January 6, 2009).

[23] Bloomberg News, "GM China Unaffected by U.S. Bankruptcy, Seeks More Growth," June 1, 2009.

[24] *The Wall Street Journal*, "Auto Sales in China Increase Sharply Amid Stimulus Measures" (November 10, 2009).

In 2007, GM overtook VW as the leading foreign-owned motor vehicle manufacturer in China, in terms of market share of vehicle sales. The automotive market in China is largely dominated by international companies (see **Table 1** and **Figure 4**). Such dominance is particularly strong in the fastest-growing passenger cars category, where about two-thirds of new cars sold were produced by international companies. General Motors and Volkswagen are by far the leading vendors, each commanding more than 10% of the market. A number of other major car makers follow, including Toyota, Honda, Nissan, Mazda of Japan, and Hyundai-Kia of South Korea.

Chery Automobile Co. Ltd. was the leading independent domestic vehicle manufacturer in sales, Some other major domestic automakers are China First Automobile Works Group Corporation (FAW), Geely, SAIC, and Dongfeng.

Table 1. Motor Vehicle Sales in China and Market Share of Selected Manufacturers, 2007-2008

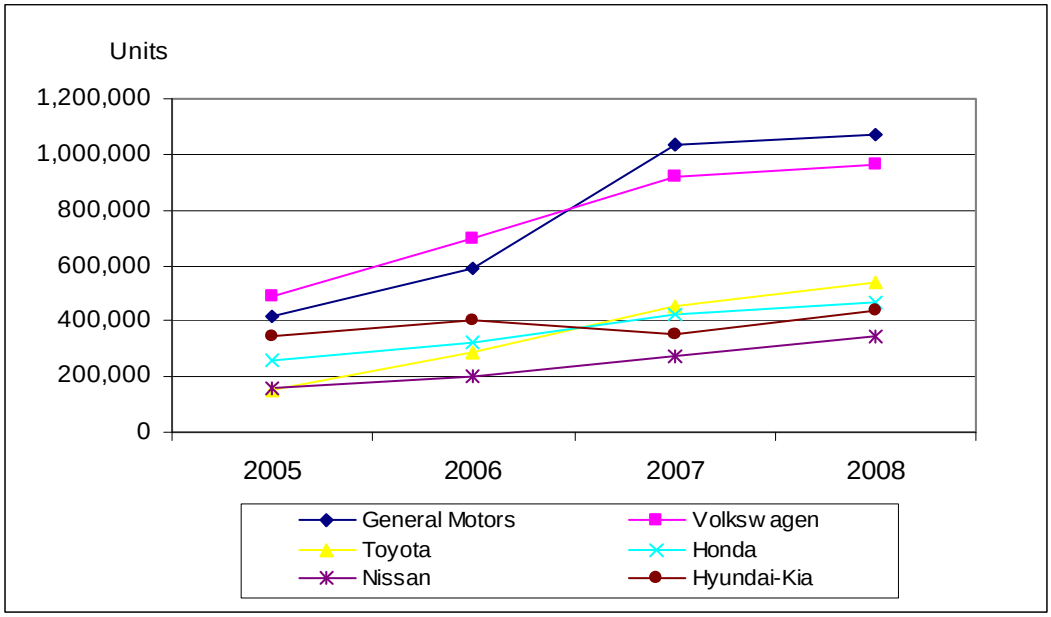
	2007		2008	
	000s	%	000s	%
GM	1,032	11.7%	1,074	11.3%
VW	918	10.4%	964	10.1%
TOYOTA	460	5.2%	538	5.6%
HONDA	422	4.8%	470	4.9%
HYUNDAI - KIA	355	4.0%	437	4.6%
CHERY	387	4.4%	356	3.7%
NISSAN	272	3.1%	346	3.6%
FAW	294	3.3%	302	3.2%
GEELY	220	2.5%	237	2.5%
MAZDA	222	2.5%	209	2.2%
TOTAL	8,819	100%	9,541	100%

Source: Ward's Auto InfoBank.

Notes: Totals in **Table 1** include sales of other manufacturers not listed, and are used to calculate market share of the listed auto makers.

To virtually all of the major global automakers, China appears to be the only sizable market with strong and persistent growth. Given such prospects, almost all the major international automakers either are expanding operations in the country or are in the process of establishing plants. For example Shanghai GM opened a second plant in December 2008 at (Shenyang) Norsom Motors Co., another GM joint venture. The new factory initially will produce Chevrolet's new compact sedan, the Cruze.[25] In August 2009, GM formed a new 50-50 joint venture with FAW Group to make light trucks in China for the first time. Fiat, the Italian auto group, recently announced a 50-50 joint venture with Guangzhou Automobile Group to make cars and engines for the Chinese market.[26] Fiat has been looking for a new local partner since it terminated a venture with Nanjing Auto in late 2007.[27]

Figure 4. Largest Multinational Motor Vehicle Manufacturers in China, 2005-2008



Source: Ward's Auto InfoBank.

Among the Detroit Three producers, Ford has been slowest to establish a manufacturing presence in China. After a strong sales increase from 2005 to 2006, Ford sales have been flat in this rapidly growing market and, therefore, it has ceded market share to competitors. Ford's total annual sales in 2008 of affiliated brands was about 162,000 units, slightly lower than 2007 sales.[28] Meanwhile, Chrysler's future plan for China operations remains unclear. After the automaker stopped producing Jeep models in China in 2007, it reportedly decided to supply imported vehicles, mainly Jeep, through a small dealer network. In late 2008, Chrysler pulled out of Daimler's joint venture with Beijing Automotive. A Chrysler deal to produce cars with China's domestic

[25] *Automotive News*, "2009 Guide to China's Auto Market" (April 27, 2009), p.10.

