

***ROAD MOTOR VEHICLES:
Trends in Trade
1990 — 2005***

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Road Motor Vehicles: Trends in Trade 1990 —2005

□ Highlights

The United States' international trade in road motor vehicles (RMV) produced a deficit every year during the review period, nearly doubling in real terms to reach \$102 billion. The imbalance appears to have stabilized somewhat over the past few years, but this situation won't prevail. The deficit is the product of three persistent major forces – (1) systemically weak export efforts coupled with an open and lucrative home market that has grown robustly, (2) the ongoing restructuring of the auto industry, and (3) adverse government policies – especially in the developing economies.

This study reports that —

- The USA, the world's largest market for new motor vehicles, was worth \$470 billion in 2005. Domestic sales represented one-fourth of the estimated 2005 global total of 66 million units.
- The U.S. is the world's 4th largest exporter, with 2005 shipments of \$41 billion equal to 7% of all global exports. U.S. exports increased 142% in real terms during the review period.
- The Top 5 U.S. markets in 2005 – Canada, Mexico, Germany, Saudi Arabia, and the U.A.E.– absorbed 78% of all U.S. outbound motor vehicles shipments. The Top 10 accounted for 86%.
- Without Canada and Mexico, 2005 exports totaled \$15.8 billion, yielding a world rank of 10th overall, \$6 billion behind Mexico – whose exports, like Canada's, go mainly to the USA.
- In 2005, U.S. imports reached \$143 billion, 26% of the world's total shipments. Canada, Japan, Mexico, Germany, and Korea supplied 92% of U.S. imports.
- 47% of all imports came from Canada and Mexico in 2005, a long-standing pattern that evolved from old, restrictive, but now defunct policies in those countries that tightly controlled imports and required local investments in order to gain and maintain access to their markets.
- Even without inbound shipments from Canada and Mexico, the U.S. is still the world's largest importer, \$34 billion ahead of the second place U.K.'s \$42 billion.
- Japan's share of the U.S. vehicle trade deficit fell from a 58% high in 1991 to 34% in 2005. However, the bilateral deficit with Japan continues to grow, reaching \$34.5 billion in 2005.
- Despite ongoing U.S. efforts to dismantle market barriers around the world, there is little reason to believe that the United States ever will see a surplus in its motor vehicle trade.
- Within a few years, new suppliers will contribute significantly to a growing U.S. RMV deficit.

Overview

In 1990, the United States shipped road motor vehicles (RMVs)— both new and used – to 163 countries.¹ America imported similar vehicles from a total of just 39 countries and generated a surplus with 26 of them. Nonetheless, the net result was an overall constant dollar trade deficit of \$53.6 billion. By 2005, the U.S. shipped vehicles to 202 countries, while importing from 45. Of the latter, the U.S. had a surplus with 32. The overall deficit reached \$102 billion. In constant dollar terms, the 2005 deficit was 90% larger than 1990's, having increased at a compound annual growth rate (CAGR²) of 4.4% throughout the period.

On a somewhat more positive note, motor vehicle's share of the U.S. merchandise trade deficit declined measurably during the review period, but only because the latter grew at a CAGR three times faster – 13.7% in real terms, reaching \$766.6 billion. This dropped the vehicle share of the overall merchandise deficit from 48% to 13%. In similar fashion, the vehicle share of the non-petroleum related merchandise deficit (i.e., all commodities except mineral fuels, HTS 27) fell from 93% to 20%. The 'non-petrol' deficit grew at a CAGR of 15.6%. [Graph 1](#) in [Appendix 1](#) shows the relationship between the motor vehicle deficit and the total commodities trade balance. [Table 1](#) in [Appendix 2](#) details the progression of the RMV deficit in current and constant dollars.

RMV exports actually grew at a higher CAGR than did imports during the period under review. Export advanced 6.1% per year in constant dollars, while imports averaged 4.8% growth annually. This dampened the deficit's rate of expansion, but did not reverse it.³ Trend analysis suggests that the deficit will total \$120 billion by the end of 2006, which would be 17% larger than in 2005. In fact, the deficit gained 14% in the first six months of this year, reaching a total of \$55.4 billion.

This situation reflects three major characteristics of the domestic motor vehicle industry. First, exporting beyond North America always has been only a minor component of the assemblers' business plans. Historically they relied almost exclusively on the home market, the world's largest, to sustain them. The USA accounted for 29% of the estimated 48.8 million new vehicles of all types sold worldwide in 1990, and for 26% of the estimated 2005 total of 66 million units⁴. Focusing almost exclusively on the home market, American manufacturers developed a product mix that appealed – and still appeals – to few other markets. Those markets were considered just too small to justify, relative to the profit potential of the home market, any concerted effort to design and produce in the USA vehicles specifically intended for them. American firms did, however, build or acquire assembly plants in overseas markets – especially Europe and more recently, Asia – to pursue opportunities for generating incremental profits.

Secondly, the local market not only is the world's largest (at least for the near term), it also is the most lucrative (most likely for the long term), annually absorbing a rich mix of vehicles, some with extraordinarily high profit margins for the manufacturers. U.S. sales accounted for about 40% of all estimated global sales of passenger vehicles units in 1990, and for 38% of the 44.3 million units sold globally in 2005, according to Automotive News' Market Data Book. The Commerce Department's Bureau of Economic Analysis estimates that the final transaction value of new motor vehicles sold in the USA was \$471 billion in 2005, up 83% in real terms since 1990 on a growth rate that has

averaged 4% per year, compounded, since 1990.⁵ Consequently, our market attracts foreign suppliers in droves. In 2005, 24 foreign affiliated high-volume car and truck producers have either invested in or focused on exporting to the United States – and many firms do both. Imports supply about 35% of the U.S. market on average, with half of that coming from non-NAFTA plants.

Finally, there is ongoing consolidation of the industry on both a local and global basis. The auto industry is consolidating, coalescing through both M&A efforts and via collaborative agreements, in an effort to create greater economies of scale than the competition enjoys. In the early 1960s there were some 100 exclusively independent vehicle manufacturers scattered around the globe. In 2005, seven alliances representing some 26 large volume manufacturers produced 75% of the world's output.⁶ While these seven groups probably still will be operating in 2010, and probably will continue to represent 75% of the world's output, where they produce the majority of those vehicles will have shifted significantly.⁷

Each cluster is struggling to gain the upper hand in an arena that features closely matched teams fielding similar, essentially interchangeable product lines. The battle is compounded by the existence of too much, too expensive, and too fixed investment in assembly capacity (often estimated to be on the order of 20 million units worldwide, the equivalent of about 80 assembly plants), coupled with a shift in focus from the nearly-saturated developed markets, save for the United States, to the emerging economies that sport vehicle markets that are growing much more quickly.

This consolidation was fueled by a change in the industry's business model that has emerged aggressively in past 10 years, but which was, in fact, present even in the earliest years of the industry's emergence. This was the realization that scale economies that might derive from large plants in a single country serving global markets are not as significant as the economies that derive from localizing production in large markets (or within clusters of proximate smaller markets), and from simplifying product complexities through using identical subassemblies across multiple product lines. Thus, the phenomena we witness today: American manufacturers closing home market plants, even while they strive to increase manufacturing abroad, and even as foreign manufacturers invest in plants in the United States and also ship more vehicles here.

American Exports Don't Lead the World...

By a wide, but shrinking margin, the United States is the single largest market and the single largest producer of road motor vehicles. It is not, however, the single largest exporter of these products. Data from Automotive News indicates that local U.S. motor vehicle sales accounted for 28% of estimated global sales of 50.6 million vehicles in 1990, and for 26.5% of the 66.2 million estimated units sold globally in 2005.⁸ Ward's Automotive Reports' World Motor Vehicle Data Annual estimates that the United States produced 17.7% of the 67.7 million vehicles assembled worldwide in 2005, down from 20.2% of 48.6 million in 1990.⁹

Between 1990 and 2005, the United States never ranked higher than fourth in its share of the total dollar value of world exports of motor vehicles,¹⁰ according to current-dollar trade data available

from the United Nations¹¹ and from Global Trade Information Service (GTIS).¹² Table 2 provides details for 1997, 2001, and 2005.¹³

There is a considerable gap between the United States fourth place export ranking and first place Germany. In 1997, the latest year of comprehensive global data, Germany accounted for nearly 20% of all cross-border shipments, while the U.S. was credited with 8%. The U.S. fell to fifth behind France in 2001, and did not regain fourth place until 2005, when it supplied 7% of global exports. Germany overtook Japan for first place in 1995, while Canada has managed – on the strength of its shipments to the United States – to hold third place devoid of interruption throughout the period. However, without the U.S. market, Canada would rank just thirty-first in 2005 with shipments of \$828 million, trailing Denmark by \$130 million. On the other hand, without shipments to Canada, the United States would fall to tenth place in 2005; \$772 million behind Mexico's export shipments of \$21.7 billion. However, most of Mexico's shipments, 85% in 2005, are headed for the United States. Table 3 points out the weakness of all three North America Free Trade Association (NAFTA) partners for exporting anywhere but to each other.

...But, Our Imports Do

The United States, the world's largest economy, is also the world's largest importer of road motor vehicles. The margin, however, is shrinking as other nations take a larger share of an expanding pie. Table 4 shows that in 1997, the USA absorbed 31% of the \$285 billion (current dollars) of road motor vehicle imports reported by 43 countries to GTIS. In 2005, the U.S. share was 27% of \$546 billion reported by 75 countries. Germany, the world's sixth largest economy in 2005 based on purchase power parity reported by the CIA,¹⁴ was the second largest RMV importer in 2005, but at a considerable distance, taking 7% of the reported total. Germany's 1997 share was 10%. In units, the United States imported 6.7 million vehicles in 2005, the equivalent of 39% of a 17.5 million-unit market for new passenger and commercial vehicles. By contrast, Korea imported 79,000 vehicles in 2005, 6.7% of its 1.2 million-unit market. Japan's imports of 277,000 units equaled 4.7% of its 5.9 million-unit market. China's reported imports of 161,000 units in 2005 equates to 2.9% of its estimated market of 5.5 million vehicles.¹⁵

...Producing The World's Largest, and Still Growing, Deficit

Not only is the U.S. road motor vehicle deficit the world's largest, it continues to grow, increasing by an average 4.4% a year throughout the review period. Available data suggests the deficit may accelerate at a rate of 9.7% for 2006, reaching \$112 billion. The deficit probably will continue upward to \$122 billion in 2007, a further gain of 9%. However, not all product segments will fare poorly. The Office of Aerospace and Automotive Industries (OAAI) tracks 10 motor vehicle product categories to analyze U.S. international trade, primarily using custom groupings of 10-digit Harmonized Tariff Categories that emulate the U.S. market. Table 5 shows that in 2005, six of these categories had a positive balance, and probably also will report similar results in 2006/7. Even so,

their contribution to the overall balance is quite modest. In fact, the deficit in the passenger vehicle and light truck category in 2005 was 25 times larger than all of the surplus categories combined.

