

Motor Vehicles, Model Year 1996

By Ralph W. Morris

SALES OF new motor vehicles in the United States reached 15.5 million units in model year 1996, the highest level in 8 years (*chart 1*).¹ However, this level of sales is still well below the peak of 16.1 million units in 1986. Sales increased

1.5 percent in 1996 after little change in 1995. In 1996, the increase was more than accounted for by sales of trucks; sales of cars decreased (*table 1*).

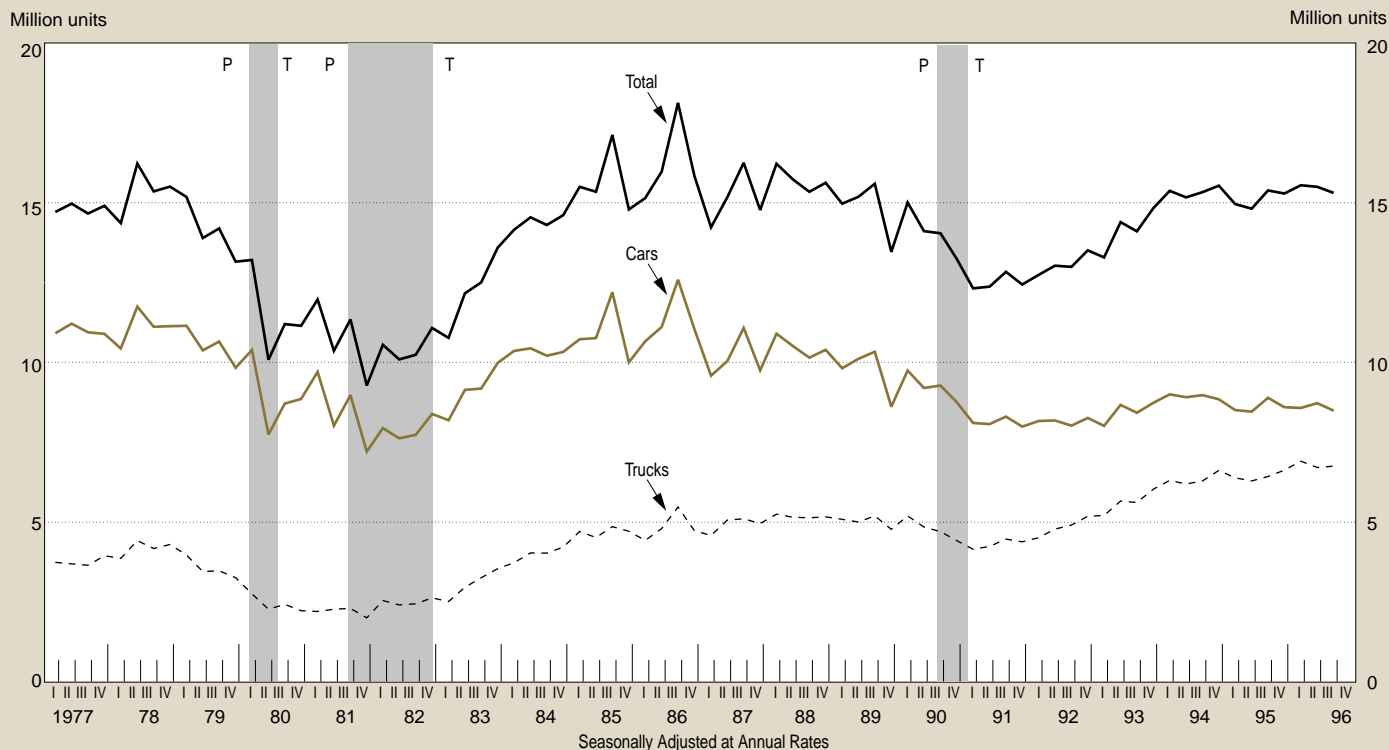
The high level of motor vehicle sales in 1996 reflected a number of factors that provided favorable conditions for consumers to undertake major durable goods purchases. The unemployment rate decreased for the fourth consecutive year. Real disposable personal income increased 3.0 percent. The Index of Consumer Sentiment (prepared by the University of Michigan's Survey Research Center) decreased a little, but its level remained relatively high. In addition, the rise in stock and