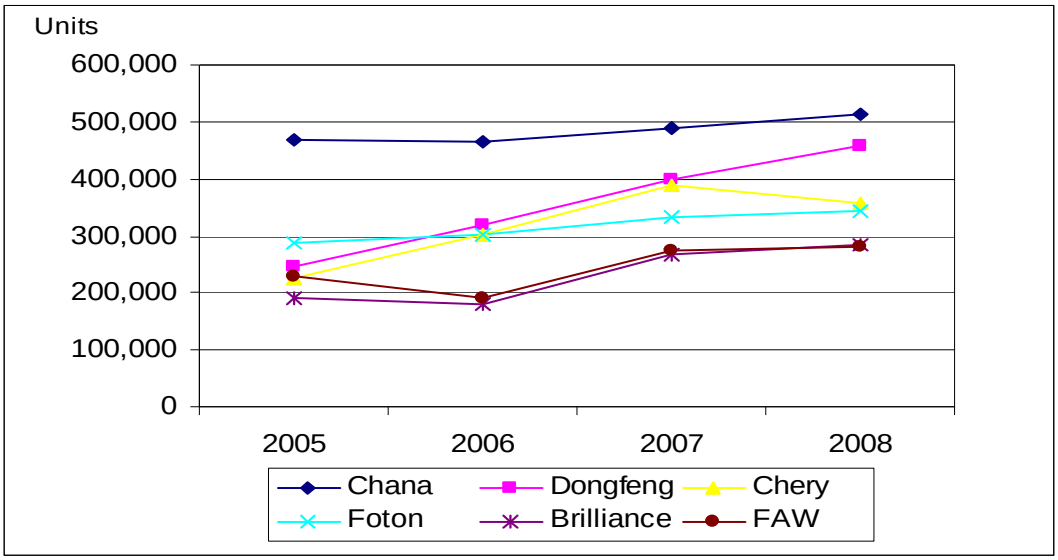
[26] *Financial Times*, "GM to make light trucks in China" (August 30, 2009).

[27] *The Detroit News*, "Fiat to start joint venture in China," (July 7, 2009). Fiat also had previously planned a joint venture with Chery Automobile, China's largest independent domestic carmaker, to start production in 2009. But the project was put on hold in March 2009.

[28] *Automotive News*, "2009 Guide to China's Auto Market," (April 27, 2009).

producer, Chery Automotive, failed to materialize in December 2008—at the same time that the U.S. government began moving to shore up Chrysler's waning finances. Another planned partnership to share technology, components, and distribution channels with Great Wall Motor has been on hold.[29]

Figure 5. Largest Chinese Motor Vehicle Manufacturers, 2005-2008



Source: Ward's Auto InfoBank.

Independent Production vs. Foreign Cooperation

When the central government decided to open China's auto market to international companies, it was fully aware that domestic manufacturers then would not be able to compete with the more sophisticated and experienced foreign rivals. To surmount this problem, foreign automakers were allowed to enter the Chinese market only through joint ventures with local partners, each no more than 50% controlled by a major foreign nameplate automotive manufacturer.

For example, Volkswagen has joined forces with Shanghai Automotive Industry Corp. (SAIC) and First Automotive Works Corp. (FAW). SAIC is also a joint venture partner of GM, while FAW is also a partner of Toyota. Honda and PSA Peugeot Citroen have both formed partnerships with Dongfeng Motor Corp. There are numerous other automotive manufacturing alliances between domestic and foreign automakers.

Foreign investments entered China in three waves. Between the mid 1980s and late 1990s, China's market was dominated by three foreign joint ventures—VW's joint venture with SAIC, and with FAW, in addition to PSA Peugeot Citroen's joint venture with Dongfeng.[30] From the late

[29] Ibid.

[30] PSA Peugeot-Citroen was among the first foreign automakers to set up operations in China when it opened a joint venture with Guangzhou Auto Group in 1985. But this venture failed, and Peugeot sold its stake to Honda Motor in 1997. It then folded Peugeot production into the Dongfeng joint venture in 1994 and started to produce Citroens.

1990s to 2001, GM and Honda entered the market, and then, after China's accession to the World Trade Organization (WTO) in December 2001, other foreign automakers also entered the market.[31]

The Chinese government hoped, initially, that such arrangements would allow Chinese car producers to tap the technological and management expertise of their foreign partners. In exchange, foreign automakers would gain access to the vast Chinese market. Two-and-a-half decades later, however, foreign corporations are perceived by the domestic auto makers to have benefited more than their local partners from these link-ups. According to *Automotive News China*, "while some [domestic] own-brand cars are built on platforms transferred from global automakers, almost all of the rest are products of the reverse engineering of international models. Some domestic firms continue to resort to outright copying."[32]

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. Foreign companies in China have taken steps to protect proprietary technology, as well as product design and development, the crucial stage in automotive manufacturing. 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, some assert, cooperation through joint ventures inherently restrains the Chinese partner from independently developing an export market for vehicles. In this view, support and planning for global vehicle sales must be coordinated within the sales and service network of the international partner.

SAIC and Nanjing Automobile Group Buys Bankrupt Rover Group; SAIC Later Buys Nanjing

One strategy the Chinese government has been exploring is whether to allow domestic automakers to acquire foreign brands. The first attempt of this kind was the purchase of MG Rover by SAIC and Nanjing Automobile Group in 2005. Seeking to obtain advanced automotive technology and manufacturing capacity, these two Chinese automakers set out to acquired MG Rover, a company with a complicated and sometimes unsuccessful history.

The predecessor of MG Rover was the Rover Group, itself a remnant of the nationalized British Leyland Motor Corporation (later known as BL Ltd.). BL manufactured such brands as Jaguar, Rover, Land Rover, and Mini. In 1984, Jaguar was privatized and later sold to Ford in 1989 and then to Tata Motors of India in 2008. In 1986, BL was renamed Rover Group and, in 1988, was privatized and sold to British Aerospace. BL's commercial truck and bus business was spun off in 1986. The remainder of Rover Group was purchased by BMW in 1994. That purchase reflected BMW's effort to become a volume car producer. By 2000, Rover Group was inflicting a serious financial drain on BMW, which sold the MG and Rover brands to a group of British investors, the Phoenix Consortium, for £10. At the same time, BMW also sold the Land Rover brand to Ford,[33]

[31] *Economist Intelligence Unit*, "Automotive Briefings & Forecast: Foreign investment in car making" (January 31, 2008).

[32] *Automotive News China*, "Letting BAIC bid for Opel reflects a major government policy shift," July 8, 2009; also see cases discussed in a later section "Chinese Auto Sector Commitments."