Light vehicle imports grew significantly throughout the review period, increasing at a CAGR of 4.8% in real terms to a total of \$136.2 billion dollars, closely tracking growth in the domestic market. At the same time, weakness in many foreign markets, intense competition in the home market, historically weak export efforts by the indigenous manufacturers (which include discouraging their licensed dealers from exporting on their own accord), and unfavorable exchange rates have markedly restrained U.S. exports of light vehicles – with the exception of large-volume shipments to Canada and Mexico, and of limited-volume, high-value niche product exports to a few other markets. In absolute terms, the constant dollar deficit in light vehicle trade increased by 92%, rising from \$54.6 billion in 1990 to \$104.8 billion in 2005. On average, the deficit increased by an average of 4.4%, compounded, each year. In the first nine months of 2006, the light vehicle deficit rose 10.2% over the same 2005 period, reaching \$82.3 billion. Somewhat encouraging, exports gained nearly 16%, totaling \$25.98 billion, while imports increased 11.5% to \$108.2 billion.

A Multitude of Trading Partners

In 1990, trade with 13 of 163 countries accounted for the entire vehicle trade deficit, \$41.7 billion (\$53.6 billion in constant 2005 dollars): Australia, Belgium, Brazil, Canada, Germany, India, Italy, Japan, Korea, Mexico, Sweden, the United Kingdom, and Yugoslavia. In 2005, 13 countries again accounted for the total deficit, \$102 billion, but the total count of trading partners had risen to 202 and some of the deficit-generating partners had changed. Gone were Australia, Brazil, and India. Added were Austria, Hungary, and the Slovak Republic.¹⁶

In 1990, trade with 150 partners generated a U.S. surplus of \$2.8 billion that helped to reduce the total deficit. In 2005, trade with 189 countries helped to erase \$9.4 billion of the overall deficit. Trade with the top 5 suppliers in 2005 – Canada, Japan, Mexico, Germany, and Korea – was equivalent to 91% of the 2005 total deficit, and for 97% of the deficit on average throughout the review period. The deficit with the top five grew at a combined, constant dollar CAGR of 3.9%, while the deficit with the rest of the world increased at a rate of 4.2% annually. Current dollar deficits generated by trade with the ten largest suppliers are shown in [Table 6](#).

NAFTA — On average, 45% of the entire U.S. global motor vehicle imbalance each year is represented by trade with Canada and Mexico. American, Japanese, and German producers have factories in these countries that ship substantial volumes to the United States, while importing far fewer vehicles from the United States. In 2005, 47% (\$66.5 billion) of all U.S. motor vehicle imports came from Canada and Mexico, while U.S. exports to these markets (\$25.2 billion) accounted for 61% of total U.S. shipments abroad. Because most motor vehicle trade with our two neighbors is denominated in U.S. dollars, the imbalance has little impact upon U.S. foreign exchange reserves (but neither do these imports generate tariff revenue since they enter the U.S. duty free).

Subtracting U.S. trade with these two countries in 2005 from the global trade account lowers the apparent road motor vehicle trade deficit to \$60.6 billion dollars, a reduction of \$41.4 billion. However, the dollar ratio of imports-to-exports worsens, increasing to 4.8-to-1, compared with a 3.5-to-1 ratio when NAFTA trade is included in the equation. (I.e., for every \$3.50 worth of motor vehicle imports from abroad, the U.S. exports only \$1.00.) This occurs because the U.S. deficit with Canada and Mexico, while two-thirds the size of the deficit with all other countries combined, exhibits a trade ratio of 2.6-to-1. Said more directly, the U.S. exports next to nothing to most other trading partners with whom we have a deficit, compared with the amount that is imported from them. For example, the ratio with Japan in 2005 was 62.9-to-1, while with Korea it was 74.3-to-1.

Our trade imbalance with both Canada and Mexico primarily is the result of old, restrictive policies in both of those countries that had controlled imports and had required local investment and exports by foreign manufacturers seeking access to their markets. Led by the Detroit 3, and joined later by Asian and European assemblers, the dictates of scale economies and local government fiat resulted in the building of plants in both countries that were larger than could be justified by the local markets alone.¹⁷ If U.S. firms had not been “persuaded” by those governments to produce in their countries, our total trade deficit today would be much smaller.

The United States succeeded in eliminating those trade-distorting practices by negotiating the U.S.-Canada Automotive Products Trade Agreement of 1965, the 1989 U.S.-Canada Free Trade Agreement, and the 1994 NAFTA Agreement that embraced Mexico. While the several agreements have helped to raise economic standards in all three countries, the United States remains by far the largest of the three motor vehicle markets. Consequently, the vast majority of vehicle output in both of our partners remains focused on the United States – and one can reasonably expect that the NAFTA deficit will continue to grow far into the future. The Detroit automakers have announced that a large number of U.S. plant closings will occur between 2006 and 2010, eliminating an estimated 1.7 million units of vehicle assembly capacity, according to Ward’s Automotive Reports. Current plans to increase capacity in Mexico and Canada, to take advantage of perceived lower direct compensation and benefits costs in both countries, apparently have not been affected.

Japan — The imbalance with Japan has been declining as a share of the total deficit, dropping at a CAGR of 2.6%. It now represents 34% of the U.S. global deficit, equal to \$34.5 billion in 2005. That’s the good news. The bad news is that the deficit with Japan itself has grown at a compounded rate of 1.7% annually. Thus, Japan’s share of the total deficit has declined only because the deficit with other countries has grown faster. Imports from Japan rose and fell several times during the review period, hitting a low of \$22.4 billion constant dollars in 1996 before reaching its 2005 high of \$35 billion. On average, growth has equaled 1.5% compounded annually, in real terms. U.S. exports to Japan declined at a CAGR of 4.8% in real terms during the review period. Imports fell every year following the peak in 1995 of \$3.6 billion constant dollars, until reaching their lowest level in 2004, \$485 million. Exports rebounded slightly in 2005 to \$557 million.

Germany — From a low of \$3.8 billion in 1991, the bilateral deficit with Germany has grown steadfastly ever since, reaching \$16.7 billion in 2005, reflecting a compounded average growth rate of 6.4% throughout the period. Imports from Germany increased at CAGR of 6.9%, reaching \$20.4 billion. Thankfully, U.S. exports to Germany grew at a CAGR of 11.8%, second only to the

U.K. (12.4%) among the major European markets for U.S. exporters, reaching \$3.7 billion in 2005.

Korea — Our fastest growing deficit partner among the top 5 suppliers, Korea has increased its exports to the United States at a CAGR of 12.9%, reaching a total of \$8.8 billion in 2005. U.S. exports to Korea grew at a rate of 4.9% annually, totaling \$118 million in 2005, producing a deficit of \$8.6 billion. The imbalance has grown a compounded annual rate of 13.1% since 1990.

Top Markets for U.S. Exports

U.S. exports of all classes of road motor vehicles expanded 140% in absolute, constant dollar terms during the review period, reaching \$40.9 billion in 2005. Growth averaged 6% per year, compounded, throughout the period. However, since 2000, U.S. exports have grown at an average, compounded, annual rate of 9.4%. The top tier customers, comprising the 5 countries in [Graph 2](#), absorbed 78% of all American RMV exports in 2005. This was 4 points lower than in 1990, the result of a new mix of key customers and in increase in accounts from 163 to 202 countries.

U.S. exports predominately are destined for Canada and Mexico – more precisely, Canada. Shipments to the two represented 62% of all U.S. exports in 1990; 61.5% in 2005. Between 1990 and 1999, shipment to the two grew at a combined, constant-dollar CAGR of 6.8%. Since then, growth has slowed to an average of 4.9% per year, reaching \$25.2 billion in 2005. U.S. exports to the rest of the world grew at a CAGR of just 0.65% between 1990 and 1999. From 2000 through 2005, however, growth averaged 20% per year, reaching \$15.8 billion last year.

Canada — remains the most significant export market for the United States, a distinction that is likely to hold well into the future, if not forever. Exports to Canada grew to \$20.5 billion in 2005, double 1990's constant dollar total. As a percentage of total U.S. exports, however, shipments to Canada fell 10 points to a 50% share. In 2005, total U.S. motor vehicle exports to Canada reached nearly 890,000 units, up 5 percent for the year. Ward's Automotive reports that Canadian sales of new cars and trucks from all sources reached 1.6 million units in 2005, giving United States imports the equivalent of a 44% overall share.

The U.S. is Canada's leading vehicle supplier, providing an average of 72% of its total vehicle imports by value between 1990 and 2005. The U.S. share peaked at 79% in 1996, dropping from that point at a compounded average annual rate of nearly 1.5% to a 69% share in 2005. Canada's four other major suppliers are identical to our own: Japan, Mexico, Germany, and South Korea. Mexico supplied just 1% of Canada's imports in 1990, but an average of 6.5% throughout the review period. Mexico's share growth has averaged 13.6% per year since 1990, ahead of Korea's 9.8% CAGR. Since Korea's share began to expand in 1996, however, its share has grown at a CAGR of 19%, while Mexico's has declined by an average of 2.3%.

Mexico — Our five leading markets in 1990 – Canada, Japan, Taiwan, Germany, and Saudi Arabia – remained in the Top 5 every subsequent year, until Mexico replaced Taiwan in 1996 (which had been as high as second, in 1992). On the strength of that surge, Mexico also leapfrogged Saudi

Arabia, landing in fourth. This is, perhaps, the most significant change in U.S. exports during the review period. (See below for comments on the UAE, which also moved up dramatically during the review period.) Mexico was our fourteenth largest market in 1993 on constant dollar exports of \$197 million. In 1997, Mexico was our second largest market, with U.S. shipments of \$2.2 billion. Shipments totaled \$4.6 billion in 2005. The CAGR during the period, 19.3%, is the best among the four best markets, an outcome directly attributable to the North American Free Trade Agreement, implemented in 1994.¹⁸ In unit terms, U.S. exports have increased by 2,000% since 1993, reaching 349,000 units in 2005 on a CAGR of 29%. Automotive News reports that Mexican sales of new motor vehicles totaled 1.3 million units in 2005, giving U.S. imports a 27% share of the total market.

Earliest comprehensive data available from GTIS shows that the U.S. was Mexico's leading supplier in 1995 with an 81% share of its imports of motor vehicles. Unfortunately, the U.S. share of Mexico's imports has slipped to 43% in 2005, mostly through losses in the passenger vehicle sector, HTS 8703. The U.S. share in this sector has declined at an average compounded annual rate since 1995 of 7.7%, falling to a 36% share even though our shipments to Mexico have risen significantly in absolute terms. Japan's share of Mexico's passenger vehicle imports has risen by a factor of four since 1995, reaching 12.8% in 2005. This is the result of improved trade relations between the two, culminating in a free trade agreement that went into effect in April of 2005. The FTA provides an immediate tariff-free import quota for Japanese passenger vehicles that grows 5% per year from a base of 30,000 units. All quotas and tariffs (some as high as 30%) will be eliminated in seven equal, annual steps starting the first year.

The United States has also lost ground to Brazil, whose share grew at a CAGR of over 81% from 1995 to 2005, reaching 18.5%. However, the earlier 2001 free trade agreement between the EU and Mexico apparently has not had a significant impact upon the U.S. position in the Mexican market, as the European share of Mexico's imports has not increased significantly. In fact, since the agreement went into effect, the EU's share of Mexican imports has fallen 5.4% per year to a 14.7% share. (On the other hand, Mexico's share of EU motor vehicle imports (HTS 8701-04) has fallen at a CAGR of 4.1% since 2001. The EU's U.S.-sourced share has declined by a CAGR of 2.2%.)