1. This article uses data on unit sales, inventories, and production mainly from the *Ward's Automotive Reports* and the American Automobile Manufacturers Association, Inc., and data on prices mainly from the Automobile Invoice Service and the Bureau of Labor Statistics, U.S. Department of Labor. These data underlie the estimates of auto and truck output in the national income and product accounts. The quarterly data are seasonally adjusted by BEA.

For this article, the model year is defined as beginning on October 1 and ending on the following September 30. Thus, model year 1996 covers the fourth calendar quarter of 1995 and the first, second, and third calendar quarters of 1996. All years mentioned in this article are model years unless otherwise stated.

CHART 1

New Motor Vehicle Sales



Note.—Peak (P) indicates the end of business cycle expansion and the beginning of recession (shaded area). Trough (T) indicates the end of business cycle recession and the beginning of expansion. Business cycle peaks and troughs designated by the National Bureau of Economic Research, Inc.
Data: American Automobile Manufacturers Association, Inc. and *Ward's Automotive Reports*, seasonally adjusted by BEA.

bond prices in recent years has produced sizable gains in wealth for many households; personal sector holdings of corporate equities and mutual funds shares increased about 27 percent.²

Several factors specific to the motor vehicle industry were also favorable. Manufacturers offered attractive sales-incentive programs to consumers throughout 1996, and several of these programs covered popular models that had been excluded from earlier programs. These programs included rebates, below-market-rate financing, and discount packages on optional equipment on selected models.

New-vehicle prices increased less in 1996 than in 1995. The consumer price index (CPI) for new cars increased 1.7 percent in 1996 after increasing 2.7 percent in 1995, and the CPI for new light trucks increased 2.6 percent after increasing 3.3 percent. The modest increases in new-vehicle prices reflect efforts by vehicle manufacturers to hold down production costs, as well as the continuation of the sales-incentives programs. These efforts, which include the outsourcing of production to suppliers, have resulted in changes in the motor vehicle parts industry, including the restructuring and the mergers of many major parts-supplying companies. A report by the Federal Reserve Bank of Chicago showed that there were over 130 mergers of suppliers in calendar year 1995, and in

2. Holdings were calculated as the average of the holdings in the middle two quarters of the model year; the data is from the Federal Reserve Board.

Changes in Methodology

Several important improvements were made to BEA's data on car and truck sales in the comprehensive revision of the national income and product accounts that was released in January 1996. First, BEA reclassified sales of imported sport-utility vehicles and imported vans from car sales to light-truck sales for years back to 1985. In calendar year 1994, for example, 228,619 unit sales were reclassified from car sales to light-truck sales. Second, BEA adopted the seasonal adjustment process developed by the Federal Reserve Board in order to compute the new seasonal adjustment factors for sales of domestic and imported cars and light domestic trucks. These new factors incorporate improved adjustments of sales data to a calendar month basis. Third, BEA revised its estimates of average expenditures per new car to reflect the improved estimates of average base prices and of average expenditures for optional equipment and to incorporate adjustments for rebates, on the basis of additional information from a trade source.

the first 4 months of 1996, over 50 mergers were announced.

Interest rates on new-vehicle loans were lower in 1996 than in 1995. For example, rates for new-car loans made by commercial banks averaged 9.1 percent in 1996, down from 9.4 percent in 1995; rates for loans made by motor vehicle finance companies averaged 10.1 percent, down from 11.1 percent (chart 2).