[33] Ford sold Land Rover (along with Jaguar) to Tata Motors in 2008.

while retaining Rolls-Royce,[34] the Mini brand, and production facilities at Cowley and Swindon, England. BMW also kept the Triumph and Riley trademarks.

The Phoenix Consortium, which formed MG Rover, also acquired the Longbridge assembly plant in Birmingham, England. MG Rover went into receivership in 2005. In July 2005, Nanjing Automobile Group purchased the remaining assets of MG Rover for about $100 million and invested another $50 million to prepare the plant for production. Also in 2005, before MG Rover collapsed, SAIC acquired the intellectual property rights to two Rover automobile platforms and planned to produce vehicles in China for domestic and export sales. SAIC developed Roewe brand cars on Rover platforms.[35]

In December 2007, SAIC, China's largest automaker, acquired Nanjing Automobile.[36] Chinese government officials, reportedly, have said they want to see an industry centered on three or four auto groups that have the resources and technology to succeed globally. The tie-up between SAIC and Nanjing Auto could serve as a model as regulators push smaller auto makers to merge with larger manufacturers.[37] In September 2008, the Longbridge plant, which employed about 380 workers, began assembling MG roadster kits imported from China.[38]

Chinese Auto Assemblers and Parts Makers

The Chinese automotive market remains highly fragmented. There are about a hundred vehicle manufacturers, with only a few capable of achieving viable sales volumes.[39] Many are subsidized by provincial governments eager for the prestige, employment, and tax revenue provided by the automakers. About two-thirds of the top 25 domestic producers are owned by the state.[40] The central government, reportedly, is encouraging industry consolidation, but has had little success so far. Part of the reason, at least, is the vested interest of local governments.[41]

On the automotive suppliers' side, a diversity of other strategies has been adopted by Chinese parts producers, 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, more and more international parts manufacturers have followed their Original Equipment Manufacturers (OEM) partners to China and established operations there. For example, Magna International Inc., Canada's largest auto parts maker, currently has 17 manufacturing and 6 sales, engineering, and product development facilities in China; Visteon has 25 manufacturing facilities and 3 customer service centers in China.[42]

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[34] The automobile brand, not the aerospace company.

[35] *Automotive* News, "SAIC plans car for China and export," April 13, 2006; *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.

[36] *Automotive News*, "China's SAIC takes over MG plant in England," December 26, 2007.

[37] Reuters, "China's SAIC Motor, Nanjing Auto announce merger," December 26, 2007; *Automotive News China*, "Letting BAIC bid for Opel reflects a major government policy shift," July 8, 2009.

[38] *Automotive News Europe*, "MG name stands proud again at Longbridge," January 21, 2009.

[39] *Economist Intelligence Unit*, "Industry Report: Automotive July 2009."

[40] *Automotive News*, "2009 Guide to China's Auto Market," April 27, 2009. p.20.

[41] *Economist Intelligence Unit*, "Industry Report: Automotive July 2009."

[42] Magna corporate website (http://www.magna.com/magna/en/global/); Visteon website (http://www.visteon.com/worldwide/asia/china.html), both as viewed on August 24, 2009.

Another option for Chinese OEMs and OEM suppliers is outright purchase of foreign automotive suppliers. This strategy has the advantage of allowing Chinese firms to target technologies and intellectual property that they need to improve automotive quality. In June 2009, Geely Automotive, a top domestic manufacturer of passenger vehicles, completed the acquisition of an Australian auto parts company, Drivetran Systems International (DSI), which will allow Geely to improve its development of gearboxes.[43]

With western automakers suffering financial distress with declines in production and sales, speculation that Chinese companies might seek to acquire some of the assets of troubled western car makers has come to pass. China's largest privately owned automaker, Geely, reportedly approached Magna, the Canadian parts producer, about taking an investment position in GM's Opel subsidiary. According to the CEO of Geely, its parent company, Geely Group Holding Co. "seeks to buy all of Volvo," a company owned by Ford. In late October 2009, Ford announced that Geely is its preferred bidder in negotiations to sell Volvo. Lewis Booth, executive vice president and chief financial officer of Ford, said, "Ford believes Geely has the potential to be a responsible future owner of Volvo and to take the business forward while preserving its core values and the independence of the Swedish brand. But there is much work that needs to be completed in the more substantive discussions that are agreed to take place. We have no specific timeline to conclude the discussions."[44]

In July 2009, Beijing Auto bid for a part of Opel, but was turned down by GM after intellectual property issues became a hurdle.[45] Another issue was that Beijing Auto's parent company, Beijing Automotive Industry Holdings Co. Ltd. (BAIC), planned to move Opel production to China.[46] In August 2009, GM sold 100% of Saab to Koenigsegg Group AB, a Swedish manufacturer of high end, sports cars. On September 9, 2009, BAIC and Koenigsegg announced a tentative agreement that would allow BAIC to become a non-controlling minority shareholder in Koenigsegg.[47] The only Chinese company, so far, to agree to purchase a GM subsidiary is a little-known, privately owned heavy equipment manufacturer, Sichuan Tengzhong Heavy Industrial Machinery, which has agreed, subject to Chinese government approval, to buy the Hummer sports utility vehicle marque from GM for $250 million.[48]

Automotive Readjustment and Revitalization Plan

Given the rapid and steady growth of China's auto industry and the apparent ambitions of several domestic automakers, some are surprised that the Chinese government has not been more aggressive in promoting the creation of domestic brands by Chinese firms, especially those that

[43] *Economist Intelligence Unit*, "Industry Report: Automotive July 2009"; and Geely corporate website (www.geely.com).

[44] Ford Motor Company, "Ford Confirms Geely as its Preferred Bidder for Volvo Cars," Dearborn, MI, October 28, 2009. http://www.ford.com/about-ford/news-announcements/press-releases/press-releases-detail/pr-ford-confirms-geely-as-its-31282

[45] *Automotive News*, "Geely, Magna held talks over Opel, Reuters reports," September 17, 2009.

[46] *Automotive News*, "Chinese face doubts in bids for GM, Ford discards," September 14, 2009.