Germany — Never less than our fifth largest market during the review period (in 1993), Germany is our third largest customer, having grown at a CAGR of 10.2% throughout the period to reach \$3.7 billion in 2005. Exports to Germany have accelerated significantly, growing at a rate of 23% each year since 2000. Unit shipments to Germany grew by an average of 5.5% since 1990, and by 14.3% since 2000, to a total of 120,000 vehicles. Retail sales in Germany of new cars and trucks totaled 3.6 million units in 2005, which means that U.S. exports were the equivalent of just 3.3% of the market. Data available through GTIS indicates that the United States was Germany's fourth largest supplier of passenger vehicles (HTS 8703) in 2005 with a 9 percent share of total imports, compared with 3.7% in 1996.

In recent years, U.S. exports to Germany have been bolstered by the American plants of BMW (operating in South Carolina since 1995) and Mercedes (in Alabama since 1997), both of which serve as the leading source for their sport utility vehicles. South Carolina is also BMW's sole source for its 2-seat sports car. GM has relied primarily upon its European plants to satisfy German demand, but has had some success with Cadillac, Corvette, and soon, the Opel GT, based on the Pontiac

Solstice/Saturn Sky and to be built in the same U.S. plant. Ford and Chrysler (acquired by Mercedes' parent, Daimler Benz, in 1998) also have been active exporters to Germany from their U.S. plants of niche products.

Saudi Arabia — Of the five best markets for U.S. road motor vehicles, Saudi Arabia is the only one with which the United States has a positive motor vehicle trade balance, if only because the Kingdom has no vehicle industry. Since 1990, it has never been less than our seventh largest customer, and was twice our second largest during the review period. Saudi Arabia ranked fourth in 2005 on U.S. exports worth \$2.2 billion. Surprisingly, perhaps, Saudi Arabia was the second largest market for U.S. exports of used passenger vehicles from 2002 through 2005, when they totaled \$257 million. (Mexico was the leading U.S. market for used passenger vehicles in 2005, \$444 million.)

U.S. shipments to the Kingdom of all classes of motor vehicles grew at an average of 7.8% annually in constant dollar terms during the review period, starting from a base of \$705 million. In units, U.S. shipments rose from 27,733 in 1990 to 93,817 in 2005. They represented 19% of the Kingdom's total market that year. By value, new and used passenger vehicles and light trucks accounted for 99% of U.S. shipments to Saudi Arabia in 2005, which in turn accounted for about 17% of the Kingdom's total market. Japan held the dominant position with a share of approximately 36%. Australia supplied 16%; Germany, 14%; and Korea, 6%.

United Arab Emirates — Although the U.S. share of the UAE markets is small – less than 5%, compared with nearly 60% for Asian brands – it was still lucrative enough to be our fifth largest market in 2005 on exports of \$979 million. In fact, throughout the review period, the UAE has ranked consistently in the top 10 markets for U.S. RMV exports, even though the market is relatively small at an estimated 200,000 units annually. Export value grew at an average annual rate of 18% from 1990 through 2005. The UAE was the ninth largest market for U.S. exports in 2004, with a constant dollar value of \$457 million. 2005 volume was 60,000 units, compared with 4,600 in 1990, yielding a CAGR of 19%.

Leading Suppliers of U.S. Imports

U.S. imports of road motor vehicles totaled \$142.9 billion in 2005, double the value of imports in 1990 in constant dollars. Growth averaged 4.8% per year and declined only twice, dropping 5.5% in 1991 and slipping 2.2% in 2001. In unit terms, imports declined 6.2% in 1991 to 4.4 million vehicles, and by 3.7% in 2001. The domestic market for all road motor vehicles had collapsed by 11% in 1991, falling to 12.4 million units – the lowest level recorded during the preceding 8 years. The market also slipped in 2001, but by a more digestible 1.9%, to a total of 17.5 million vehicles.

The top five suppliers of road motor vehicles in 1990, shown in [Graph 3](#), accounted for 94% of our total imports, slipping to 91% in 2005 as new, second tier supplier countries have begun to take a larger role, creating new deficit partners for the United States. Moreover, there have been significant changes within the top ranks. Japan supplied 40 percent of our imports in 1990, but dropped to 25% in 2005. The Canadian share also declined, falling from 37% to 34%, while Mexico tripled its share,

rising from 4% to 13%. Collectively the two NAFTA partners now supply 47% of all U.S. imports, compared with a combined 40% in 1990. Germany remains our third largest supplier, having increased its import share from 11% to 14%. Like Mexico, imports from Korea have tripled, reaching 6% of the 2005 total.

Canada — Canadian shipments to the United States increased 88% in absolute terms during the review period, reaching \$48.1 billion. This was a new high, which had previously peaked at \$48.8 billion in 1999 before declining for 4 years straight. On average, however, Canadian shipments to the United States grew 4.3% each year between 1990 and 2005. Volume rose from 1.7 million units in 1990 to a peak of 2.7 million units in 1999. Shipments in 2005 were slightly lower than the previous year, falling 3% to 2.4 million units.

The majority of U.S. imports from Canada are passenger vehicles and light trucks, shipped into the United States from 11 factories operated by GM, Ford, and DaimlerChrysler's Chrysler Group, all located in Ontario and Quebec. They produced 1.624 million units in 1990, 1.741 million in 2005. Honda and Toyota also ship vehicles from their two Ontario factories into the United States. Their combined output was 165,000 vehicles in 1990. They assembled 691,000 in 2005.

Germany — Imports from Germany, primarily from DaimlerChrysler, VW, and BMW, totaled 247,000 vehicles worth \$7.5 billion (2005 dollars) in 1990. Imports increased to 549,000 units in 2005 with a combined value of \$20.4 billion, representing an average annual growth rate of 6.7%. DaimlerBenz, parent of Mercedes-Benz, acquired control of Chrysler Corporation in 1998 and subsequently changed its name to DaimlerChrysler. Mercedes operates a light truck plant in Alabama, but imports the majority of its sales volume from Germany. BMW has an SUV plant in South Carolina, but imports most of its corporate volume from plants in Germany and South Africa. VW closed its Pennsylvania factory in 1999, transferring production to its Mexican facility. Most of its U.S. sales volume, however, comes from its European plants.

Japan — Motor vehicle imports from Japan totaled \$35 billion in 2005, up 25% in absolute terms from 1990's total of \$28 billion (constant dollars). The compound average growth rate, 1.5% is the lowest among the five leading suppliers to the United States. (Unfortunately, the CAGR for U.S. exports to Japan during the same period was a negative 4.8%, the lowest among our major markets.¹⁹) Volume decreased 23% in absolute terms during the review, falling to 1.7 million vehicles. Most Japanese producers have shifted their import focus to higher-value lower-volume vehicles, while producing their higher-volume lower-value vehicles in North America, primarily the United States. In 1990, Japanese-affiliated firms imported 62% of the vehicles they sold in the United States from Japan, with the balance coming from factories in the United States and Canada. By 1996, the ratio had reversed and local production reached 67% of total Japanese-brand sales in the U.S. market. Their locally produced share slipped to 62% in 2002, but is now at 68%.

Honda's U.S. production peaked at 82% of sales in 1996 and now stands at 80% on a volume of 940,000 vehicles. Honda has two plants in Ohio, one in Alabama, and is building a fourth in Indiana with a first-year capacity of 150,000 units. Toyota's locally produced share of its U.S. sales was 33% in 1990. It grew steadily to 63% in 1999, just a tick above 2005's ratio of 62% on a volume of 1.3 million units. Toyota has steadily expanded its U.S. facilities, operating a joint venture in

California with GM, and solo plants in Kentucky and Indiana. It opened a truck plant in Texas in 2006 with an initial capacity of 200,000 units, and has indicated that it will start construction on two more plants in North America by 2008.

Nissan's import ratio was 61 percent in 1990. It fell to 36 percent in 1996 and then began to rise, reaching 40 percent in 1999. Nissan operates one car plant in Tennessee and a light truck plant in Mississippi. Total production was 703,000 units in 2005, 79% of its sales. Mitsubishi operates one plant in Illinois where it produced 63,000 Mitsubishi vehicles in 2005, 65% of its total sales. Subaru bought out Isuzu's half of their joint venture assembly plant in Indiana, producing 87,000 vehicles in 2005, 56% of its sales volume. When GM sold its interest in Subaru in 2006, Toyota acquired a minority interest and contracted Subaru to produce vehicles starting in 2007. Mazda has a joint venture in Michigan with Ford, Auto Alliance, in which it produced 74,000 Mazda-branded vehicles in 2005, 44% of its total sales that year.

Korea — Shipments from Korea to the United States have increased at the fastest average growth rate of the five leading supplier countries, expanding at a CAGR of 12.9%, and rising from \$1.4 billion in 1990 to \$8.8 billion in 2005. Shipment value declined in 2005, however, from the previous year's \$10.1 billion. In volume terms, imports from Korea increased by 375%, jumping from 195,000 units in 1990 to 731,000 vehicles in 2005. 2004 volume was 860,000 units.

U.S. sales of Korean brand imported light vehicles peaked in 1988 at 264,000 units before declining to 108,000 in 1992. (Korean imports that year totaled 130,000, falling to 123,000 in 1993.) Hyundai closed its Canadian plant in 1993 when U.S. demand for its product collapsed. In 2005, it began production at a new plant in Alabama, which accounts for most of the decline in imports from Korea experienced last year. The plant's capacity is targeted for 300,000 units. Kia entered the U.S. market in 1994; selling in modest quantities before being Hyundai acquired control in 1998. Kia begun construction of its own 300,000-unit assembly plant in Georgia in late 2006, with production expected to begin in late 2009. GM acquired control of the Korean maker, Daewoo, in 2002, and began selling vehicles here imported from Korea in 2003. Sales totaled 68,000 units in 2005.

Mexico — During the review period, imports from Mexico grew from \$3.1 billion to \$18.4 billion, a CAGR of 12.6% that mostly reflects the strength of the U.S. market and the strategic decisions of the Detroit 3 to source significant quantities of vehicles from their lower-cost plants in Mexico. Unit volume grew from 239,000 units in 1990 to 1 million in 2005, a 10% CAGR. The NAFTA agreement, implemented in 2004, has had no measurable impact upon U.S. imports from that country, as they already entered the U.S. at very low duty rates and were not otherwise restricted. In fact, from 1994 through 2005 the dollar value of imports from Mexico increased at a slower 11.8% CAGR, units by 8.5%.

In addition to the Detroit 3, Nissan, and VW ship vehicles to the United States from their 13 Mexican plants (10 of which are Big 3). Honda has one facility in Mexico with capacity in the low 30,000 units for the local market. Toyota established a small truck assembly operation in Mexico in 2005, but has not announced plans to export any of its 30,000-unit output to the United States. Ford has indicated that it will expand capacity at its two Mexican plants, while it looks for a North American location for a new facility. GM is building a new small-passenger vehicle plant in Mexico,

with output for the local market scheduled to commence in 2008. Detroit 3 light-vehicle production in Mexico was 900,000 units in 2005. The others produced a total of 650,000 cars and light trucks.

