

The Changing Dynamics of the U.S. Auto Industry: Exploring the Impact of International Trade Policies

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Abstract: The U.S. auto industry structure has undergone major changes since the early post-WWII era. Once, the Big Three U.S. automakers completely dominated the U.S. and World auto markets. Today, the positions of the Big Three have shifted, no longer do they overwhelmingly dominate their major competitors. The U.S. auto industry has seen the notable investments of foreign “transplants,” which have built major production facilities on U.S. soil, while simultaneously the Big Three are investing heavily in production facilities in foreign countries, looking for different opportunities such as low cost production and domestic markets. Also, U.S. auto firms are joint venturing with foreign competitors for their local market access, to learn their Know-How, etc. This paper explores how international trade and trade policies have impacted many of the changes in this industry.

Keywords: Automotive industry, Trade policies, Changing U.S. Auto industry, Auto transplants

1 Historical Background of U.S. Auto Industry

In the post-WWII period, the U.S. was the only major country that had undamaged modern plants and equipment. During the war period, the U.S. had pushed “mass technology to new heights” (Porter 1990). There was a skilled labor force and pent up consumer demand. Everything, according to Michael Porter, set the stage for the development of a successful auto industry. It was during this period that the Big Three (General Motors, Ford and Chrysler), accompanied by the much smaller American Motors, Studebaker-Packard and Kaiser, completely dominated the U.S. auto market. Only a few specialty luxury and sports cars along with Volkswagen’s Beetle had even a small niche in the U.S. marketplace (Cooney and Brent 2005).

Porter (1990) speculates that success may have come too easily for the U.S. auto industry. With little viable competition, it developed an “invincibility” mentality. This is evidenced by the “What’s good for the country is good for General Motors, and vice-versa.” statement voiced by the chairman of General Motors (GM) in the 1950’s. At that time GM produced more than half of all automobiles sold in the U.S.

In the early 1950’s a few imported basic VW Beetles were sold in the U.S.; later more deluxe Beetles were designed for and sold in the U.S. The VW transporters (bus), while never as popular as the Beetle, were popular with the young “hippie” segments of the population in the 1960’s.

During the 50’s and early 60’s, the Japanese were also beginning to export a few small low priced small cars to the U.S. The Japanese, working with a tight labor market and a high-priced yen, focused on technology and efficiency. These efforts resulted in significant improvements and innovations which later allowed Japan to develop high performance quality automobiles such as the Lexus, Acura, and Infiniti. As late as 1979, the Big Three produced almost 80% of consumer vehicles sold in the U.S. (Cooney and Brent 2005).

Between 1998 and 2007, the Chrysler division was acquired and controlled by German DaimlerChrysler, but was acquired by another U.S. firm, Cerberus Capital Management in 2007 (Lee and Anderson 2008, p. 43), returning to the U.S. Big Three again.

Table 1 Total Auto Production per company (2006 and 2007): Mexico

Period	Chrysler	Ford Motor	General Motors	Honda	Nissan	Toyota	Volkswagen	Total
2006	313,387	349,910	502,544	24,262	408,439	33,209	347,020	1,978,771
2007	283,960	304,137	457,667	26,374	498,288	32,249	409,566	2,022,241
Dif % Jan- Dec 07/06	-9.4	-13.1	-6.9	-8.7	22.0	-2.9	18.0	2.2

Source: Mexican Association of Automobile industry (Asociación mexicana de industria automotriz a.c.; 2008) [Available at: <http://www.amia.com.mx>] Accessed on January 24.

2 Salient Trade Partners and Policies

2.1 North American Trade Policy

The North American Free Trade Agreement (NAFTA), the landmark trade agreement among the U.S., Canada, and Mexico was implemented on January 1, 1994. Designed to gradually remove trade barriers among the three countries within 15 years, the Agreement covered market access through tariff and non-tariff barriers, rules of origin, and government procurement (Daniels and Lee 1998).