Table 1.—Selected Motor Vehicle Indicators

	Model year ¹						Seasonally adjusted annual rates				
	1991	1992	1993	1994	1995	1996	1995		1996		
							III	IV	I	II	III
	Thousands of units										
New motor vehicle sales	12,756	12,868	13,913	15,179	15,233	15,460	15,438	15,342	15,595	15,548	15,356
New-car sales	8,373	8,160	8,428	8,936	8,736	8,654	8,949	8,657	8,630	8,780	8,545
Domestic	6,276	6,195	6,595	7,173	7,167	7,361	7,466	7,267	7,335	7,523	7,295
U.S. nameplates	5,137	5,048	5,348	5,707	5,518	5,428	.....	.....	.....	.....	.....
Transplants	1,140	1,146	1,247	1,466	1,649	1,933	.....	.....	.....	.....	.....
Import	2,097	1,966	1,833	1,763	1,570	1,293	1,483	1,390	1,295	1,257	1,250
New-truck sales	4,384	4,707	5,486	6,244	6,498	6,806	6,489	6,685	6,965	6,768	6,811
Light	4,131	4,446	5,167	5,869	6,070	6,390	6,087	6,258	6,548	6,345	6,408
Domestic	3,582	4,026	4,789	5,499	5,666	5,976	5,716	5,865	6,153	5,887	6,005
Import	549	421	378	370	404	413	371	393	395	458	403
Other	253	261	320	375	427	417	401	427	417	422	403
Domestic-car production	5,454	5,643	5,827	6,548	6,466	6,187	6,281	6,254	5,445	6,361	6,721
Domestic-car inventories ² .....	.....	.....	.....	.....	.....	.....	1,532	1,530	1,283	1,238	1,319
Domestic-car inventory-sales ratio ³ .....	.....	.....	.....	.....	.....	.....	2.46	2.53	2.10	1.98	2.17
	Dollars										
Average expenditure per new car ⁴	15,892	16,893	17,575	18,444	18,490	18,371	18,380	18,288	18,291	18,190	18,713
Domestic	15,499	16,281	16,596	17,415	17,351	16,915	17,407	16,864	16,818	16,803	17,176
Import	17,067	18,861	21,111	22,641	23,672	26,633	23,279	25,728	26,633	26,486	27,685

1. A model year begins on October 1 and ends on September 30, covering the fourth quarter of one calendar year and the first three quarters of the next calendar year.

2. End of quarter, not at an annual rate.

3. Ratio of end-of-quarter inventories to average monthly sales for the quarter.

4. BEA estimate using average base price and adjustments for options, transportation charges,

taxes, discounts, and rebates for each model, weighted that each model's share of sales; not at an annual rate.

Source: American Automobile Manufacturers Association, Inc., and Ward's Automotive Reports; quarterly data are seasonally adjusted by BEA.

Two trends in the 1990's that have dampened motor vehicle sales probably continued in 1996. First, owners are keeping their vehicles longer; according to estimates by R.L. Polk and Company, the average age of cars on the road reached 8.5 years in calendar year 1995, compared with 7.8 years in 1990. Second, the growth rates in the driving-age population and in household formation slowed in the first half of the 1990's.

New Cars

Sales of new cars decreased 0.9 percent to 8.7 million units in 1996 after decreasing 2.2 percent in

1995. The 1996 decrease was more than accounted for by sales of imported cars; sales of domestic cars increased, as an increase in sales of "transplant" cars more than offset a decrease in sales of domestic-nameplate cars.³