U.S. Exports by Product Group

Exports of road motor vehicles from the United States totaled \$40.9 billion in 2005, having grown at a compounded annual rate of 6% since 1990. [Table 7](#) provides a breakout in constant dollar values and compound annual growth rates for all ten of the motor vehicle product categories crafted by OAAI to analyze U.S. road motor vehicles international trade. The categories are blends of 10-digit Harmonized Tariff System (HTS) codes, grouped as necessary to approximate comparable domestic market segments.²⁰

The fastest growing category during the review period was Passenger Vehicle Chassis With Engines, which exhibited a CAGR of 23%, but which totaled only \$41 million in 2005. The leading market that year was Colombia, which imported \$12.1 million, followed by Mexico at \$8.3 million. Used and New Road Tractors (on-road, not farm), and Medium & Heavy Straight Trucks were the next three fastest growing categories. Used Road Tractors gained 10% a year starting in 1991 when the category was separated from the new category, reaching \$93 million. Leading markets in 2005 were Russia, which purchased \$29.6 million, and Nigeria, which accounted for \$14 million of the total. Exports of New Road Tractors reached \$1.8 billion in 2005, on growth that averaged 8.6%. Best customers were Canada, \$1.5 billion; Mexico, \$66.4 million; South Africa, \$63 billion; and Australia, \$58 billion. Medium and Heavy Straight Truck exports totaled \$2.5 billion on average growth of 8.4%. 2005 top markets were Canada, \$1.9 billion, and Australia, \$129 million.

Passenger Vehicles and Light Trucks (PVLTL, or 'light vehicles'), accounted for 82% of all U.S. road motor vehicle export value during the entire review period (unfortunately, light vehicles also comprises the majority of U.S. imports; see the next section). From 1990 through 2005 the value of PVLTL shipments increased by an average of 5.9% each year until reaching \$31.3 billion. Volume increased by an average of 3.5%, totaling 1.5 million units. [Graph 4](#) indicates that between 1990 and 2005, exports of domestic (i.e., U.S.-made) light vehicles to the world as a share of domestic light vehicle production peaked at 11.3% in 1997, before slipping to 9.2% in 1999. Only 1990's share, 8.8%, was lower. Exports represented 11% of domestic production in 2005.²¹

During the review period, domestic light vehicle production grew at an average rate of 1.3%, while that of exports exhibited a CAGR of nearly 2.8%, slowly increasing exports' share of production. However, the U.S. export to production ratio is by far the lowest among the major vehicle producing nations. For example, exports of all types of motor vehicles from Germany, according to industry data, totaled 3.9 million units in 2004, 70% of that nation's production. From Korea, exports reached 2.4 million units, 68% of its output. Japan's exports totaled 5 million vehicles in 2004, 48% of its production.

By contrast, exports represented just 15% of all types of U.S. domestic production in 2004. Moreover, as [Graph 2](#) also notes, when shipments to Canada and Mexico are excluded, the export

share of U.S. light vehicle production would have been just 2.3% in 2005. In addition, without NAFTA shipments, the CAGR for U.S. light vehicle exports would fall to 0.9%, slower than the domestic market's sales growth rate of 1.3%.

U.S. Imports by Product Group

Throughout the review period, imports of all categories of motor vehicles tracked by OAAI grew at a combined average annual rate of 4.8%, rising from \$70.5 billion in 1990 (constant 2005 dollars) to \$143 billion in 2005. [Table 8](#) provides constant dollar import values for each category. Import growth was fastest in the [New Road Tractor](#) category, which advanced 16% per year, on average, reaching \$2.3 billion, the third highest total. Most of the imports in this (and the following truck) category are imported from Canadian and Mexican affiliates of indigenous American manufacturers. Canada accounted for \$1.6 billion of U.S. imports in 2005; Mexico accounted for almost all of the balance, \$683 million. Germany was the only other supplier, but imports totaled just \$130,000. The second largest import category, [Medium and Heavy Straight Trucks](#), totaled \$3.2 billion in 2005 on compounded growth that averaged 7% each year. Here the mix is somewhat broader, with 5 countries accounting for all imports in 2005. Canada and Mexico also were the lead suppliers at \$1.8 billion and \$814 million, respectively, followed by China, which accounted for no imports in 2001, but for \$500,000 in 2005.

Just as for U.S. exports, the largest road motor vehicle import category is [Passenger Vehicles and Light Trucks](#) (PVLTL, also referred to as light vehicles). They comprise 96% of all U.S. motor vehicle imports tracked by OAAI. During the review period, light vehicle imports more than kept pace with domestic sales. The new, light vehicle market grew from 13.9 million units in 1990 to 16.9 million in 2005, reflecting a CAGR of 1.3%.²² (New unit sales reached their all-time peak of 17.3 million units in 2000.) At the same time, imports increased from 4.6 million units to 6.6 million units (peaking at 6.8 million vehicles in 2002), an average growth of nearly 2.5% per year. Import value grew at a rate of almost 4.9% per year in real terms, reaching \$136 billion on a C.I.F. basis.

[Graph 5](#) shows that imported vehicles supplied 33% of the U.S. new, light vehicle market in 1990, fell to a low 30% share in 1994, and eventually recovered to 39% of the market in 2005.²³ The average annual import share was 35%. Without shipments from Canada and Mexico, however, imports averaged a 17% annual share of the American market. NAFTA sourced imports in 1990 totaled 1.8 million units, equal to 40% of total imports and 13% of the total market. As with the commercial truck categories, most of the vehicles brought into the United States from our two neighbors are produced in plants affiliated with indigenous American manufacturers. By 2005, 50% of all U.S. light vehicle imports were sourced locally, a total of 3.3 million units that equaled 19% of total sales.

A quick perusal of the pie charts in [Graph 6](#) might lead one to conclude only that the shares of the domestic market filled by traditional suppliers, with the exception of Japan, have grown stoutly. Mexico tripled its share. Korea's share quadrupled. Japan's share of imports is down by one-third. This is all true. However, note also that the share of imports supplied by the rest of the world, while still small, has doubled. [Graph 7](#) shows that light vehicle imports from the old-line, top six supplier-

countries have continued their upward trajectory with little respite throughout the review period. Graph 8 points out the rapid but erratic growth in U.S. imports from six newer supplier nations, countries to which U.S. vehicle assemblers currently export very little. Taken together the latter two graphs demonstrate more clearly the addition of an additional cohort of nations with whom the United States will experience persistent motor vehicle trade deficits. This is a direct byproduct of the globalization of motor vehicle manufacturing, enabled by the democratization of previously controlled economies, and by the liberalization of market access all around the world. The major vehicle manufacturers are now fully engaged in a contest to maximize their global presence. They seek manufacturing operations in lower-cost countries that will serve both to solidify their positions in those small but growing markets, and to provide products they can sell at a price advantage in the fully mature, but currently more lucrative markets.

Conclusions

The U.S. deficit in motor vehicle trade is growing rapidly, having nearly doubled between 1990 and 2005 to \$102 billion in constant dollar terms. The imbalance is primarily a function of weak export programs and an unusually strong, long-lived, and open domestic market. It also reflects the marketing and manufacturing strategies of the major participants that is rapidly globalizing the industry. The U.S. market has grown soundly throughout the review period, on average 1.3% per year, functioning as a very strong import (and inbound investment) magnet. This, compounded by the domestic industry's earlier investments in Canada and Mexico, and augmented by their need to either establish plants in or near major growth markets or to acquire firms already active in them, has resulted in record U.S. trade deficits.²⁴ The restructuring of the global auto industry has – and will continue to have – a major and complex impact upon our trade balance and trading relationships. None of these developments will reduce the American consumer's demand for import brands, nor whet the appetite of foreign consumers for vehicles designed for America.

There is a bit of “silver” lining to lighten the dark cloud of the deficit – road motor vehicle imports have added significant customs revenue to the U.S. Treasury – an estimated total of \$23 billion in accumulated current dollars during the review period. Collections totaled an estimated \$1.967 billion in 2005 alone. There also is no question that U.S. government policy to maintain an open automotive market has accrued to the benefit of the American consumer. Full exposure to competitive pressures has catalyzed significant improvements in U.S. vehicle manufacturing productivity and product quality, significantly increased product variety, and has moderated increases in product prices. All of these factors also accrue to the benefit of the entire economy.

Today, 13 countries account for the entire U.S. deficit. It is not reasonable, of course, to expect that our trade with any one country will approach perfect harmony. Were that the case, the United States would be hard pressed to defend the imbalance in its own motor vehicle trade with the 190 countries that in 2005 provided the United States with a collective surplus of \$9.4 billion. Moreover, adopting such a policy would leave the United States vulnerable to demands from many countries regarding other industries, such as aircraft, in which we enjoy significant trade surpluses. Even so, the fact remains that the U.S. is in deficit with eight of the 10 largest motor vehicle exporting nations

and the roster will grow rapidly in the near future, complements of the many new plants being built in the emerging economies of both Asia and Eastern Europe.

We are on the cusp of experiencing major deficits in motor vehicle trade with both China and India. For example, both Mahindra & Mahindra, possibly in association with Renault, and Hyundai separately have announced plans to export to the USA from India. GM, DaimlerChrysler, and Ford are exploring the production of “mini-vehicles” in their China plants, or by Chinese partners for sale in North America.²⁵ Several, smaller independent Chinese vehicle manufacturers have initiated exploratory export programs for Europe, and have expressed their intention of subsequently entering the American market. Two firms, Geely and Chery, have already mounted small exhibits at the North American International Auto Show in Detroit to test the waters. A third, Changfeng Motors, is scheduled to exhibit at the 2007 event. Yet another, Wuxi Anyuan, shipped its first exports from its ISO9001-certified plant of luxury motor coaches to the United States in late 2006. Thus, China and India are likely to become significant exporters to the United States by no later than 2010, and are equally unlikely to import offsetting quantities of U.S. produced vehicles.

To the extent that the motor vehicle trade imbalance is the result of artificial barriers, it is reasonable to insist that those countries that expect to enjoy the benefits of selling in the U.S. market provide reciprocal access to their markets. In fact, U.S. government efforts to eliminate such barriers have been underway throughout the review period in various bilateral and multilateral fora, with varying degrees of mostly limited success. Even if those barriers are eliminated, the echo of preexisting trade distorting practices will take years to muffle.

Perhaps the best approach to addressing the motor vehicle trade imbalance requires recognition (1), that the world’s largest, most lucrative market always is going to attract imports; (2), that most vehicle producers (including U.S. manufacturers) prefer to assemble their high volume products in or very near their major markets; and (3), that the next stage in the industry’s international rationalization mandates global sourcing by each manufacturer group from any of their plants around the world to serve “niche” market segments anywhere in the world. Thus, what is needed is not just a focus on overcoming unfair trade barriers abroad, but also upon (1), fostering a superior domestic business climate that effectively lowers vehicle producers’ operating and production costs and thereby attracts and retains assembly plants in the United States; and (2), on achieving the long-sought and long-resisted international harmonization of motor vehicle safety and emissions standards that virtually every vehicle manufacturer in the world wholeheartedly supports.