[47] Koenigsegg Group AB. "Koenigsegg Group AB signs MOU with Beijing Automotive Industry Holdings Co. Ltd (BAIC) regarding SAAB Automobile AB," September 9, 2009.

[48] General Motors Company. "General Motors and Tengzhong Sign Definitive Agreement for Sale of HUMMER," October 09, 2009. http://media.gm.com/content/media/us/en/news/news_detail.html/content/Pages/news/us/en/2009/1009_HUMMER_Sale.

are partners in foreign joint ventures. *Ward's Automotive Yearbook 2008* stated, "Although China's 11th five-year plan (2006-2010) for the auto industry included an article requiring such development of indigenous brands, it was not officially promulgated in early 2007 as originally scheduled."[49]

In March 2009, the State Council, China's Cabinet, released the *Automotive Readjustment and Revitalization Plan* (the Plan), the latest development blueprint for the auto industry in China.[50] The three-year plan contains eight development goals for the auto industry from 2009 through 2011. All of the goals appear to be designed to ensure that automobile production and sales in China continue at a steady pace. The overall objective is to achieve a 10% average growth in the next three years, using 2009 as base year, during which more than 10 million units of automobiles have been projected to be produced and sold.

The plan also provides guidance on the composition of automobile production for the Chinese market: small passenger cars with engine displacement of under 1.5 liters are to account for more than 40% of market share, while cars under 1.1 liters, will comprise over 15% of the market. To this end, China has halved the purchase taxes for small cars and started to encourage auto consumption in rural areas with government subsidies.

In the plan, the government also reiterated its support and determination to encourage auto industry mergers and restructuring. According to the plan, a goal is the consolidation of the current 14 major auto manufacturing groups, which account for more than 90% of China's production and market share, into 10 auto makers by 2011. The plan also envisions eventually having two to three giant auto groups with an annual output capacity of over 2 million units, and four to five big groups with annual production capacity of over 1 million units.

The plan also calls for independent domestic vehicle manufacturers to increase their share of the domestic market to over 40%, with about 10% of vehicle exports made by independent Chinese assemblers. It also encourages auto parts manufacturers to expand capacity through mergers and restructuring, while seeking independence in the technological development of key auto parts and components.

The plan also calls for the overall improvement in automotive technologies, including greater fuel efficiency and development of new energy sources, as well as safety features. These measures are intended to improve the Chinese motor vehicle industry's competitiveness and appear to be in line with the government's ongoing efforts to curb growing energy dependence on imported oil and to reduce air pollution, which, in China's biggest cities, is largely caused by cars. Gasoline consumption by motor vehicles accounts for about one-third of China's total oil demand. The government has introduced a number of measures to reduce fuel consumption, including raising fuel prices and reducing taxes on smaller vehicles.[51] In early 2008, the Chinese government

[49] *Ward's Automotive Yearbook 2008*, p. 38.

[50] *China Automotive Review*, "Automotive revitalization plan requires 10 percent growth in next three years" (April 28, 2009) http://www.chinaautomotivereview.com/pub/CARArticle.aspx?ID=3620; "Automotive Readjustment and Revitalization Plan" (March 20, 2009) on the official website of The Central People's Government of the People's Republic of China, http://www.gov.cn/zwgk/2009-03/20/content_1264324.htm#, as viewed on August 19, 2009. The US-China Business Council released a brief English-language summary, "USCBC Summary of the PRC Auto Industry Revitalization Plan." The author of this CRS report used the original Chinese-language version of the document.

[51] *Economist Intelligence Unit*, "Industry Report: Automotive July 2009."

started a pilot program, offering incentives to taxi and other fleet operators if they purchase alternative-energy vehicles.[52]

Support and fiscal incentives from the central government, local provinces, and municipalities have spurred a surge in projects to produce alternative-energy vehicles and technologies. Nissan Renault has announced a partnership with the Ministry of Industry and Information Technology to promote electric cars and to create a battery-charging network. In April 2009, SAIC announced that it would produce gas-engine hybrid cars using battery technology and parts from two U.S.-based manufacturers, A123 Systems and Delphi.[53]

The Shenzhen city government, like several other provincial and municipal counterparts, has announced support for advanced technology initiatives. Shenzhen will provide fiscal support for BYD Auto Company, the car manufacturing subsidiary of one of the world's largest battery manufacturers. American investor Warren Buffet's investment firm, Berkshire Hathaway, bought a 10% stake in BYD in 2008. The company manufactures electric, dual mode (pure electric and hybrid), and standard gasoline-powered vehicles and has announced plans to enter the U.S. auto market in 2010, a year ahead of schedule.[54]

Alternative energy vehicles have strong support from governments at all levels in China. Both China and India would like to exploit and rapidly adopt new technologies in the hope of leap-frogging mature countries that are unlikely to experience the same dramatic growth levels in the future. However, local (i.e., provincial or municipal) governments that use subsidies to favor "local champions" run a very real risk of research duplication and market fragmentation.[55] Such an outcome would be quite inefficient.

Impact of China on the U.S. Automotive Market

Chinese-Made Vehicle Imports Not Imminent

The number of vehicles produced in China annually more or less equals the number of vehicles sold there, with both exports and imports at relatively low levels. In 2005, China became a net exporter of vehicles for the first time, with 172,800 export units. Since then, the country's motor vehicle exports have been growing. According to China Association of Automobile Manufacturers (CAAM), China exported a total of 617,900 units in 2008, of which 56% were passenger vehicles, while 44% were commercial vehicles.[56]

The vast majority of China's vehicle exports are by domestic companies such as Chery and Geely. Vehicles made by independent domestic automakers, as opposed to those built by Chinese joint

[52] *Automotive News*, "2009 Guide to China's Auto Market," April 27, 2009, p.20. The incentives are reported to be a fixed amount of $8,770 for an electric car and up to $7,310 for a hybrid.

[53] *Economist Intelligence Unit*, "Industry Report: Automotive July 2009."

[54] BYD Auto. "China's BYD Auto Plants To Sell Hybrids in U.S.," January 11, 2008. http://www.byd.com/press.php?id=7; *Financial Times*, "BYD to sell electric car in U.S. in 2010" (August 31, 2009).

