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OF THE

COMMITTEE ON WAYS AND MEANS
U.S. HOUSE OF REPRESENTATIVES

# Auto Situation: 1980



JUNE 6, 1980

Prepared by the staff of the Subcommittee on Trade for use of the Committee on Ways and Means

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# LETTER OF TRANSMITTAL

COMMITTEE ON WAYS AND MEANS,
U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRADE,
*Washington, D.C., June 6, 1980.*

HON. AL ULLMAN,
*Chairman, Committee on Ways and Means,*
*1102 Longworth House Office Building*

DEAR MR. CHAIRMAN: Attached is a report from the Subcommittee on Trade entitled, "Auto Situation: 1980."

As you know, the Subcommittee held 2 days of hearings on World Auto Trade. Subsequently, three members of the Subcommittee visited Japan and met with a number of private and government auto officials. Because of the crisis in the industry, the Subcommittee has been involved in a number of meetings this spring to discuss the situation facing the industry.

The Subcommittee's report seeks to provide basic data on the American industry and on its principal competitors. In addition, the report discusses several major issues, such as the probable duration of the present crisis and the need for the domestic industry to stress quality production. The report recommends that the Executive Branch establish a permanent committee of industry, labor, consumer and government leaders to help the industry adjust to what will be a most serious and challenging decade. The Subcommittee also recommends that because of the importance of the auto to the world economy and energy use, that an Auto Committee be established within some international body.

We hope that this report will be of use to the Committee, the Congress and the public.

In preparing this report, the Subcommittee wishes to thank the International Trade Commission for providing to the Subcommittee the services of its auto analyst, Mr. Jim McElroy.

Sincerely yours,

CHARLES A. VANIK,
*Chairman.*

# CONTENTS

## APPENDIXES

# AUTO SITUATION: 1980

## I. Summary

With almost 1 out of every 5 workers in the United States either directly or indirectly employed in motor vehicle-related industries, motor vehicles are the key to the American economy.

It is a matter of grave concern, therefore, that the U.S. auto industry is in trouble—and little improvement is seen in the next 2 to 3 years.

At a time when domestic sales are rapidly dropping and auto unemployment is rising, sales of imported cars, especially from Japan are setting new records. Import penetration for January, February, March, and April of this year set monthly records of 27 percent, 27.1 percent, 25.1 percent, and 27.2 percent, respectively. The estimated market share that imported autos will hold for 1980 range from a "conservative" 25 percent up to 30 percent. If the recession is deeper than expected, the import ratio could go even higher. The previous record for imports was set in 1979 when imported cars accounted for 21.9 percent of the U.S. car market.

The record number of imported car sales is due to a rapid shift by U.S. consumers from large, relatively inefficient cars, to small fuel-efficient compacts and subcompacts. Because of the U.S. carmakers' inability to shift production from large cars to small cars, the sale of many U.S. models has dropped drastically, while the sale of imported models has skyrocketed. The U.S. industry was unable (or unwilling) to believe that the price of gasoline would increase and shortages would occur, while the Japanese proceeded to perfect a quality, fuel-efficient auto and are more than glad to supply the demand for them.

The domestic industry will probably not be able to fill the public's demand for quality autos until late 1982. At that time, GM, Ford, Chrysler, and Volkswagen will have the capacity to produce annually about 7 million newly designed, fuel-efficient cars.

Between now and the fall of 1982, however, the industry and its workers will face difficult times.

To help reduce the $8 to $9 billion Japan-United States auto trade deficit and to reduce auto-related unemployment, considerable effort and some gains have been made in encouraging Japan—

(1) To purchase auto parts (including replacement parts) in the United States;

(2) To make it easier to export U.S. autos to Japan; and

(3) To establish auto assembly plants in the United States.

Considerable progress appears to be underway on the first and second points above, and the third point—assembly lines in the United States—appears to be the major unresolved item.

Honda has announced plans to build an auto plant and Nissan (Datsun) a small truck plant (with potential for expansion into an

auto plant), but the total production of these two plants will account for only about 8 percent of the number of Japanese autos and trucks currently being sold in the United States.

The top two Japanese auto producers have repeatedly refused to build autos in this country, citing labor problems (high cost, quality, and strikes), access to suppliers, yen/dollar fluctuations, and high initial investment as the primary reasons for not investing in the U.S. plants. The subcommittee's report discusses the merits of these concerns in detail.

The principal reason for the Japanese success on the U.S. auto market is clear: their cars are perceived as being fuel-efficient and quality built. These two factors also account for the rapid drop in domestic sales: in recent years U.S. cars have not been known for quality and fuel efficiency. Although many domestic autos achieve better fuel economy than some imports in the same size classification, and the quality of domestic autos is not nearly as bad as many American consumers believe, U.S. automakers will have to rapidly overcome these perceptions in order to recapture their traditional share of the domestic market through the newly designed, fuel-efficient models which will begin rolling off the assembly lines in the early 1980's.

If the U.S. consumer's perception of quality is to be changed, both the auto workers and the auto companies will have to work together. Unless there is a restoration of the reputation of quality, which the U.S. auto workers and management are surely capable of achieving, the American industry may be in permanent trouble.

In the Federal Government, because of the role the auto plays in the U.S. economy, a permanent committee, composed of Government, industry, labor, and consumers should be established to help prevent and/or adjust to future problem areas. All four of these groups need to work together, not separately, in order to insure not only the continued viability of the industry, but the health of the entire American economy.

In the future, auto models can be easily modified so that they can be sold just about anywhere in the world. These models, many times referred to as a "world car," will be produced by every major auto manufacturer in the world—each will compete "head-to-head" with all other world cars. However, since only the financially strong automakers will be able to compete on the world market, many small producers will either go out of business or be forced to merge with one or more other producers.