ENDNOTES

¹ This report addresses motor vehicles designed primarily for the on-road transport of passengers and goods. See the OAAI web site at: <http://www.ita.doc.gov/td/auto/data/vehicledataintro.html> for a detailed listing of the Harmonized Tariff System codes that comprise the 10 product groups tracked. Most of the U.S. trade tables cited in this report are extracted from the U.S. Census Bureau's database using the USITC Dataweb <http://dataweb.usitc.gov>. Most data is based on "Total Exports", and "General Imports" for each product code. Tables are revised from previous reports, removing HTS 8703.21 (Passenger vehicles with 1,000cc or smaller gasoline engines), which are primarily "All Terrain Vehicles," that fall outside of our purview.

² Compound Annual Growth Rate, CAGR – a 'pro forma' calculation that expresses positive or negative 'average' growth between a beginning and end point. The calculation ignores any intervening periods of volatility in the growth curve, producing a smoothed, or average rate of annual growth across the entire period.

³ In unit terms, U.S. RMV exports expanded at a CAGR of 4.7% between 1990 and 2005, while imports grew at a 2.5% rate. In the first half of 2006, unit exports increased 7%; imports, 16%, compared with the same 2005 period.

⁴ U.S. vehicle sales of all new cars and all classes of new trucks grew from 14.1 million units in 1990 to 17.4 million units in 2005, an absolute increase of 23% on a CAGR of 1.4%.

⁵ See BEA's National Income and Product Accounts Table 7.2.5B, Motor Vehicle Output on its webpage at <http://www.bea.gov/bea/dn/nipaweb/SelectTable.asp>.

⁶ Seven Groups: GM, Ford, Toyota, Renault-Nissan, DaimlerChrysler, VW, Hyundai. GM and Renault-Nissan evaluated and dismissed an alliance in the fall of 2006. A GM-Ford alliance reportedly was also being considered, as well as a Ford-Renault-Nissan alliance.

⁷ A detailed discussion of globalization's impact on the automotive industry is contained in "The American Automotive Industry Supply Chain" at <http://www.ita.doc.gov/td/auto/domestic/SupplyChain.pdf>.

⁸ See the publication's web site at: <http://www.autonews.com/apps/pbcs.dll/section?Category=ANE>

⁹ See the company's web site at: <http://www.wardsauto.com/>

¹⁰ For global comparisons, these HTS numbers were selected: 8701.20; 8702.10 and .90; 8703.21, .22, .23, .24, .31, .32, .33, .90; 8704.21, .22, .31, .32, .90; and 8706.00. Intra-European Union trade is reported as separate trade between nations.

¹¹ See the UN Statistics Division web site at: <http://unstats.un.org/unsd/default.htm>

¹² See Global Trade Information Service web site: <http://www.gtis.com/>

¹³ In theory, global exports should equal global imports. The reality is that some shipments are not recorded in the same month as leaving one country and arriving in another. Moreover, all nations tend to more carefully track imports rather than exports, since the former usually generates direct and immediate

tax revenue, while exports produce “only” indirect income. Consequently, they are more likely to develop and report import data before assembling data on exports.

¹⁴ See: <https://www.cia.gov/cia/publications/factbook/rankorder/2001rank.html>

¹⁵ Import data for this comparison was obtained from the Commerce Department’s internal data retrieval system, “TPIS,” which utilizes UN data tapes. Automotive News 2006 Market Data Book provided the total market estimates.

¹⁶ Imports from Yugoslavia ceased in 1991 with the dissolution of that country.

¹⁷ In 2005, Mexican passenger vehicle plants produced 1.6 million units. The local market reported total sales of 1.1 million. Canadian plants produced 2.6 million passenger vehicles. The local market totaled 1.6 million. In the United States, production totaled 11.4 million units. Sales totaled 16.9 million cars and light trucks.

¹⁸ See “The Impact of the NAFTA Upon U.S. Automotive Exports to Mexico,” on the OAAI webpage at <http://www.ita.doc.gov/auto/mexico.html> for additional background.

¹⁹ In 1990, the United States shipped 51,400 motor vehicles to Japan worth \$1.16 billion. U.S. shipments peaked in 1995 at 166,000 vehicles worth \$3.6 billion and then began a steady decline to 21,600 units in 2004 worth \$485 million. This was the equivalent of an average negative annual growth rate of 17.9%. (All comparisons in constant 2005 dollars, using USG data.) However, 2005 produced a 7% growth in units for U.S. shippers and a 15% growth in value to \$557 million, “improving” the overall CAGR to a negative 4.8%.

²⁰ A complete set of 40 Excel tables showing this data for exports and imports, in current dollars and unit quantities, for each product category, and for each year from 1990 through 2005, can be downloaded from the OAAI website. The webpage also contains a table showing our groupings of export and import HTS codes for the 10 categories. See: <http://www.ita.doc.gov/td/auto/data/vehicledataintro.html> .

²¹ While industry data provides exact data for light truck production in U.S. assembly plants, the U.S. version of the Harmonized Tariff System does not include separate codes for used pick-up trucks. Thus, the export ratio is overstated, but probably not by very much. Also, note that U.S. trade data does not disclose shippers, placing exports by factories, as well as by private entities, in the same basket. Data for individual shippers can be purchased from the Journal of Commerce (not part of the U.S. Department of Commerce) via their PIERS program at: <http://www.piers.com/> .

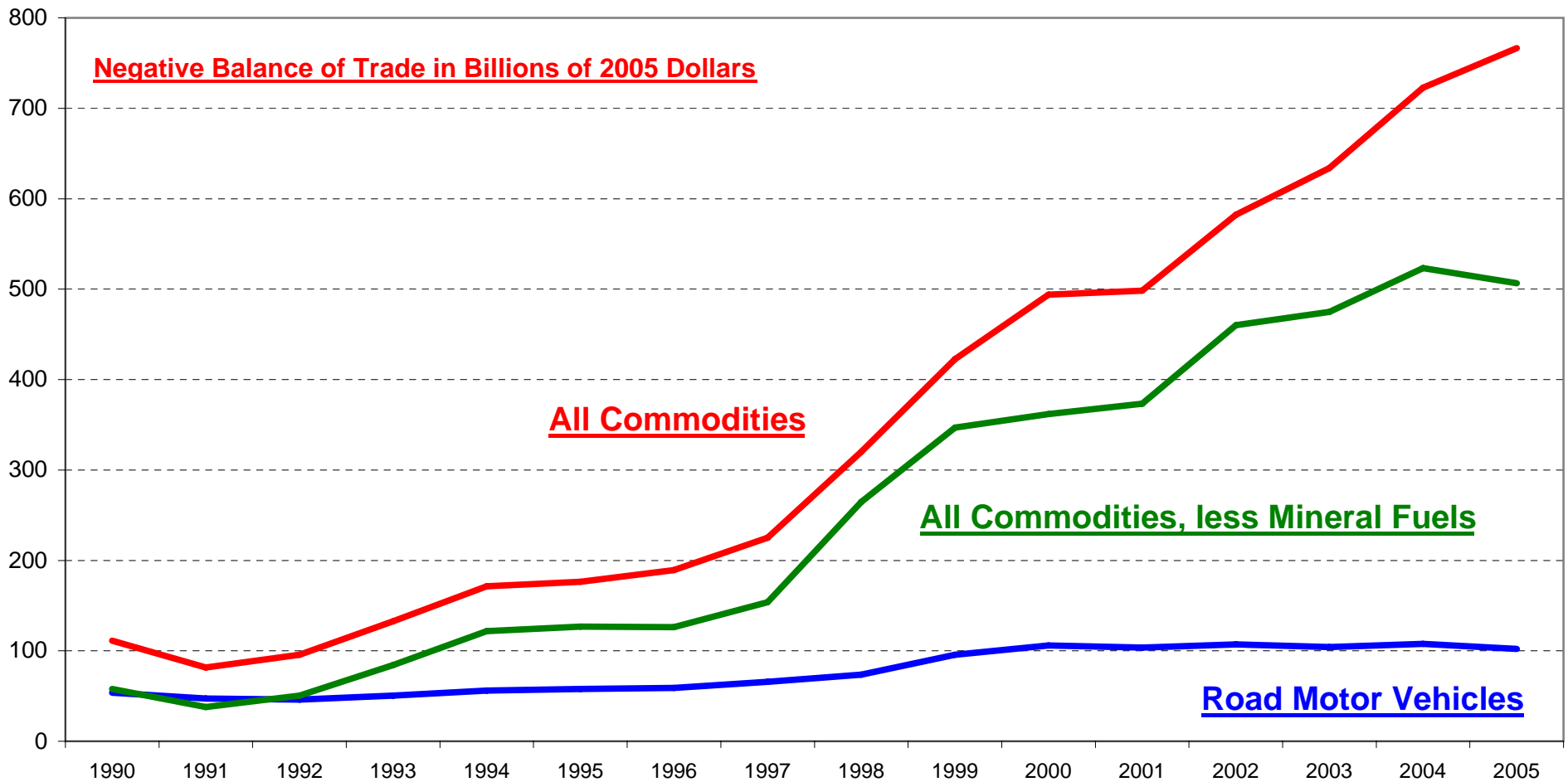
²² Light vehicles – Cars, vans, station wagons, SUVs, crossovers, and pick-up trucks of less the 10,000 pounds gross vehicle weight. For a full discussion of the U.S. market for passenger cars and light trucks, see “The Road Ahead for the U.S. Auto Industry” on the OAAI webpage at <http://www.ita.doc.gov/td/auto/domestic/index.html> .

²³ Official government statistics for imports of passenger vehicles and light trucks do not correlate exactly with annual retail sales data. Partially, this is because of time lags that can occur between when vehicles enter a country and when they are sold – a December import may not be sold until January of the following year. Also, some imported vehicle sales may not be registered in the local retail market. Further, the Harmonized Tariff System (HTS) definitions of passenger vehicles and light trucks do not match precisely the definitions of such vehicles as reported in local sales statistics. The HTS categories also include some used vehicles. Finally, in the case of the United States, industry data reports sales of vehicles produced in Canada and Mexico as being “domestic,” rather than as import sales. Industry data shows that sales of imports, exclusive of those from Canada and Mexico, did not begin to rise until 1997.

²⁴ This widely shared preference is also the primary reason why the United States is home to so many foreign-affiliated vehicle assembly plants. Foreign affiliates have helped to ensure that the United States produces more motor vehicles than any other country, 18% of the world's total output in 2005.

²⁵ Honda was the first foreign manufacturer in China to export, initiating shipments of "Jazz" compact cars from its export-only, 50,000-unit capacity, JV-plant to Germany and other European markets in mid-2005. While, Honda has expressed no intent to ship to the USA from this plant, it serves as clear validation of the possibilities.

While the U.S. merchandise trade deficit with the world has increased greatly, the motor vehicle deficit has moderated. It now equals 13% of the total deficit (having dropped from 41% in 1990), and 20% of the 'non-petroleum' deficit (down from 93% in 1990).