[55] *Economist Intelligence Unit*, "Automotive Briefing & Forecasts: China fuels: China bets on electric vehicles" (April 30, 2009).

[56] CAAM (www.caam.org.cn) (February 13, 2009).

venture partners, account for more than 70% of the total exports, while the remainder were exported by non-Chinese manufacturers.[57] Most Chinese car exports are destined for developing countries in Africa, the Middle East and Southeast Asia, where their unit prices are reported to be less than US$10,000.[58] Vehicle exports to Russia rose quickly in 2007 and 2008, and accounted for 13% (or 48,000 units) of Chinese auto exports during the first half of 2008. Some EU member states, such as Romania, Poland, and the Czech Republic, have also seen an increase of motor vehicles imported from China.[59]

In 2005, American entrepreneur Malcolm Bricklin undertook widely publicized efforts to form a 200-dealer network (named Visionary Vehicles) aimed at selling 250,000 Chery-made vehicles in the U.S. market by 2007. After delaying the start of sales several times, Bricklin reportedly postponed his plan until late 2008 in order to meet the U.S. government crash-test safety requirements.[60] In July 2008, Bricklin filed a lawsuit against Chery Automobile Co., along with some of its affiliates and officials, under the Racketeer Influenced and Corrupt Organizations Act, severing ties with Chery.[61] No Chery vehicles were sold in the U.S.

Attempts to export more vehicles to developed-country markets (such as the US and the EU) have been repeatedly delayed due to poor product quality and the failure of Chinese domestic brands to meet safety and emissions requirements. A domestic automaker, Jiangling Motors Co. Ltd., debuted its Landwind SUV in Europe in 2006 and was widely criticized by the European media for its lack of safety features and poor handling. The German automobile club, Allgemeiner Deutscher Automobil-Club e.V. (ADAC), which also conducts crash testing, reportedly insisted it be banned from European roads.[62] In 2007, another Chinese domestic vehicle manufacturer, Brilliance Auto, was forced to put its European export plans aside after one Brilliance car scored the worst crash test results in the history of ADAC. Furthermore, a recording of a Brilliance car failing a crash test was later broadcast on YouTube, an Internet video-sharing site, damaging the brand.[63]

Some major auto producers have been exporting motor vehicles from China. One of the leading foreign manufacturers using China as an export platform is Honda. One of its operations is a joint venture in Guangzhou producing sedans solely for export. Chinese regulations, in general, prohibit multinationals from owning more than 50 percent of auto assembly joint ventures in China. But the government made an exception in 2003 and allowed Honda to own 65% of the assembly plant in Guangzhou, 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 to Europe.[64] GM announced in August 2009 that its SAIC-GM-Wuling joint venture would begin

[57] *Economist Intelligence Unit*, "Industry Briefing: China cars: Export ambitions postponed?" (August 22, 2008).

[58] *Economist Intelligence Unit*, "Industry Report: Automotive July 2009."

[59] *Economist Intelligence Unit*, "Industry Briefing: China cars: Export ambitions postponed?" (August 22, 2008).

[60] *Ward's Automotive Yearbook 2007*, p. 38.

[61] RICO; 18 U.S.C.A. § 1961 et seq. [1970]; *Forbes.com*, "Brickbats For Chery" (July 20, 2008).

[62] *Ward's Automotive Yearbook 2007*, p. 38.

[63] *Economist Intelligence Unit*, "Industry Report: Automotive July 2009."

[64] *New York Times*, "China Looms as the World's Next Leading Auto Exporter" (April 22, 2005); *Wall St. Journal* (Feb. 15, 2006); and IBM Business Consulting Services, *Inside China*, 2005, p.17.

exporting two of its most popular mini-commercial vehicles under the Chevrolet brand to South America, North Africa, and the Middle East. Exports to Peru reported began in July 2009.[65]

In May 2009, various news sources reported that GM was planning to build a new small car in China for export to the United States.[66] It was also reported that GM planned to sell about 17,300 Chinese-made vehicles in the United States in 2011 and then to triple the volume to 51,500 in 2014. However, such plans drew immediate opposition from some Members of Congress and the United Auto Workers (UAW).[67] In negotiations with the UAW in May 2009, GM announced that it would invest in a new compact and small car assembly plant in the United States capable of producing 160,000 annual units of production. This was widely regarded as a concession to the UAW.[68] A GM plant in Orion, MI was selected as the site to build the new small car.

China, thus far, has played little part in terms of exporting motor vehicles to the United States. Most of the vehicles imported into the United States from China, so far, have been largely limited to multi-use small trucks and vans for off-road use. The United States had a trade surplus with China in motor vehicles in 2008: $1,102 million in U.S. exports versus $149 million in imports[69] (see **Table 2**).

The Chinese Auto Parts Sector

There are multiple reasons for foreign parts makers to build facilities in China.

First of all, unlike the 50% cap on foreign ownership in vehicle manufacturing companies, there are no limits on foreign stakes in the automotive parts sector. This means international companies can set up wholly foreign-owned auto parts companies in China, without fear of transferring advanced technology to local partners. Second, the Chinese government increased the tariffs on auto parts from 10% to 25% if imported parts made up more than 60% of the finished vehicle's value. This controversial tariff, which resulted in a WTO dispute case, will be discussed later in this report. Other important factors are competitive labor costs and an increasingly skilled labor force.[70] However, as China's economy continues to grow and the living standards continue to rise, wages and benefits will increase as well. There also has been pressure for China to allow its currency to appreciate further. On the other hand, the U.S. auto industry is going through restructuring and its labor costs should become more competitive. China's advantage as a low-cost manufacturing base will likely diminish over time.

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[65] GM China website, http://www.gmchina.com, "GM Communications: SAIC-GM-Wuling Signs Agreements to Export Mini-Commercial Vehicles to South America, Middle East, and North Africa," August 13, 2009.

[66] *Automotive News*, "GM plans to export China-made cars to U.S.," May 12, 2009; *BusinessWeek*, "GM looks to China, the UAW looks to the Feds," May 14, 2009; *Automotive News*, "GM plans to import small Chevys from China," May 18, 2009.

