

Global passenger car production grew 2 percent in 2002, to 40.6 million units.¹ This is still slightly below the 2000 peak output of 41.1 million.² Since 1950, annual car production has grown fivefold.³ (See Figure 1.) Production of sport utility vehicles and other “light trucks” reached a record 15.8 million in 2002, 6 percent more than in 2001.⁴ Revised estimates show the global passenger car fleet reaching 531 million in 2002.⁵ (See Figure 2.) The United States has one quarter of the cars in the world.⁶

Reflecting continued overcapacity in the industry, passenger car production outpaced sales by almost 2 million vehicles, or more than 5 percent.⁷ But light trucks continued to be popular, outrunning production in 2002 by more than 1 million (almost 9 percent).⁸ Once primarily used for hauling loads, light trucks are now heavily marketed as passenger vehicles. But even more so than cars, they are increasingly important contributors to air pollution and climate change. In the United States, model-year 2001 light trucks emitted 2.4 times more smog-forming pollutants and 1.4 times more carbon than passenger cars.⁹

Driving a gasoline-powered car accounts for about 68 percent of the greenhouse gases emitted over the life of the vehicle, but producing and distributing the fuel on which it runs accounts for another 21 percent, while manufacturing the car itself contributes the rest.¹⁰

Automobile carbon emissions could be reduced significantly by boosting fuel efficiency. Yet fuel economy has remained flat since 1990 in the United States, after substantial improvements since the early 1970s.¹¹ Efforts to raise mandated fuel efficiency standards failed in the mid-1990s and again in 2002.¹² Carmakers exploit exemptions and loopholes in existing standards, and the Bush administration is considering tax measures that would provide more incentive for buyers to choose the biggest gas-guzzlers.¹³

In 1970, Americans drove some 80 million cars close to 1 trillion miles (almost 1.6 trillion kilometers), burning 5.25 million barrels of fuel per day (mb/d) and emitting 193 million tons of carbon.¹⁴ By 2000, there were about 128 mil-

lion cars—60 percent more. They traveled 2.3 trillion miles (a growth of 146 percent), consumed 8.2 mb/d of fuel (up 56 percent), and emitted 302 million tons of carbon (also 56 percent more).¹⁵ (See Figure 3.)

In the rest of the world, car density relative to population is much lower than in the United States. In Western Europe and Japan, it is currently comparable to the level the United States reached in the early 1970s; in Eastern Europe, it is similar to that in the 1930s; and in other regions it is even lower.¹⁶

People outside the United States also use their cars less than Americans. For instance, the average car in the United States travels 10 percent more per year than a car in the United Kingdom, about 50 percent more than one in Germany, and almost 200 percent more than a car in Japan.¹⁷ And Americans drive less fuel-efficient cars, so these figures understate the national differences in gasoline used for driving.¹⁸

The United States consumed 43 percent of the 19.1 mb/d of world gasoline use for all transportation purposes in 1999.¹⁹ (This number overstates the U.S. share of road fuel use, however, because it does not include diesel fuels, which are popular in Europe.)²⁰ All in all, the carbon emissions of U.S. automobiles are roughly equivalent to those of the entire Japanese economy—the world’s fourth-largest carbon emitter.²¹

The leaders in fuel economy are Honda, Hyundai, Volkswagen, and Subaru. The U.S. “Big Three,” by contrast—General Motors, Ford, and Daimler-Chrysler—are among the laggards.²² One analysis of the six largest carmakers also finds that the Japanese firms Honda, Toyota, and Nissan have a “cleaner” record with regard to smog-forming pollutants than the Big Three.²³

To date, only Honda and Toyota have introduced “hybrid electric” cars (in which electric power supplements the internal combustion engine, which lowers fuel intake and pollutants).²⁴ Vehicles running on all different types of alternative power currently account for only a tiny share of the total car fleet. In the United States, fewer than 380,000 such vehicles were on the roads in 2001.²⁵