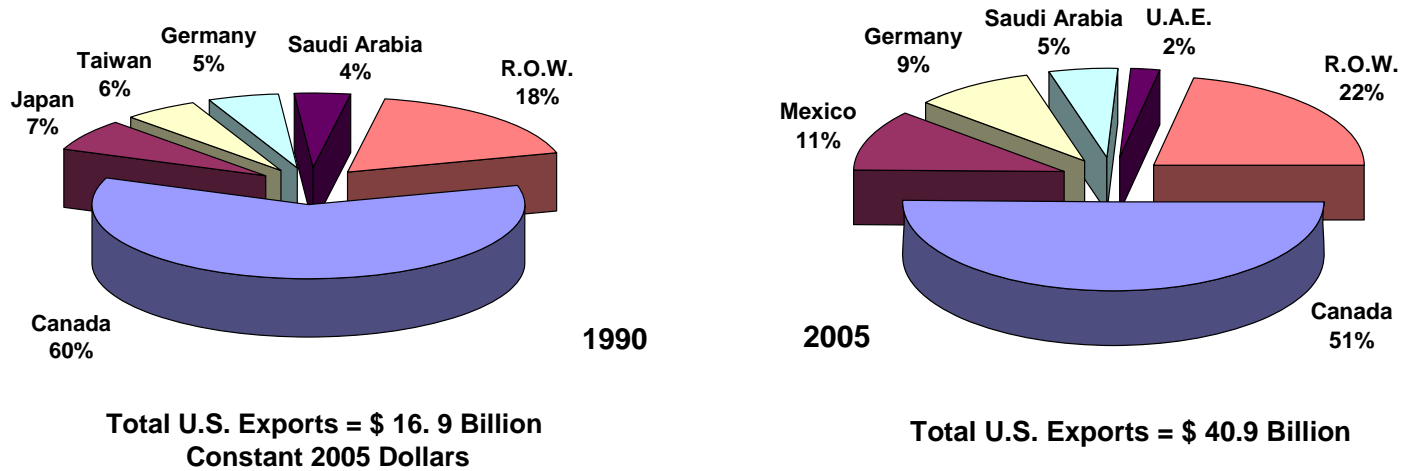


Source: U.S. Census Bureau using Harmonized Tariff System Product and Country Codes selected by the U.S. International Trade Commission and the U.S. Department of Commerce.

Graph 1

In 2005, the 5 largest markets for U.S. road motor vehicles absorbed 78% of all American RMV exports; 4 points lower than the 1990 top five.

Five Largest Markets Each Year

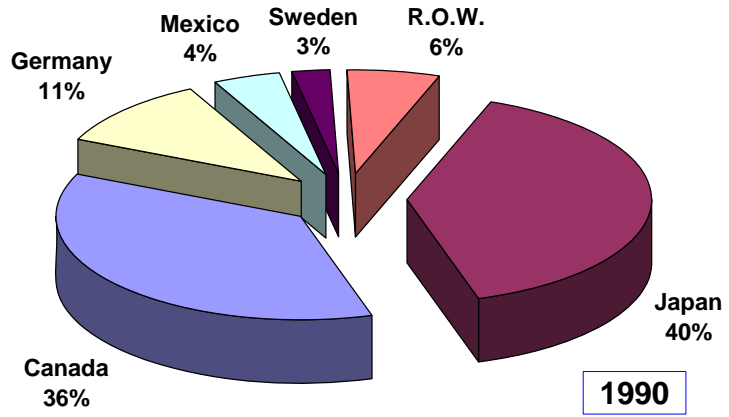


Source: US Census Bureau using USDOC/OAAI Selection of 10-digit HTS codes

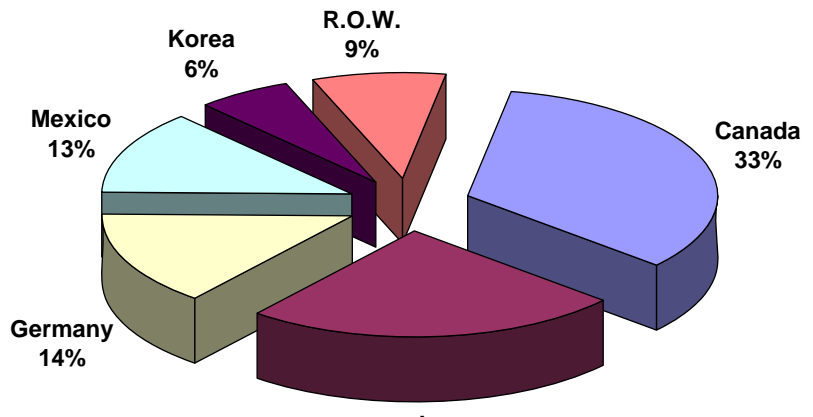
Graph 2

Since 1990, Mexico's share of total U.S. road motor vehicle imports has tripled, as has Korea's. Imports from smaller suppliers also are taking a larger share of the total. Japan's share has declined by one-third.

5 Largest Suppliers Each Year



Total U.S. Imports = \$ 70.5 Billion, Constant Dollars



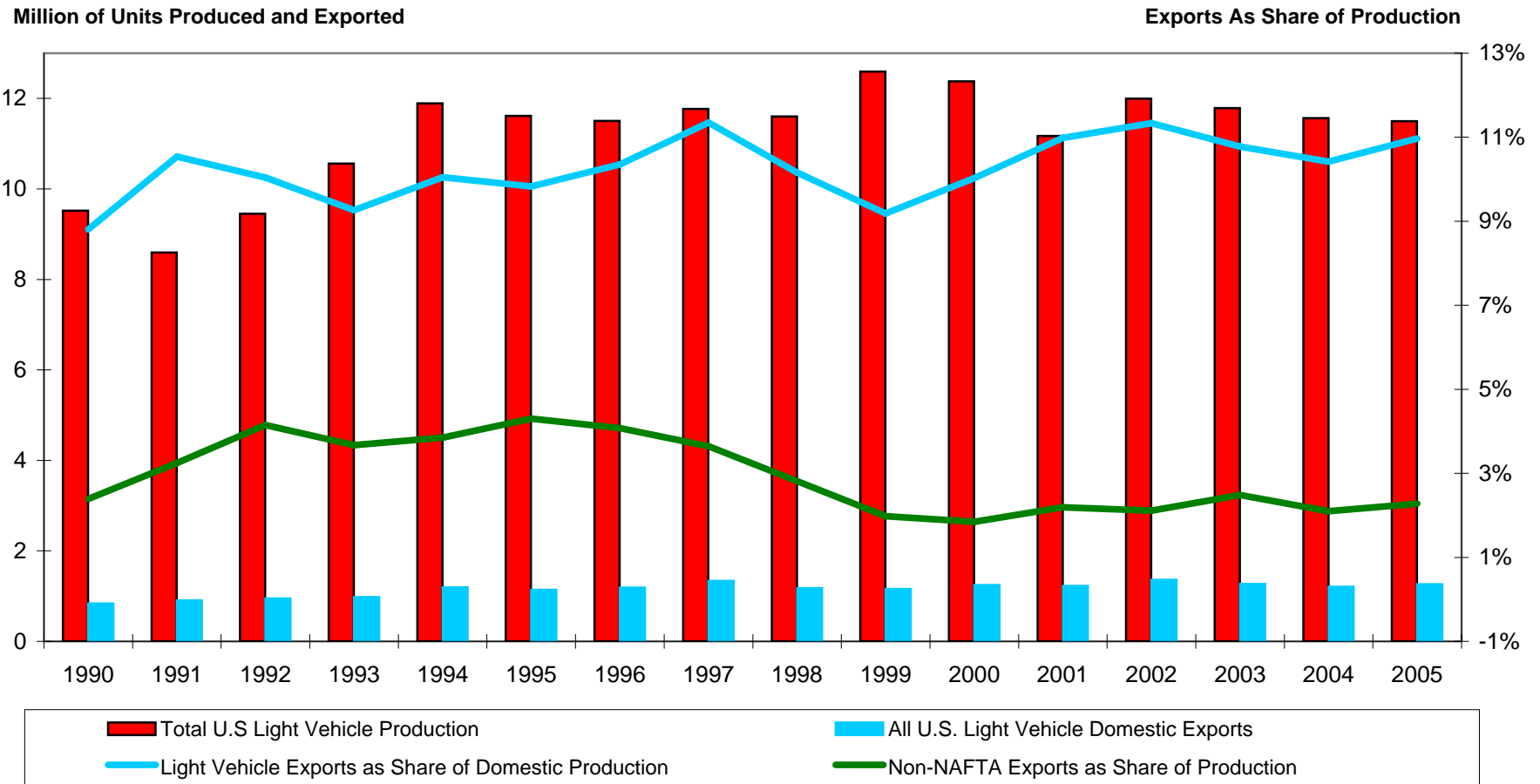
2005

Total U.S. Imports = \$ 142.9 Billion, Constant Dollars

Source: US Census Bureau. USDOC/OAAI selection of 10-digit HTS codes.

Graph 3

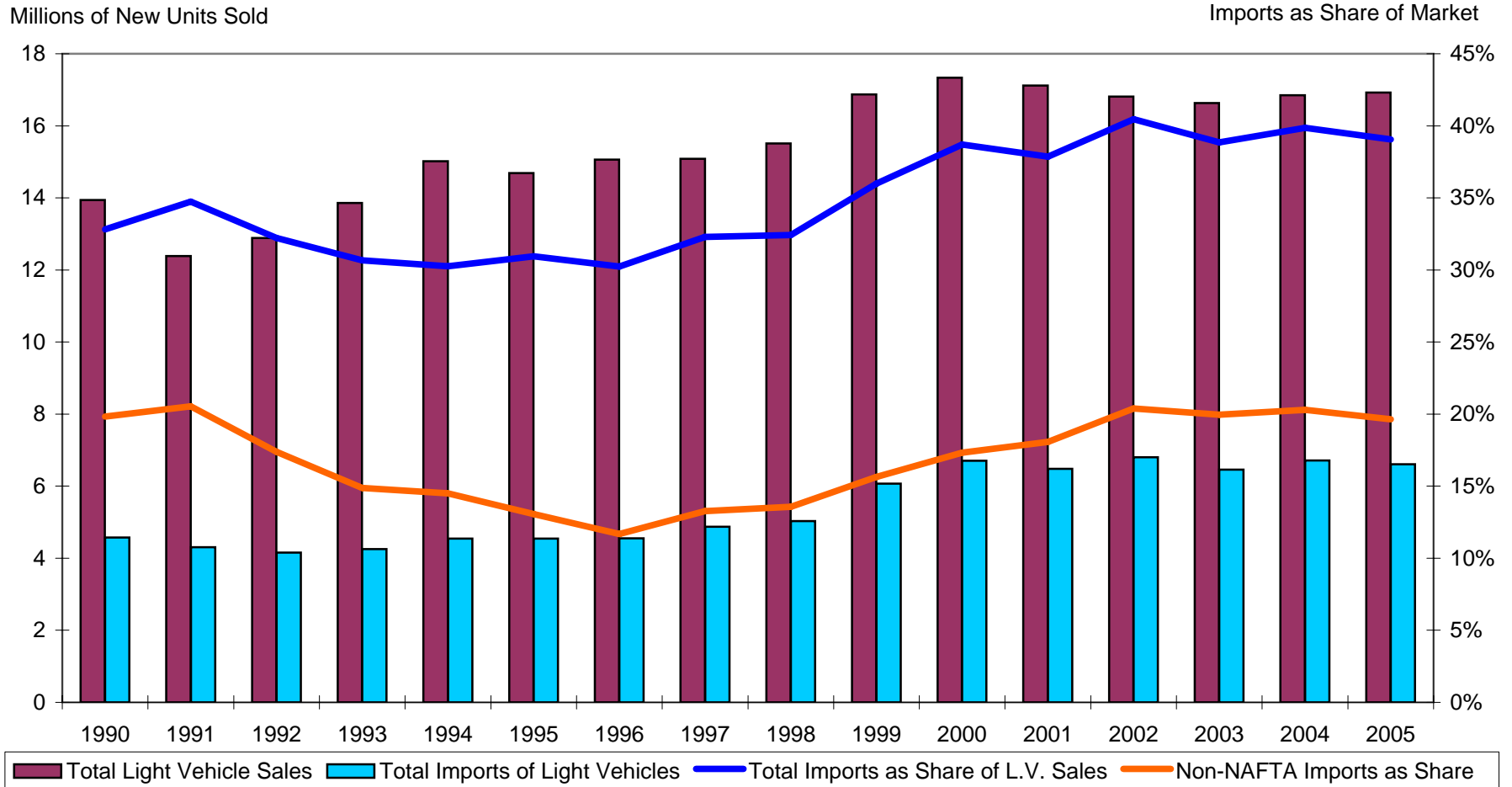
Total U.S. light vehicle exports by all shippers averaged 10.3% of total domestic light vehicle production from 1990-2005. Exports to the world increased at a compounded annual growth rate that averaged 2.8%. Without shipments to Canada and Mexico, the CAGR falls to 0.9%.