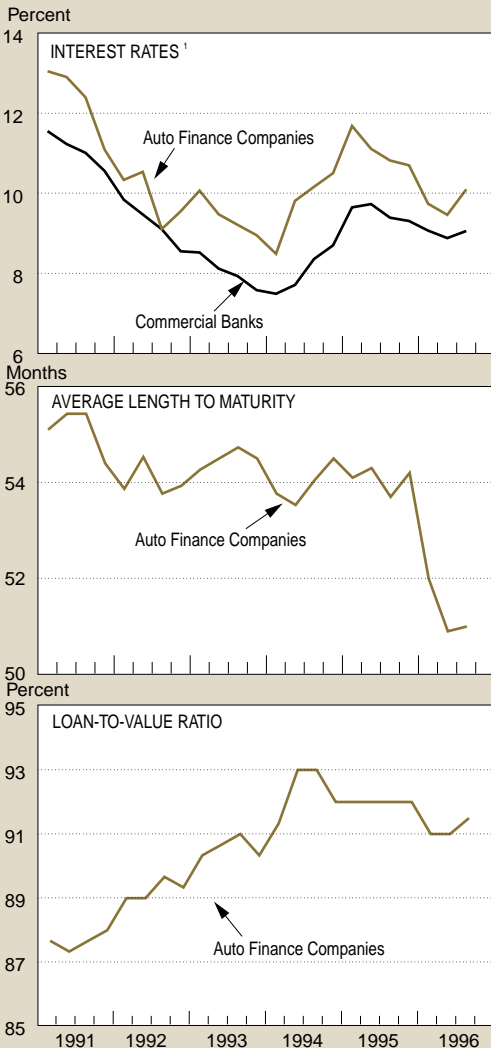
The average expenditure per new car decreased 0.6 percent to \$18,371 in 1996.⁴ The decrease reflected a change in the average size of all cars

3. Sales of domestic vehicles consist of sales in the United States of domestic-nameplate vehicles and "transplant" vehicles manufactured in North America—that is, Canada, the United States, and Mexico. Domestic-nameplate vehicles are those manufactured at factories owned by U.S. companies, and transplant vehicles are those manufactured at foreign-owned factories. Imported vehicles are those manufactured outside North America and sold in the United States.

4. BEA derives the average expenditure per new car by adding the price of optional equipment, transportation charges, and taxes to the base price and by subtracting discounts and rebates. Movements in the average expenditure differ from movements in the new-car component of the CPI, because the CPI, unlike the average expenditure, is adjusted to remove the influence of quality change on prices and because the average expenditure, unlike the CPI (which is a fixed-weighted price index), reflects changes in the mix of models and options sold and includes cars sold to businesses and governments as well as cars sold to consumers.

CHART 2

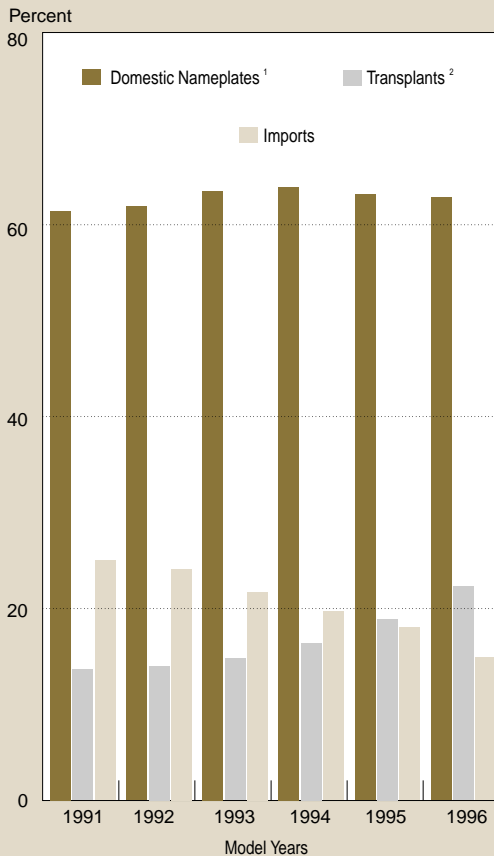
Finance Terms on 48-Month New Car Installment Loans



1. Most common interest rates (annual percentage rate) at reporting institutions. Data: Federal Reserve Board.

CHART 3

Share of New Cars by Source



1. Domestic nameplates are cars manufactured in North America at factories owned by domestic companies.

2. Transplants are cars manufactured in North America at factories owned by foreign companies.

Data: Motor Vehicle Manufacturers Association of the United States, Inc. and Ward's Automotive Reports, seasonally adjusted by BEA.

sold: Sales of small cars and middle-sized cars increased, and sales of large cars and luxury cars decreased. For domestic cars, the average expenditure decreased 2.5 percent to \$16,915. In contrast, the average expenditure for imported cars increased 12.5 percent to \$26,633; the increase was partly attributable to a shift in the composition of imported-car sales toward luxury cars.