NAFTA prompted the Big Three U.S. firms to open auto assembly facilities in Mexico and to a lesser extent in Canada. The lower labor costs in Mexico led to massive investments throughout Mexico by Ford, General Motors and Chrysler. Opening these facilities meant that domestic car production in the U.S. declined from 6.6 million to 5.6 million units between 1994 and 1999. As domestic production declined, imports from NAFTA partners increased. According to Cooney and Brent (2005), NAFTA partners now supply almost half of “all U.S. vehicle imports and more than 50% of all parts imports” (p. 53). Slightly more than 13% of vehicle imports came from Mexico, up from 5% in 1990. This increase is due not only to the Big Three U.S. auto firms increased investment in Mexico but also, in part, to the number of foreign owned competitors such as Honda, Nissan, Toyota and Volkswagen, who have established assembly operations in Mexico, as a gateway to the North American markets. Tables 1 and 2 show recent figures for Mexican auto production and auto exports per company in 2006 and 3 quarters of 2007. Table 1 shows both Nissan and Volkswagen are projected to increase production, while the Big Three, Honda and Toyota will have lower production.

As Table 2 shows, Nissan, Toyota and Volkswagen are seeing increases in exports, while the Big Three, Honda and Renault are experiencing decreases. This may be a result of the Free Trade Agreements Mexico has ratified with Japan in 2005 and the European Union in 2000 (Lee and Srivastava 2008).

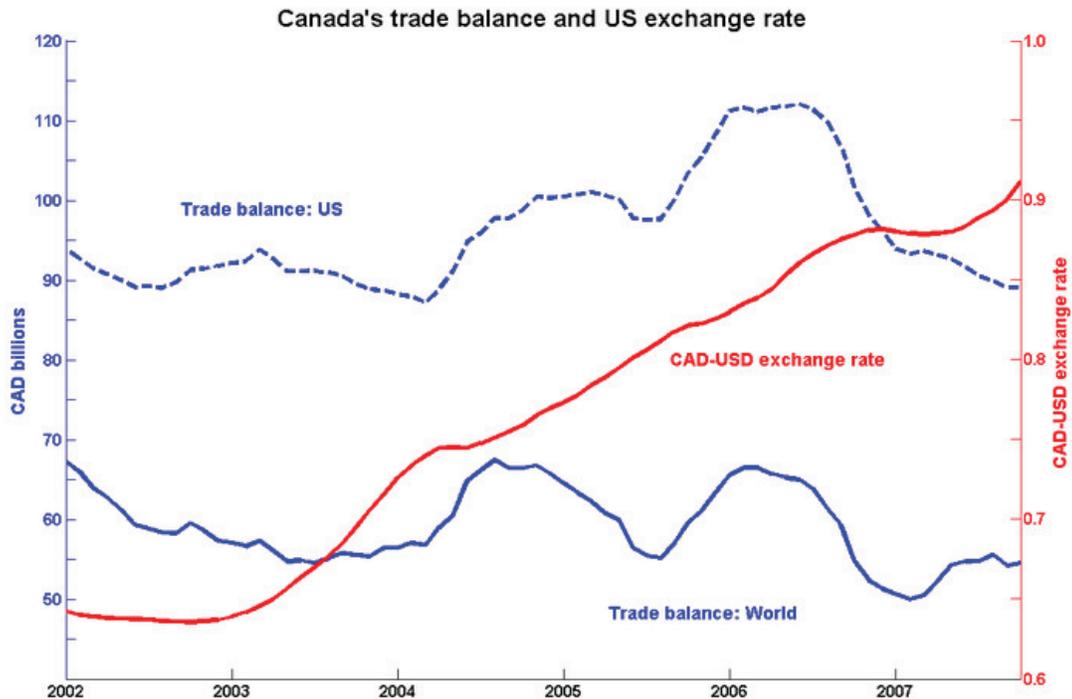
Imports from Canada in 2004 were about 50% greater than both Japan and the European Union and accounted for over 30% of all imports. The trade balance between the U.S. and Canada has been impacted by the exchange rate between the U.S. and Canadian dollars as illustrated in Graph 1.

Table 2 Total Auto Export per company (2006 and 2007): Mexico

Period	Chrysler	Ford Motor	General Motors	Honda	Nissan	Renault	Toyota	Volkswagen	Total
2006	303,441	302,780	412,807	15,107	208,820	138	10,111	283,564	1,536,768
2007	272,109	263,452	383,943	15,755	314,269	83	32,249	331,453	1,613,313
Dif % Jan – Dec 07/06	-10.3	-13.0	-7.0	4.3	50.5	-39.9	218.9	16.9	5.0.