[67] *Automotive News China*, "GM plans to import small Chevy from China" (May 20, 2009).

[68] UAW, UAW-General Motors Modifications to the 2007 Agreement and Addendum to VEBA Agreement, May 2009; *Detroit Free Press*, "Tenn. plant may be GM long shot," (June 13, 2009); and *Washington Post*, "Under Restructuring, GM to Build More Cars Overseas" (May 8, 2009).

[69] USITC trade dataweb, NAIC No. 3361 definition includes chassis.

[70] As noted in a recent *Washington Post* article, "Under Restructuring, GM to Build More Cars Overseas" (May 8, 2009): "Labor costs in those countries are far lower. While paying a U.S. autoworker with benefits costs about $54 an hour, a South Korean worker earns about $22 an hour, a Mexican worker earns less than $10 an hour and some Chinese workers can earn as little as $3 an hour, industry sources said."

Table 2. U.S.-China Automotive Trade

$ millions

NAIC No.		2000	2001	2002	2003	2004	2005	2006	2007	2008
33637	Metal Stampings (US exps)	0	1	1	1	2	8	12	9	5
	(US imps.)	1	1	1	2	2	4	4	5	5
33633	Steering & Suspension Components, excl. Spring (US exps.)	3	3	3	1	4	5	13	17	10
	(US imps.)	6	7	11	18	20	33	67	77	120
33634	Brake Systems (US exps.)	12	4	9	9	6	18	37	31	31
	(US imps.)	154	169	202	269	354	433	556	761	884
33636	Seating & Interior Trim (US exps.)	31	24	37	33	29	37	24	35	32
	(US imps.)	66	72	102	181	231	280	340	386	468
33635	Transmission & Power Train Parts (US exps.)	9	18	18	29	63	37	38	18	36
	(US imps.)	39	53	65	75	119	214	289	317	313
33631	Gasoline Engine & Engine Parts (US exps.)	9	15	16	31	38	34	34	82	59
	(US imps.)	42	58	96	96	115	168	220	263	304
33632	Electrical & Electronic Equipment (US exps.)	32	33	59	47	55	79	59	66	77
	(US imps.)	244	213	269	305	421	531	647	794	858
33639	Misc. Auto Parts (US exps.)	97	129	159	289	328	299	451	634	433
	(US imps.)	282	385	542	726	1,118	1,569	2,198	2,685	2,591
3363	Motor Vehicle Parts - Total (US exps.)	193	226	302	441	525	517	669	893	684
	(US imps.)	834	958	1,288	1,671	2,380	3,231	4,319	5,287	5,543
3361	Motor Vehicles - Total, incl. chassis (US exps.)	38	30	64	140	125	300	601	841	1,102
	(US imps.)	2	3	6	19	61	126	174	223	149

Source: U.S. International Trade Commission. Trade Dataweb, based on North American Industry Classification (NAIC) system definitions, 4-digit and 5-digit levels.

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

Vehicle and parts manufacturers also need to contain shipping costs, which reflect fluctuations in the price of oil. According to the Economist, the cost of shipping a standard 40-foot container between Shanghai and America's East Coast, for example, jumped from $3,000 in 2000 to about $8,000 in 2008.71 While the cost of container shipments subsequently declined with the onset of the global recession, the advantage of extensive supply chains may only apply when shipping costs are inexpensive. For all but the most labor-intensive parts, the attraction of low labor costs may not be sufficient to offset the high costs of maintaining a trans-Pacific supply chain. The close proximity between car makers and their suppliers is crucial to better JIT (Just-in-Time) inventory and production management.

The quality of locally sourced Chinese auto parts was not up to expectations in the early years of the Chinese auto sector. Frank Ogden, vice president of global supplier development for the PAC group, a Shanghai based consulting company, was quoted in *Who Really Made Your Car?*, a book on the auto parts industry by Thomas Klier and James Rubenstein, "Only 15 percent of Chinese suppliers can meet those standards ... Problems range from not knowing how to meet a customer's deadlines to inadequate testing of raw materials." Nevertheless, parts quality has improved considerably, as noted by Klier and Rubenstein:

> ... China has seen rapidly improving quality. GM's defect rate for parts in China declined from 2,197 per million in 1999 and 1,397 per million in 2000 to only 23 per million in 2003. In comparison, GM's worldwide defect rate in 2003 was much higher (35 per million) and only slightly lower (22 per million) in the United States.[72]

Shanghai and the surrounding provinces of Jiangsu, Zhejiang, and Anhui are the leading centers for the manufacture of auto parts, accounting for about 40% of total production. Other import parts-manufacturing hubs include Guangzhou, Chongqing and Changchun.[73]

China's domestic automotive-parts manufacturers typically have limited R&D capacity and, as a result, are usually restricted to the production of lower-end products, such as tires, wheel hubs and other labor-intensive products. However, there are signs that the domestic parts manufacturers are trying to move up the value chain. As previously mentioned, in June 2009, Geely announced the acquisition of an Australian company, Drivetran Systems, which may allow Geely to improve its development of gearboxes and move up the technological ladder.[74] The same can be said for BYD Auto Company and other independent producers: as they develop new automotive technologies (such as batteries and electric systems for cars) over time, they could emerge as significant competitors to American companies.

In conclusion, the current U.S. automotive market is still under the shadow of the economic downturn, and the U.S. domestic auto industry continues to restructure. The slump in vehicle sales since late 2008, albeit temporarily relieved by the "cash-for-clunkers" incentives of July and August 2009, has resulted in substantial idle capacity in the United States. In China, however, carmakers and auto parts manufacturers have seen continued growth in domestic auto sales. But global acceptance of the quality and safety of Chinese automobiles remains a challenge for the present. Before it overcomes these issues, the Chinese auto industry is likely to go through a

[71] *Economist Intelligence Unit*, "Industry Briefing: China cars: Export ambitions postponed?" (August 22, 2008).

[72] Klier and Rubenstein, *Who Really Made Your Car?*, p. 323.

[73] *Economist Intelligence Unit*, "Industry Report: Automotive July 2009."