Source: Production data from Ward's Automotive Reports. "Domestic Exports" from USDOC Census Bureau, using OAAI's selection of 10-digit HTS codes.

Graph 4

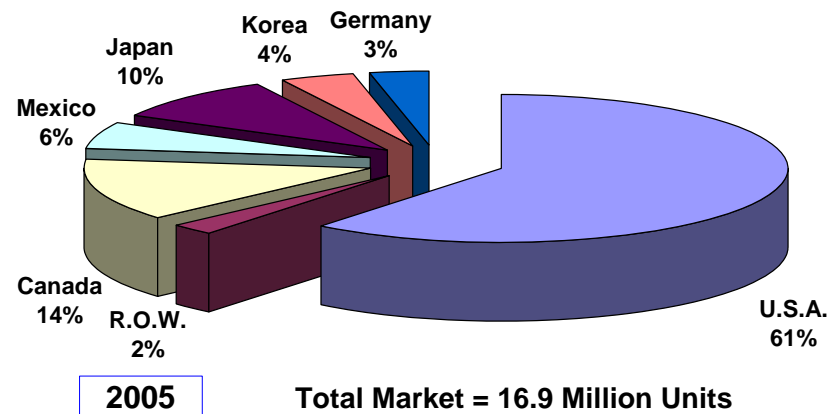
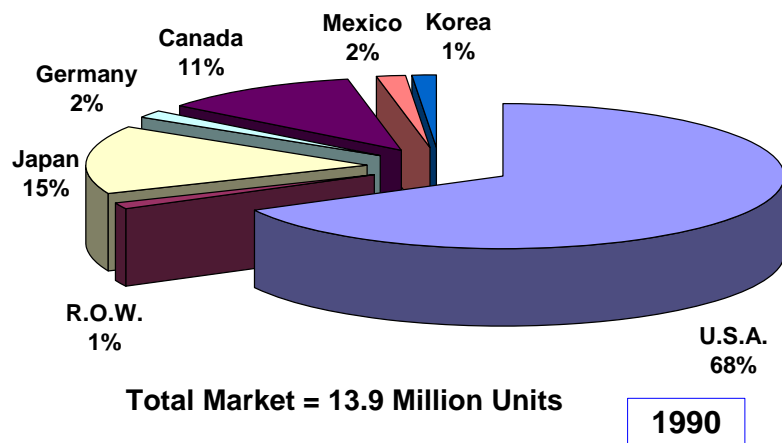
Light vehicle imports rose from a low of 30% of the U.S. market in 1994 to 39% in 2005; have averaged 35% since 1990. Without shipments from Canada and Mexico, imports represent an average share of 17%.



Source: Sales- Ward's Automotive Reports, adjusted by OAAI. Imports- Census Bureau, using OAAI selection of HTS codes.

Graph 5

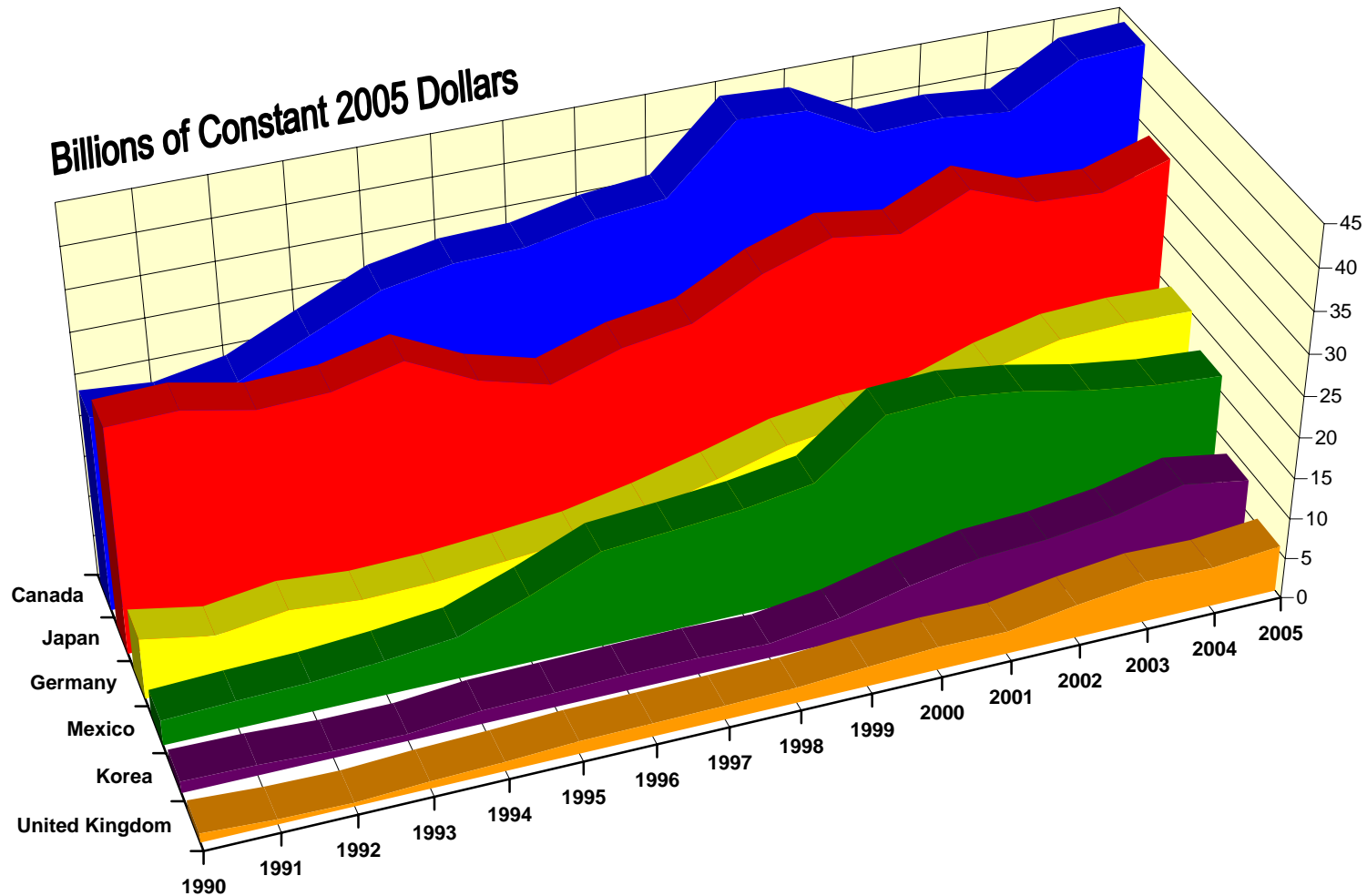
Since 1990, Mexican-sourced vehicles tripled their share of the U.S. light vehicle market, while the Korean-sourced share increased by a factor of four. The share for vehicles sourced from Japan declined by one-third. The U.S.-sourced share has fallen 10%.



Source: Market size from Ward's Automotive Reports. Imports as Share by OAAI, using Census Bureau data.

Graph 6

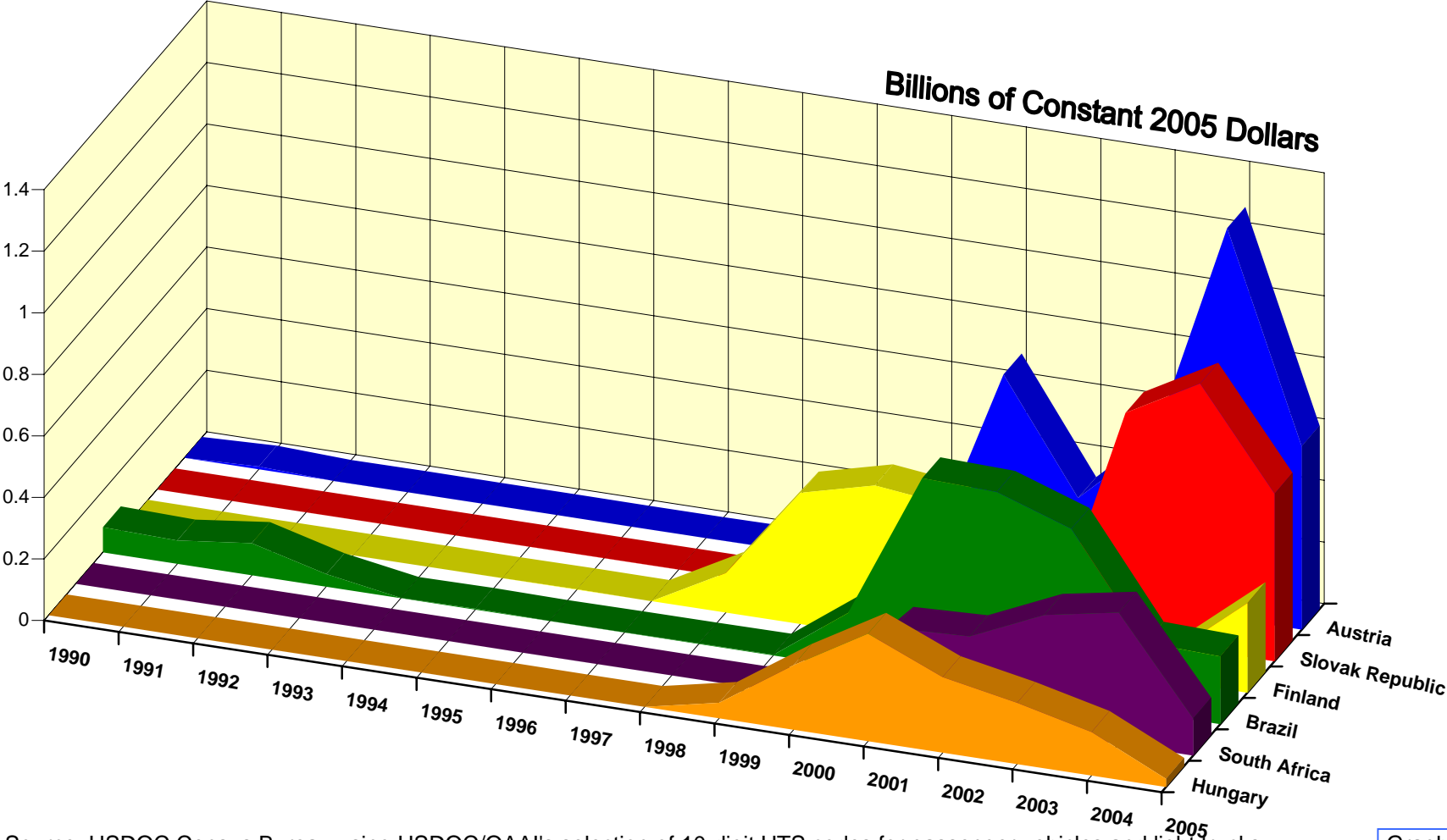
Light vehicle imports from the top six supplier-countries have continued their upward trajectory with little respite.