Source: Mexican Association of Automobile industry (Asociación mexicana de industria automotriz a.c.; 2008) [Available at: <http://www.amia.com.mx>] Accessed on January 24.

Graph 1.



Source: Statistics Canada (2007) *The Daily*, December 12. Available at www.statcan.ca/

For over 30 years the exchange rate between the U.S. and Canada was relatively stable. The recent currency crunch is the latest round of trouble for Canada's parts suppliers. The Big Three buy almost 90% of Canada's parts, so the entire Canadian parts industry is suffering (Sherefkin 2007).

In 2006, Ford Canada is reported to have produced fewer vehicles than it sold last year, which is the first time this has happened since 1961 according to Greg Keenan (2006). In earlier times, this would have been in violation of the Canada-U.S. auto pact. However, this auto pact was overruled by the World Trade Organization (WTO) in 1999. For the first time in many years, Canada is now a net auto importer.

2.2 Japan Trade Policies

Trade policies between the U.S. and Japan are rooted in the trade imbalance between the two countries. In the early 1980's U.S. auto manufacturers pressed Congress to enact legislation that would have put quotas on imports from Japan. Instead, the Reagan White House pressured Japan to institute voluntary export restraint (VER). The result was that Japan limited exports to the U.S. to 1.68 million units for one year. These export restraints (with slight modifications in numbers) were extended for several years. As desired by U.S. auto manufacturers and in response to these quota limitations, Toyota, Honda, and Nissan all established "transplant" manufacturing facilities in the U.S. The U.S. automakers who favored this thought that if foreign competitors were forced to produce autos in the U.S. they would be dealing with the same cost structure and employees that the Big Three had. This was envisioned as a way to level the playing field. Unfortunately for the Big Three, things didn't quite work out as envisioned. The United Auto Workers (UAW) was not successful in unionizing the foreign transplants, and the transplants never quite had the same cost constraints as the Big Three. The official trade restraints were eventually lifted, but Japan continued limiting the number of exports for the U.S. for several years.

The U.S. has had a trade deficit with Japan for many years. For example in 1987 the deficit was \$57 billion. The U.S. exports a variety of raw materials and manufactured goods to Japan, while Japan's major exports to the U.S. are motor vehicles and parts. The Structural Impediments Initiative (SII) was initiated in 1989 and each country committed itself to structural reforms. Japan indicated a willingness to investigate its distribution system, exclusionary business practices, keiretsu, land use policies and savings/investment patterns. In turn, the U.S. agreed to try to improve its savings and investment rates, export promotion efforts, research and development, and workforce and training efforts. At the 1992 Tokyo summit U.S. President Bush and Japan's Prime Minister Miyazawa agreed to make their economies more open to the world and to work to build sustainable trade relationships.

The cornerstone of current trade policy with Japan was developed under President Clinton through the July 1993 Framework Agreement. The Agreement focused on three aspects of the U.S. – Japan economic relationship: 1) macroeconomic, 2) structural and 3) sectoral. The macroeconomic factors included exchange rates between the yen and dollar and differences in savings rates and investment as a percentage of GDP. These macro factors were, and continue to be, believed to be the cause of trade imbalances of the U.S. and Japan. Structural aspects included Japan's willingness to consider a changed way of thinking that would view increasing imports from the U.S. as a positive. To the U.S. auto industry the most salient was sectoral focus, which included specific guidelines for trade in the auto industry among others.

Based on the Framework Agreement in August 1995, the U.S. and Japan signed the Auto and Auto Parts Agreement. This agreement resulted in the Big Three and Japanese transplant producers exporting over 140,000 U.S.-made vehicles to Japan – up 40% from 1994 (Council of Economic Advisers 1996).

2.3 European Trade and Policies

The EU has historically exported both cars and parts to the U.S. and since 1990, U.S. autos imports from EU (mostly Germany) have increased more than imports from Japan – the competitor of most concern to the Big Three in recent years. The EU is challenging Japan for second place behind Canada in auto exports to the U.S. On the other hand, U.S. exports of vehicles and parts to the EU is over five times the amount exported to Japan.

European auto companies have also built several facilities in the U.S. As the U.S. dollar weakens against the Euro, EU auto makers look at producing autos in the U.S. as a low cost alternative. Mercedes opened its first U.S. facility in the mid 1990's and is expanding – doubling its employment since 2001. BMW has only one plant, but has capacity to build over 200,000 vehicles per year at the Spartanburg, South Carolina plant (Chon and Stephen 2007).