[74] Ibid.

period of consolidation and restructuring—if for no other reason than the current (2009-2011) three-year plan calls for it.

U.S. Policy Issues in Economic Relations with China

With a 5.1% increase in total U.S. imports ($337.8 billion) from China and a bilateral U.S. trade deficit that rose to more than $268 billion in 2008, representatives of the Obama administration, as well as many Members of Congress, would like to achieve more balance in U.S.-China trade relations. Several factors that contribute to the trade deficit are Chinese exchange rate policies that tie the value of the renminbi (RMB) to the U.S. dollar, alleged government subsidies to industrial producers, and high levels of exports of various products into the U.S. market. From the perspective of the Administration, the main effort, so far, besides discussions on exchange rate issues, has been on ensuring that China fully adheres to its World Trade Organization (WTO) commitments, including in the auto sector.[75]

Complicating the U.S.-China economic relationship is China's large holdings of U.S. debt, such as U.S. Treasury securities. Some welcome China's purchases of U.S. debt securities, which help to fund U.S. federal budget deficit, while many policymakers have raised concerns that growing Chinese holdings of U.S. debt may increase China's leverage over the United States on major political and economic issues.

Chinese Auto Sector Commitments

The United States and other WTO members had been highly critical of China's 1994 Industrial Policy for the Automotive Sector. This policy was replaced by a new one issued by the government in May 2004, with provisions discouraging the importation of auto parts and encouraging the use of domestic technology. 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.

The Chinese Automotive Industrial Policy of 2004 abolished many formal restrictions and domestic content rules. However, the U.S. Trade Representative (USTR) expressed concerns about the vague and unclear nature of many statements in the 2004 policy (such as China's plans to regulate imports via its new registration system for auto manufacturers and China's treatment of complete knockdown kits).[76] Moreover, the 2004 policy still required foreign-owned assemblers in China to operate through joint ventures, in which their stake is still limited to no more than 50%.

The Untied 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 was required to abolish as part of its WTO Accession Agreement in 2001. With respect to formal tariff rules,

[75] See CRS Report RL33536, *China-U.S. Trade Issues*, by Wayne M. Morrison, for a full summary of issues and pending legislation; see also USTR, 2009 National Trade Estimate Report on Foreign Trade Barriers.

[76] Executive Office of the President. Office of the U.S. Trade Representative. *2004 National Trade Estimate Report on Foreign Trade Barriers* (April 2004). p.79.; World Trade Organization. "China's Transitional Review Mechanism: Communication from the United States," G/MA/W/58 (Doc. 04-3613, Aug. 31, 2004), p. 2.

China reduced its duties on imported cars and auto parts from much higher levels to a unified rate of 25% on imported vehicles and 10-14% on parts by July 1, 2006.[77]

However, China has subsequently established a regulation, "Measures on Importation of Parts for Entire Automobiles," which appears to have effectively re-established 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.[78]

According to the USTR 2009 Trade Estimates Report:

> These rules impose charges that unfairly discriminate against imported automotive parts and discourage automobile manufacturers in China from using imported automotive parts in the assembly of vehicles. In March and April 2006, the United States, the EU, and Canada initiated dispute settlement proceedings against China at the WTO. In March 2008, a WTO panel ruled in favor of the United States and the other complaining parties, finding that China's rules discriminate against imported auto parts and are inconsistent with several WTO provisions, including Article III of the GATT 1994. China appealed the panel's decision to the WTO's Appellate Body, and in December 2008 the Appellate Body upheld the panel's finding that the measures are inconsistent with China's WTO obligations. In January 2009, China stated that it would comply with the recommendations and rulings of the WTO.[79]

On August 28, 2009, China announced its decision to eliminate additional charges on imported auto parts, effective September 1, 2009. China's decision to comply with the WTO ruling in this landmark case was welcomed by the United States.[80]

Another issue that has been of persistent concern has been protection of intellectual property rights (IPR) in China. In April 2005, after a special review of Chinese efforts to comply with its commitments under the 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.[81] In its *2009 Special 301 Report*, the USTR states:

> China's IPR enforcement regime remains largely ineffective and non-deterrent… The United States also remains concerned by reports that officials, apparently motivated by the financial crisis and the need to maintain jobs, are urging more lenient enforcement of IPR laws.[82]

In April 2007, USTR brought two IPR cases against China in the WTO involving China's IPR enforcement issues and its restrictions on trading rights and distribution of IPR-related products.

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[77] Information from U.S. Dept. of Commerce, International Trade Administration Offices of China Enforcement, and Aerospace and Automotive Industries, Feb. 23 and Sept. 18, 2006.

[78] China has a maximum tariff of 25% for imported cars, but only 10% on auto parts. This new system is to levy higher tariffs on auto parts once the 60% threshold is reached, in effect treating the imported parts as vehicles. Beijing was concerned that foreign automakers could import vehicles in large parts to circumvent the higher tariff.

[79] *2009 National Trade Estimate Report on Foreign Trade Barriers*, p. 78.

[80] See USTR August 31, 2009 press release http://www.ustr.gov; and *The Economic Times*, "China moves to cut tariffs on auto part imports" (August 29, 2009).

[81] USTR, *U.S.-China Trade Relations*—Top-to-Bottom (Feb. 2006), pp. 14-15.

[82] USTR, *2009 Special 301 Report*, May 2009, p. 13.

On June 22, 2009, a WTO dispute settlement panel ruled that important aspects of China's IPR regime are inconsistent with its obligations under the WTO agreement. On August 12, 2009, a WTO panel ruled that major Chinese restrictions on the importation and distribution of copyright-intensive products such as films, DVDs, music, books and journals is inconsistent with its WTO obligations.[83] China said it would appeal the WTO ruling that ordered it to ease restrictions on imports of media products.[84]

IPR issues have created problems for U.S. and other foreign automotive manufacturers operating in China. Most notable was GM's case against Chery, alleging that the local automaker's QQ model was a copy of the Chevrolet Spark, a minicar designed by GM's Korean subsidiary, GM 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. Although terms of the agreement were not disclosed, reportedly Chery has agreed not to use its company name when marketing cars in the United States, because of its similarity to the Chevy trade name.[85]

China's independent carmakers have variously been accused of using reverse engineering and copying of foreign brands and models in pursuit of growth. For the moment, it is questionable whether any of China's independent automakers will be able to make a successful leap to international export markets, because this requires that they produce high quality automobiles and light trucks that meet safety standards and respect the intellectual property rights of other auto manufacturers.