Source: USDOC Census Bureau using USDOC/OAAI's selection of 10-digit HTS codes for passenger vehicles and light trucks

Graph 7

Many of the second tier emerging light-vehicle suppliers to the USA, as demonstrated by the six shown here, exhibit rapid, but unstable growth in shipments.



Source: USDOC Census Bureau using USDOC/OAAI's selection of 10-digit HTS codes for passenger vehicles and light trucks

Graph 8

Road Motor Vehicles Trends in Trade 1990 - 2005

U.S. Global Trade in Road Motor Vehicles Billions of Current & Constant 2005 Dollars								
	Exports			Imports			Balance	
Year	Current Dollars	Index	Constant Dollars	Current Dollars	Index	Constant Dollars	Current Dollars	Constant Dollars
1990	13.443	85.412	16.882	55.143	81.984	70.469	- 41.700	- 53.587
1991	16.013	88.455	19.418	54.468	85.670	66.612	- 38.455	- 47.194
1992	18.125	90.156	21.564	56.364	87.377	67.584	- 38.239	- 46.020
1993	18.751	90.577	22.205	62.056	89.277	72.825	- 43.305	- 50.620
1994	21.504	92.038	25.061	71.811	92.737	81.129	- 50.307	- 56.068
1995	22.233	93.625	25.472	76.055	95.678	83.282	- 53.822	- 57.810
1996	23.761	94.562	26.952	79.274	96.561	86.013	- 55.513	- 59.061
1997	25.387	95.866	28.405	87.204	97.176	94.019	- 61.817	- 65.614
1998	24.222	96.897	26.813	94.167	98.057	100.614	- 69.945	- 73.800
1999	23.551	98.265	25.707	115.016	99.377	121.258	- 91.465	- 95.551
2000	24.322	100.000	26.088	126.013	100.000	132.024	- 101.691	- 105.935
2001	23.854	100.598	25.434	123.968	100.595	129.113	- 100.114	- 103.679
2002	27.404	102.004	28.817	131.521	101.279	136.054	- 104.116	- 107.237
2003	30.388	103.699	31.432	132.124	102.154	135.507	- 101.736	- 104.075
2004	33.973	105.714	34.470	140.828	103.819	142.118	- 106.855	- 107.648
2005	40.939	107.262	40.939	142.946	104.770	142.946	- 102.007	- 102.007
CAGR* 90-05			6.08%			4.83%		4.38%
Source: Trade data, Census Bureau; OAAI HTS selection; Indices from BEA NIPA Table 7.2.4B.								
* Compound Annual Growth Rate							Table 1	

Global Exports of Road Motor Vehicles and Five Largest Shipping Nations

Billions of Current U.S. Dollars and Share of Total Reported								
1997			2001			2005		
All Reporters	317.0	100.0%	All Reporters	373.0	100.0%	All Reporters	590.5	100.0%
Germany	61.7	19.5%	Germany	76.7	20.6%	Germany	122.8	20.8%
Japan	57.7	18.2%	Japan	59.0	15.8%	Japan	89.1	15.1%
Canada	35.8	11.3%	Canada	41.9	11.2%	Canada	49.1	8.3%
USA	25.6	8.1%	France	24.9	6.7%	USA	42.0	7.1%
France	20.9	6.6%	USA	24.3	6.5%	France	40.8	6.9%
Source: GTIS / World Trade Atlas, using OAAI selection of 6-digit H.T.S. Codes							Table 2	

Road Motor Vehicle Exports to the World From NAFTA Members

Billions of Current U.S. Dollars and Share of Global Export Total							
		1997		2001		2005	
NAFTA Members To --							
	World, Less NAFTA Partners	10.7	3.39%	8.3	2.22%	19.0	3.22%
Canada To --							
	World	35.8	11.30%	41.9	11.24%	49.1	8.32%
	World, Less NAFTA Partners	0.4	0.14%	0.3	0.07%	0.5	0.09%
Mexico To --							
	World	14.1	4.44%	21.9	5.88%	21.7	3.68%
	World, Less NAFTA Partners	1.1	0.35%	0.9	0.25%	2.2	0.38%
USA To --							
	World	25.6	8.07%	24.3	6.52%	42.0	7.11%
	World, Less NAFTA Partners	9.2	2.90%	7.1	1.90%	16.3	2.76%
Source: Global Trade Information Service, using OAAI's selection of 6-digit H.T.S. codes.							Table 3

Global Shipments of Road Motor Vehicles And Five Largest Import Markets								
Billions of Current U.S. Dollars and Share of Total Reported								
1997			2001			2005		
All Reporters	285.0	100.0%	All Reporters	371.8	100.0%	All Reporters	545.5	100.0%
USA	88.1	30.9%	USA	126.3	34.0%	USA	146.0	26.8%
Germany	27.7	9.7%	U.K.	28.5	7.7%	U.K.	41.9	7.7%
U.K.	24.8	8.7%	Germany	28.0	7.5%	Germany	40.1	7.4%
Italy	19.1	6.7%	Italy	21.6	5.8%	Italy	34.7	6.4%
Canada	17.9	6.3%	France	20.6	5.5%	France	34.3	6.3%
Source: GTIS / World Trade Atlas, using OAAI selection of 6-digit H.T.S. Codes							Table 4	

U.S. Road Motor Vehicles Balance of Trade By Product Group				
Billions of Constant 2005 Dollars				
	1990	1998	2005	CAGR 90-05*
Total, All Categories	- 53.587	- 73.800	- 102.007	+ 4.38%
Ambulance/Hearse/Prison Vans	+ 0.019	+ 0.032	+ 0.025	+1.78%
Buses & 10+Seat Passenger Vans	- 0.378	- 0.904	- 0.264	- 2.36%
Chassis With Engines, CV	- 0.282	+ 0.242	+ 0.055	- 189.66%
Chassis With Engines, PV	- 0.066	- 0.241	+ 0.039	- 196.60%
Motor Homes	+ 0.338	+ 0.105	+ 0.246	- 2.10%
Passenger Vehicles & Lt. Trucks	- 53.550	- 72.042	- 104.840	+ 4.58%
Passenger Vehicles, Used	+ 1.094	+ 0.980	+ 3.765	+ 8.58%
Road Tractors, New	+ 0.289	- 0.635	- 0.443	- 202.89%
Road Tractors, Used **	N.A.	+ 0.033	+ 0.074	+ 13.61%
Trucks, Medium & Heavy "Straight"	- 0.410	- 0.349	- 0.664	+ 3.27%
* Note that a positive CAGR in a negative balance is not a "positive" development. ** Used Road Tractor export category created in 1991. CAGR is 1991-2005.				Table 5
Source: U.S. Census Bureau, OAAI selection of 10-digit HTS codes, product groups.				

**U.S. Balance of Trade in Road Motor Vehicles
With the World & 10 Largest Suppliers in Each Year**

Billions of Current Dollars

1990		1998		2005	
World	- 41.700	World	- 69.945	World	- 102.007
Japan	- 20.998	Canada	- 23.721	Canada	- 27.538
Canada	- 11.984	Japan	- 23.728	Japan	- 34.483
Germany	- 5.198	Mexico	- 10.827	Germany	- 16.739
Mexico	- 2.188	Germany	- 9.797	Mexico	- 13.830
Sweden	- 1.405	Sweden	- 1.936	Korea	- 8.650
Korea	- 1.065	U.K.	- 1.269	U.K.	- 4.880
U.K.	- 0.794	Korea	- 1.685	Sweden	- 2.148
Belgium	- 0.231	Belgium	- 0.778	Belgium	- 1.239
Italy	- 0.350	Italy	- .084	Italy	- 0.499
Australia	- 0.140	Australia	+ 0.132	Austria	- 0.583

Source: U.S. Census Bureau, using OAAI selection of 10-digit HTS codes. Table 6

U.S. Road Motor Vehicle Exports by Product Group

Billions of Constant 2005 Dollars

	1990	1998	2005	CAGR 1990-05
Total, All Categories	16.882	26.813	40.939	+6.08%
Ambulance/Hearse/Prison Vans	0.022	0.033	0.031	+ 2.45%
Buses & 10+Seat Passenger Vans	0.211	0.375	0.585	+ 7.03%
Chassis With Engines, CV	0.116	0.249	0.066	- 3.74%
Chassis With Engines, PV	0.002	0.045	0.041	+ 23.13%
Motor Homes	0.367	0.231	0.395	+ 0.49%
Passenger Vehicles & Lt. Trucks	13.230	21.183	31.333	+ 5.92%
Passenger Vehicles, Used	1.214	1.351	4.041	+ 8.35%
Road Tractors, New	0.525	1.563	1.819	+ 8.64%
Road Tractors, Used *	0.024	0.060	0.093	+ 10.08%
Trucks, Medium & Heavy "Straight"	0.752	1.107	2.535	+ 8.44%

* There was no used tractor export category in 1990. Exports and CAGR are for 1991.

Source: U.S. Census Bureau, using OAAI selection of 10-digit H.T.S. codes and product groups. Table 7

U.S. Road Motor Vehicle Imports by Product Group				
Billions of Constant 2005 Dollars				
	1990	1998	2005	CAGR 1990-05
Total, All Categories	70.469	100.614	142.946	+ 4.83%
Ambulance/Hearse/Prison Vans	0.003	0.001	0.006	+ 5.95%
Buses & 10+Seat Passenger Vans	0.589	1.279	0.850	+ 2.47%
Chassis With Engines, CV	0.398	0.007	0.011	- 21.46%
Chassis With Engines, PV	0.068	0.286	0.002	- 21.92%
Motor Homes	0.029	0.126	0.149	+ 11.55%
Passenger Vehicles & Lt. Trucks	66.780	93.225	136.173	+ 4.86%
Passenger Vehicles, Used	0.119	0.371	0.276	+ 5.75%
Road Tractors, New	0.236	2.197	2.262	+ 16.27%
Road Tractors, Used	0.016	0.027	0.018	+ 1.11%
Trucks, Medium & Heavy "Straight"	1.162	1.456	3.198	+ 6.98%
Source: U.S. Census Bureau, using OAAI selection of 10-digit H.T.S. codes and product groups.				Table 8