2.4 Other Countries and salient policies

Korea, the most restrictive market in terms of U.S. exports, is becoming a more significant factor in the U.S. auto trade deficit. In 1998 the U.S. signed a memorandum of understanding (MOU) with South Korea with the aim to make Korea's markets more accessible to U.S. auto makers. Unfortunately, the MOU has not resulted in an opening of the market. In 2003, U.S. auto makers exported fewer than 20,000 units to Korea, while Korean exports to the U.S. have increased dramatically. Korea's Hyundai was the fastest-growing carmaker in the U.S. from 2000- 2005. In 2005 it opened its \$1billion manufacturing facility in the U.S. with the goal of selling 1 million autos in North America by 2010 (Kiley 2007).

China, who is becoming of more concern to U.S. manufacturers, thus far has not been a major global player nor has it played a salient role in the U.S. trade deficit. There have been no major vehicle imports from China. While Chery plans to export to the U.S., this has not as yet come to fruition.

India's automobile industry has been targeted as one of its key industries (Lee and Beverlee 2008, pp. 43 – 44) and launched the world's cheapest four-wheeled passenger vehicle "Nano" at US\$2,500 by its local auto company Tata Motors in January of 2008 (Bidwai 2008). The same may cause a challenge to world's small car companies including Chevrolet of General Motors and others.

3 Current Snapshot of U.S. Auto Industry

The Big Three still produce the largest number of autos in the U.S., but the structure of the industry has changed. Tension has been created as international competitors have opened production facilities in the U.S. These (transplants) from Japan (Honda, Nissan, and Toyota), Germany (Mercedes and BMW), and Korea (Hyundai) initially built U.S. production facilities to substitute for importing from their home countries. However, now, particularly since September 11, 2001, the transplants can use their U.S. factories as a positioning strategy. This has also caused a bit of confusion as to exactly who or what is a U.S. automaker since the Big Three are shifting production to lower cost countries.

The U.S. automakers [Big Three] are struggling with an ever-diminishing market share and have been accused of being “on the wrong side of every environmental, safety and social issue, from opposition to the Clean Air Act, corporate average fuel economy (“CAFÉ”) standards and. . . slowness in developing alternative fuel vehicles. . .” (Cooney and Brent 2005). The Big Three have also failed to bridge the gap with their Japanese counterparts on quality, reliability, product design, production, and cost efficiency (Regassa and Ahmad 2007).

American automobile manufacturing is facing significant challenges: increased competition in the marketplace, declines in consumer buying power, macroeconomic challenges related to the declining value of the dollar, increasing oil prices and, costs associated with benefits for current and retired employees. The automotive industry, with its large obligations for retiree health benefits, in some cases as much as \$1,500 per vehicle, sought a more level playing field. The recent negotiations with the UAW union on health benefits have been of critical importance to the Big Three. The agreements reached on Voluntary Employees Beneficiary Association (VEBA) may allow the Big Three to return to more equality with their competitors regarding costs. And recent court rulings that employers can legally change differentially health care benefits for retired employees will give auto makers more latitude. However, most of the foreign transplant producers have continued to avoid unionization. This is of particular concern to the UAW.

Production of autos in the U.S. has been declining in recent years, a decline of approximately 7% between 2000 and 2005 according to the Organisation of Motor Vehicle Manufacturers (OICA) as cited by Business Monitor Online (2007). Since 2005, production has fallen almost one million units, however the decline was due to a drop in production of commercial vehicles rather than passenger cars. Unit sales have also declined. Between 2005 and 2007 sales of new autos fell from 16.99 million units in 2005 to a projected 16.46 in 2007 (Business Monitor Online 2007). The decline in sales is, in part attributable to the decline in housing prices, the credit crunch, the subprime mess and corresponding drop in financial markets, the uncertainty of the job market and other negative economic news.

3.1 Competitive Landscape

U.S. carmakers’ product portfolios have contributed to their decline by not keep pace with consumer demand. The U.S. automakers product portfolios have been heavy with trucks and SUVs, the products that have seen the largest drop in sales. In contrast, the Asian and European competitors have emphasized passenger cars. These differing portfolios have received different consumer responses. U.S. consumers currently want fewer trucks and gas using SUVs. Ford, due to its focus on its F-150 pick-up truck (sales fell 12% in 2006) and its Explorer SUV (25% drop in sales), experienced major losses and is not expected to make a profit until at least 2009.