Sales of domestic cars increased 2.7 percent to 7.4 million units, the highest level since 1989. The increase was accounted for by sales of transplant cars. Sales of transplant cars increased 17.2 percent after increasing 12.5 percent; sales of domestic-nameplate cars decreased 1.6 percent after decreasing 3.3 percent.

Sales of imported cars dropped 17.6 percent to 1.3 million units, the lowest level since 1976.⁵ The decrease in imported-car sales continues a trend that began in 1988 and that largely reflects shifts in production by foreign manufacturers from overseas plants to plants in North America. Sales of cars imported from Japan decreased sharply; the decrease occurred despite the strengthening of the U.S. dollar against the Japanese yen. Sales of cars imported from Europe increased moderately in 1996.

The market share (percent of total new-car sales) of domestic-nameplate car sales decreased

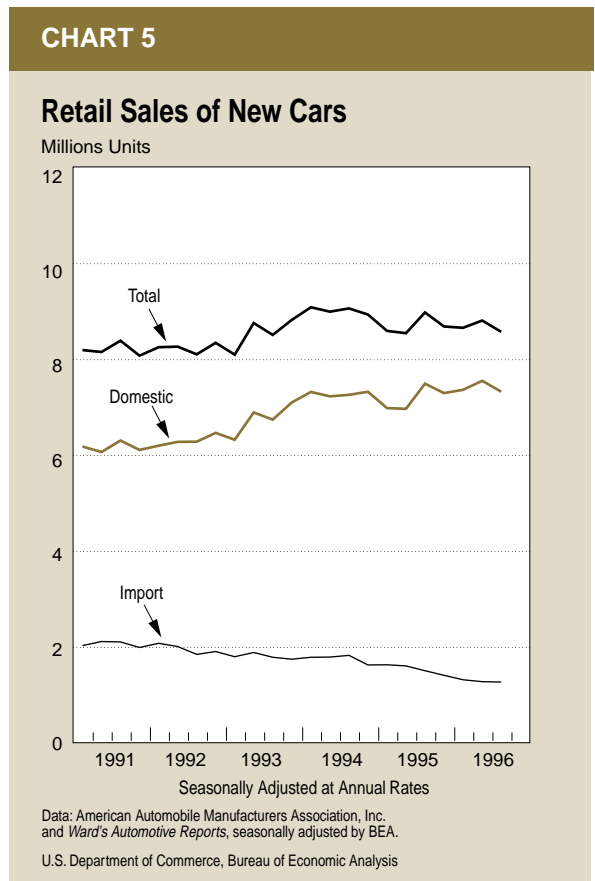
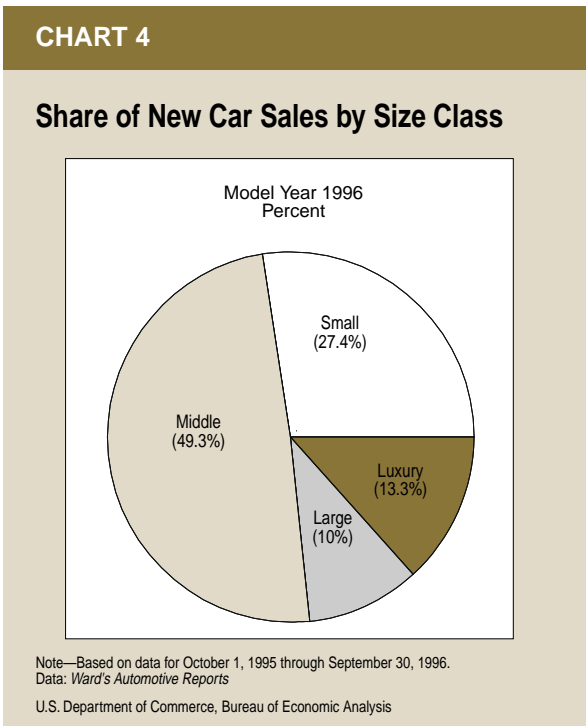
to 62.8 percent in 1996 from 63.1 percent in 1995 (chart 3). The market share of transplant-car sales increased to 22.3 percent from 18.9 percent. The market share of imported-car sales decreased to 14.9 percent from 18.0 percent.