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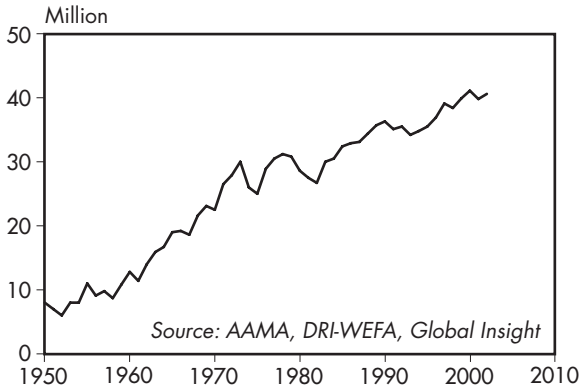


Figure 1: World Automobile Production, 1950–2002

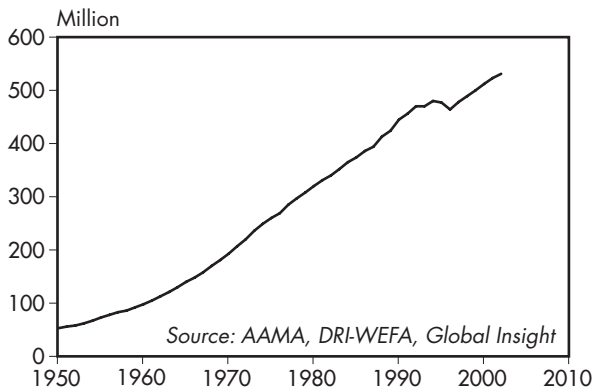


Figure 2: World Passenger Car Fleet, 1950–2002

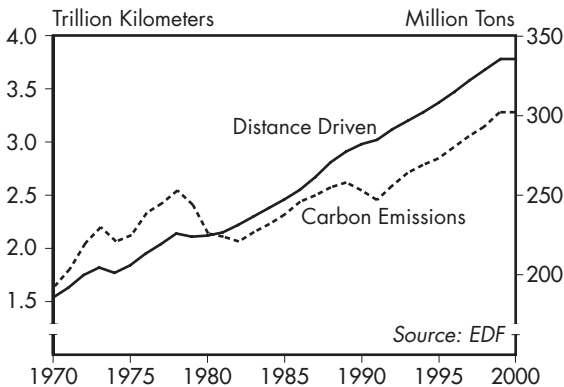


Figure 3: Distance Driven and Carbon Emitted by U.S. Automobiles, 1970–2000

World Automobile Production, 1950–2002

Year	Production (million)
1950	8.0
1955	11.0
1960	12.8
1965	19.0
1970	22.5
1971	26.5
1972	27.9
1973	30.0
1974	26.0
1975	25.0
1976	28.9
1977	30.5
1978	31.2
1979	30.8
1980	28.6
1981	27.5
1982	26.7
1983	30.0
1984	30.5
1985	32.4
1986	32.9
1987	33.1
1988	34.4
1989	35.7
1990	36.3
1991	35.1
1992	35.5
1993	34.2
1994	34.8
1995	35.5
1996	36.9
1997	39.1
1998	38.4
1999	39.9
2000	41.1
2001	39.8
2002 (prel)	40.6

Source: DRI-WEFA, American Automobile Manufacturers Association, and Global Insight.

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2. Ibid.
3. Ibid.; DRI-WEFA, Global Automotive Group, *Global Sales of Light Vehicles by Region & Country December 2001* (London: 2001); Standard and Poor's DRI, *World Car Industry Forecast Report*, December 2000 and December 1999 (London: 2000 and 1999); American Automobile Manufacturers Association, *World Motor Vehicle Facts and Figures 1998* (Washington, DC: 1998).
4. DRI Automotive Group, op. cit. note 1.
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8. Ibid.
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Statistics are for the late 1990s.
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20. Ibid.
21. DeCicco and An, op. cit. note 10, Figure 12.
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