China Safeguard Provisions (Section 421)

As part of the 2001 WTO accession agreement, China agreed to let the United States continue to treat it as a non-market economy for 12 years (codified in U.S. law under Section 421 of the 1974 Trade Act) for the purpose of safeguards. This provision allows the United States to temporarily impose restrictions (quotas and/or increased tariffs) on imported Chinese products that have increased in such quantities that they cause, or threaten to cause, market disruption to U.S. domestic manufacturers. There were six Section 421 cases filed during the administration of George W. Bush, none resulting in sanctions being imposed under this China-specific safeguard provision.

On April 20, 2009, the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union (USW or "United Steel Workers") filed a petition with the U.S. International Trade Commission (USITC) claiming that certain low-priced U.S. imports of passenger vehicle and light truck tires from China have caused or threatened to cause market disruption to the domestic tire producers of similar or directly competitive items, and that the $1.8 billion worth of automotive tires from China had caused the loss of more than 5,000 U.S. jobs.[86] U.S. tire manufacturers did not support the case, while many tire dealers fear a drop-off in demand.[87]

[83] See USTR June 22, 2009 and August 12, 2009 press release and related document at http://www.ustr.gov.

[84] *The Washington Post*, "China to appeal WTO ruling on book, movie imports" (August 17, 2009).

[85] IBM Business Consulting Services, *Inside China*, 2005, p. 13; *Detroit News AutoInsider*, "GM Settles Piracy Dispute with Chinese Automaker" (Nov. 18, 2005); *Wall St. Journal*, "GM Settles Legal Feud with Chinese Auto Maker" (Nov. 18, 2005).

[86] *Wall Street Journal*, "U.S. to impose tariff on Chinese tires" (Sept. 14, 2009); *The Detroit News*, "China challenges (continued...)

In June 2009, the USITC announced that it had determined that such imports did cause or threatened to cause market disruption, and recommended that the Obama Administration to impose duties over three years (55% in the first year, 45% in the second, and 35% in the third). President Obama signed an order on September 11, 2009 to impose increased tariffs on top of an existing 4% duty, effective September 26, 2009. The tariff increase is 35% in the first year, 30% in the second year, and 25% in the third year, lower than those recommended by the USITC.[88]

On September 14, 2009, China requested formal consultations at the WTO into the U.S. tariffs, the first step in the dispute. If China and the United are unable to resolve the issues in 60 days, China may seek a full review by the WTO, which could take months or years to resolve. If China takes such steps and a dispute panel is appointed, this would be the first time a WTO member's action under the China-specific safeguard is subject to a WTO panel review.[89]

Businesses and trade advocates are concerned that the issue could trigger a broader trade dispute which, some believe may lead to a trade war.[90] On September 14, 2009, China launched an investigation into imports from U.S. poultry products and auto parts companies, alleging these imports are being unfairly dumped in the Chinese market and may also involve government subsidies. Although some may view China's move as merely an act of trade retaliation, some trade lawyers and economists have noted that China has become increasingly sophisticated in applying legal strategies in trade disputes.[91]

In this case, the products that China is investigating are politically sensitive in the United States, yet involve limited trade volume and, therefore, limited economic harm. As noted in a *Financial Times* article, "Poultry farmers are a vocal part of America's influential farm lobby, and are particularly aggressive in seeking out export opportunities, because the US market is largely saturated. The manufacturer of cars and car parts is often heavily unionized and located in important Midwest states."[92] With the lop-sided trade balance between the United States and China, some analysts believe China potentially has much more to lose by picking a trade fight with the United States.

(...continued)

U.S. tire tariffs" (Sept. 15, 2009).

[87] *Wall Street Journal*, "Burnt rubber: tire firms decry new tariff" (Sept. 30, 2009).

[88] *Wall Street Journal*, "U.S. to impose tariff on Chinese tires" (Sept. 14, 2009); *Financial Times*, "US tyre duties spark China clash" (Sept. 14, 2009).

[89] *Financial Times*, "China turns to WTO in trade dispute" (September 14, 2009); *The Detroit News*, "China challenges U.S. tire tariffs" (September 15, 2009). For additional information on the WTO China-specific safeguards and the 2009 China tires case, see CRS Report RL 40844, *Chinese Tire Imports: Section 421 Safeguards and the World Trade Organization (WTO)*, by Jeanne J. Grimmett.

[90] *Washington Post*, "Threat of trade war with China sparks worries in a debtor U.S." (Sept. 15, 2009).

[91] *Financial Times*, "China turns to WTO in trade dispute" (September 14, 2009); Bloomberg.com, "China probes 'unfair trade' in U.S. chicken and auto products" (Sept. 13, 2009).

[92] *Financial Times*, "China turns to WTO in trade dispute" (Sept. 14, 2009); Bloomberg.com, "Poultry group blames U.S. for China trade dispute" (Sept. 14, 2009).

China Moves to Investigate U.S. Auto Subsidies

China, reportedly, is also preparing to launch a trade investigation into whether U.S. auto makers are being unfairly subsidized by the U.S. government. Implicit is a threat of higher tariffs on imports of motor vehicles made by GM, Chrysler, and Ford.[93] GM and Chrysler have received $60 billion from the U.S. government in loans, working capital, and other support funds, while Ford has received nothing. The United States exports about 30,000 vehicles to China annually, of which the Detroit Three account for 7,000 to 9,000.[94]

Although the automobile volume in dispute is limited, China's move appears symbolic and may be an attempt to turn the table on the United States, in light of the U.S. government's support for carmakers, banks, and financial institutions. American labor groups and industry associations have long accused China of unfairly subsidizing its exporters.

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[93] *The Detroit News*, "China to probe U.S. carmakers," (Oct. 29, 2009).

[94] *Financial Times*, "China to investigate US car subsidies," (Oct. 29, 2009).