By size class, the 1996 decrease in car sales was accounted for by a decrease in sales of large cars and of luxury cars; sales of small cars and of middle-sized cars increased (chart 4). Sales of large cars decreased to 0.9 million units, and their market share decreased from 11.0 percent to 10.0 percent. Sales of luxury cars decreased to 1.1 million, and their market share decreased from 13.6 percent to 13.3 percent. Sales of small cars increased to 2.4 million, and their market share increased from 26.6 percent to 27.4 percent. Sales of middle-sized cars increased to 4.3 million, and their market share increased from 48.8 percent to 49.3 percent.

By quarter, new-car sales decreased in the first quarter of the model year, changed little in the second quarter, increased in the third quarter, and decreased in the fourth quarter (chart 5).

Domestic-car production was 6.2 million units in 1996, the lowest level in 3 years. Domestic-car production was weaker in the first half of the model year than in the second half. One factor that affected car production in the first half was a

5. Unit sales data for imported cars and imported trucks were substantially revised in the recent comprehensive revision of the national income and product accounts; downward revisions of sales of imported cars were largely offset by upward revisions of sales of imported trucks. For information, see the box "Changes in Methodology."



Data Availability

BEA prepares seasonally adjusted monthly estimates of auto and truck unit sales, auto unit production, and inventory change. The estimates are available online to STAT-USA subscribers (Economic Bulletin Board and Internet site). For information about STAT-USA's services, call (202) 482-1986. These estimates, as well as other motor vehicle estimates, are also available on print-outs and diskettes. For order information, write to the National Income and Wealth Division (BE-54), Bureau of Economic Analysis, Washington, DC 20230, or call (202) 606-9700.

strike in March by workers at two plants of a major motor vehicle manufacturer; the third-quarter pickup in production partly reflected a makeup of the production lost due to the strike. Domestic-car inventories were 1.3 million units at the end of the 1996 model year, considerably lower than at the end of 1995. The inventory-sales ratio was 2.2 at the end of the year, somewhat below the traditional industry target of about 2.4.

In recent years, foreign motor vehicle manufacturers, particularly Japanese manufacturers, have sharply stepped up production in the United States. Transplant cars accounted for about 25 percent of the cars manufactured in the United States in 1996; they had accounted for about 20 percent in 1990. The effect of an increase in the operations of transplants can be seen in the data collected in BEA surveys of foreign direct investment in the United States. Employment by U.S. affiliates of foreign companies in manufacturing in the motor vehicles and equipment industry increased 19 percent from 1990 to 1994 (the most recent year for which data are available); employment at Japanese-owned affiliates increased 54 percent. Sales by the U.S. affiliates of these foreign companies increased 89 percent; sales by Japanese-owned affiliates increased 105 percent. Production at transplants is likely to continue to increase because foreign manufacturers, both Japanese and European, are planning to produce several additional vehicle models at U.S. transplants in model year 1997 and beyond.