Table 3 shows that total new car sales in the U. S. declined by 2.8% in the y-o-y Jan- September sales period and most of the decline was felt by the Big Three auto makers; all three experienced declines in sales y-o-y. All foreign auto makers with the exception of VW had increasing sales. In 2007, Toyota replaced Ford as the number 2 selling make in the U.S. BMW moved up one place and now sells more new cars than Volkswagen.

Both Honda and Toyota will open North American production facilities in 2008 to support the rapidly growing demand for their products (Business Monitor Online 2007). There is some concern that the

Table 3 U.S. Auto Sales Y-0-Y for 2006 and 2007

Group	Jan-Sept 2006	Jan-Sept 2007	% Change	Market Share % 2007
General Motors	3,139,881	2,934,094	- 6.6	23.76
Ford	2,273,808	1,970,942	-13.3	15.96
Toyota	1,928,496	2,001,646	3.8	16.21
Chrysler	1,627,948	1,578,823	- 3.0	12.79
Honda	1,160,510	1,193,520	2.8	9.67
Nissan	776,364	813,053	4.7	6.58
Hyundai-Kia	581,256	490,450	1.6	4.78
VW	247,445	246,517	-0.4	2.00
BMW	230,103	248,500	8.0	2.01
Others	742,606	770,154	3.7	6.24
Total	12,708,417	12,347,699	-2.8	100.00

Source: Automotive New Data Center as cited in "United States Autos Report Q3 2007", Business Monitor International Ltd.

industry will have over capacity and need to cut back on production in the near future. For example Hyundai cut back is U.S. production at the end of 2007 and the Big Three are all cutting back on production so they don't have to offer large discounts to get rid of unsold vehicles (White 2007).

The Big Three are also making efforts to improve their cost structure. General Motor's goal is to cut is structural costs to about 25% of revenue by 2010. For example, they will offer a buyout program to about 5,200 U.S. workers with the goal of hiring a new generation of lower-cost workers (Stoll 2007).

The pressure is on car companies to push fuel saving innovations, safer autos that are environmentally friendly. They also need to come up with "exciting products that consumers want to buy" (Jones 2006). The Big Three also need to confront consumers' perceptions that the quality of U.S. autos is not as high as foreign makes. U.S. consumers want affordable luxury and the carmaker that produces the most luxury at an affordable price will likely get their business. To be successful in the future, U.S. carmakers must focus on the ever-changing consumer and what future consumers value.

4 Conclusions and Recommendations

Trade policy has played a significant role in the structure of the U.S. auto industry. Many of the policies and agreements have been formulated with the support of the U.S. automakers. The Big Three were in favor of free trade, based on the belief that open markets would allow them to continue to dominate the world market. Based on their previous dominance, they did not anticipate that open markets would open the way for foreign competitors to enter the U.S. and world markets. In retrospect it appears that the Big Three had faulty assumptions, perhaps based on arrogance. In the 1950's and 1960's it was difficult to envision a market where foreign automakers would take almost half of the U.S. market and that General Motors would share the top automaker position with Toyota, as happened in 2007.

The trade policies and free trade agreements the U.S. has made have been good for consumers and have brought fierce competition to the auto industry. The competition has stimulated the development of better, safer, and more environmentally friendly auto offerings to the market. Open markets mean that success will depend on the products and services offered by the automakers. The playing field is becoming more level. However, trade policies will likely continue to have a major role in making the field more level. The U.S. automakers would benefit from the U.S. trade representatives' continued pressure to reduce barriers to selling and producing autos in foreign countries, such as Korea.

World automakers have built large production facilities in anticipation of growing markets. Some suggest perhaps there is or will be overcapacity in the industry. This capacity was built based on the assumption of free trade agreements among producing and consuming countries. If there are impediments to trade, the structure of the industry will likely change and adapt to the new constraints. There will likely be new entrants and current players' positions will shift due to innovations and positioning. Auto makers must continue to monitor trade policies and be prepared to adjust strategies based on the changing nature of trade and trade policies.

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