New Trucks

Sales of new trucks increased 4.7 percent to a record 6.8 million units in 1996 after increasing 4.1 percent in 1995. The 1996 increase was mainly accounted for by an increase in sales of light domestic trucks; sales of light imported trucks increased only slightly, and sales of "other" trucks decreased

slightly.⁶ The share of total new-motor-vehicle sales accounted for by trucks increased to a record 44.0 percent in 1996 from 42.7 percent in 1995.

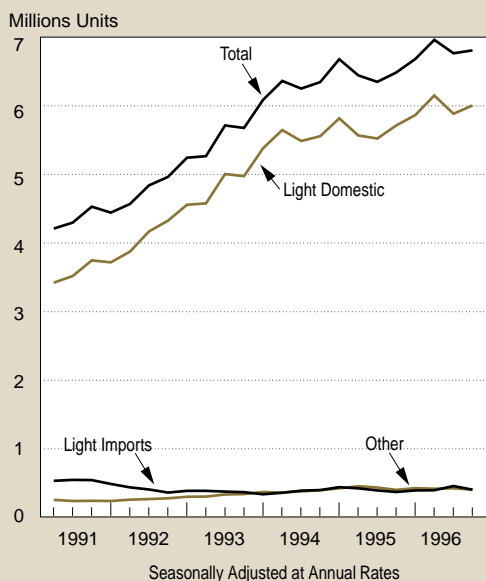
Sales of light trucks increased 5.3 percent in 1996 after increasing 3.4 percent in 1995. The 1996 increase was more than accounted for by increases in sales of sport-utility vehicles and conventional pickups; sales of vans and compact pickups decreased.

Most light-truck purchases are for personal use rather than for business use; consequently, many of the same factors that affect car sales also affect truck sales. In addition, the relative strength of light-truck sales in 1996 partly reflected the continuation of a trend in which truck purchases have been substituted for car purchases. This trend largely reflects purchases of truck models with additional equipment and refinements that have blurred the distinction between trucks and cars in terms of function and comfort. Many of these trucks also offer recreational and utility features, such as cargo-carrying and towing capacity and four-wheel-drive capability.

6. Light trucks are those with a gross vehicle weight of up to 10,000 pounds; these trucks include light conventional pickups, compact pickups, sport-utility vehicles, and passenger vans. "Other" trucks are those with a gross vehicle weight of over 10,000 pounds; these trucks range from medium-duty general delivery trucks to heavy-duty diesel tractor-trailers.

CHART 6

Retail Sales of New Trucks



Note—Retail sales of domestic trucks are classified by gross vehicle weight as light (up to 10,000 pounds) and "other" (over 10,000 pounds). Imported trucks include imports by U.S. manufacturers. Data: American Automobile Manufacturers Association, Inc. and *Ward's Automotive Reports*, seasonally adjusted by BEA.

U.S. Department of Commerce, Bureau of Economic Analysis

Sales of light domestic trucks increased 5.5 percent to 6.0 million in 1996 after increasing 3.0 percent in 1995. The composition of these truck sales in 1996 shifted towards “upscale” models—that is, models with more power, luxury, and options than the basic models. Sales of domestic-nameplate trucks increased 5.8 percent to 5.5 million units; their share of total light-truck sales increased to 86.2 percent. Sales of transplant trucks increased 5.4 percent to 0.5 million units; their market share increased to 7.3 percent.

Sales of light imported trucks were unchanged at 0.4 million units. Sales of imported sport-utility

vehicles increased, but sales of imported pickup trucks decreased; the decrease partly reflected a shift in production by foreign manufacturers from overseas plants to transplants. The imported-truck share of light-truck sales decreased to 6.5 percent.

Sales of “other” trucks remained unchanged at 0.4 million. Nearly all of these trucks are purchased by businesses. The domestic models’ share of total sales of all “other” trucks was almost 95 percent.

By quarter, new truck sales increased in the first and second quarters of model year 1996, decreased in the third quarter, and increased in the fourth quarter ([chart 6](#)). 