With the emergence of the world car and the resulting worldwide sourcing of component parts. it seems advisable that an international committee on automobile plans and development be considered. This forum could study not only the auto itself, but the effect it and the entire world auto industry have upon Society and world demands for energy.

## II. Role of Auto Industry in the Domestic Economy

### A. The American Auto Fleet and Its Composition

The United States has more automobiles in use than any other country in the world. Currently there are over 120 million automobiles registered in the United States—or more than 1 auto for every 2 Americans. While the United States accounts for 5.3 percent of the total world population, it accounts for almost 40 percent of the number of automobiles registered in the world.[1]

Americans are also more dependent on their autos than almost any other nation on Earth. The following table shows miles driven per car per year in the United States. While this is understandable, given the tremendous open spaces of America, it is also a testament to our reliance on personal vehicles.

WORLD AUTOMOBILE TRAVEL, 1975

| Region | Distance traveled (billion passenger kilometers) | Distance per person (kilometers) | Car share of personal transport [1] (percent) |
|---|---|---|---|
| United States | 3,288 | 15,300 | 89 |
| Canada | 260 | 11,300 | 86 |
| Western Eruope | 2,180 | 6,300 | 78 |
| Oceania and South Africa | 230 | 4,900 | 70 |
| Japan | 253 | 2,300 | 34 |
| Eastern | 163 | 1,300 | 41 |
| Latin America | 357 | 1,100 | 68 |
| U.S.S.R | 112 | 400 | 11 |
| Afi ica (excludes South Afi ica) | 34 | 100 | 33 |
| Asia (excludes Japan) | 145 | 100 | 10 |
| World total | 7,022 | 1,700 | 63 |

[1] Bicycle and animal transport not included.

Source: Robert U. Ayres, for Oak Ridge National Laboratory.

The number of passenger cars in the United States has increased from an estimated 8,000 in 1900 to almost 120 million in 1979. The most rapid growth in automobile ownership occurred during the early years of the automobile (1900–30), then remained relatively constant until after World War II. As shown on the following table, the level of auto ownership in the United States has increased by about 2 to 3 million each year since 1963:

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[1] 1979 MVMA Facts and Figures.

*Historical passenger automobile registrations*

| Year, December 31— | *Privately owned vehicles* |
|---|---|
| 1979 [1] | 120,000,000 |
| 1978 | 116,395,000 |
| 1977 | 112,968,806 |
| 1976 | 109,513,168 |
| 1975 | 106,077,384 |
| 1974 | 104,228,855 |
| 1973 | 101,412,229 |
| 1972 | 96,553,073 |
| 1971 | 92,221,291 |
| 1970 | 88,775,294 |
| 1969 | 86,414,179 |
| 1968 | 83,189,008 |
| 1967 | 79,998,511 |
| 1966 | 77,752,487 |
| 1965 | 74,909,365 |
| 1964 | 71,675,906 |
| 1963 | 68,748,863 |
| 1960 | 61,419,948 |
| 1955 | 51,960,532 |
| 1950 | 40,190,632 |
| 1945 | 25,694,926 |
| 1940 | 27,372,397 |
| 1935 | 22,494,884 |
| 1930 | 22,972,745 |
| 1925 | 17,439,701 |
| 1920 | 8,131,522 |
| 1915 | 2,332,426 |
| 1910 | 458,377 |
| 1905 | 77,400 |
| 1900 | 8,000 |

[1] Estimate.

Source: MVMA facts and figures, 1979.

During the last 15 years, U.S. retail sales of new domestically produced automobiles ranged from a low of 7.1 million in 1975 to a high of 9.7 million in 1973. Sales of imported automobiles increased from a low of 0.5 million in 1965 to a high of 2.3 million sold in 1979, as shown on the following table. Although the price of gasoline remained fairly level in constant dollars from 1974 through 1978, sales of imports increased from 1.4 million in 1974 to 2 million in 1978. However, when the price of gasoline jumped dramatically in 1979, import sales increased to 2.3 million.

U.S. RETAIL SALES,[1] DOMESTIC AND IMPORTED AUTOMOBILES, 1965–80

| | Domestic | Imports [2] | Total | Import penetration (percent) |
|---|---|---|---|---|
| 1980 [3] | 2,389,822 | 809,376 | 3,259,198 | 26.7 |
| 1979 | 8,315,622 | 2,325,477 | 10,641,099 | 21.9 |
| 1978 | 9,307,578 | 2,000,500 | 11,308,078 | 17.7 |
| 1977 | 9,104,454 | 2,070,633 | 11,175,087 | 18.5 |
| 1976 | 8,606,573 | 1,492,595 | 10,099,168 | 14.8 |
| 1975 | 7,050,120 | 1,577,763 | 8,627,883 | 18.3 |
| 1974 | 7,331,946 | 1,408,947 | 8,740,893 | 16.1 |
| 1973 | 9,631,082 | 1,753,494 | 11,384,576 | 15.4 |
| 1972 | 9,321,502 | 1,616,196 | 10,937,698 | 14.8 |
| 1971 | 8,676,284 | 1,563,178 | 10,239,462 | 15.3 |
| 1970 | 7,115,537 | 1,280,359 | 8,395,896 | 15.2 |
| 1969 | 8,464,375 | 985,767 | 9,450,142 | 10.4 |
| 1968 | 8,624,819 | 779,220 | 9,404,039 | 8.3 |
| 1967 | 7,567,884 | 780,579 | 8,348,463 | 9.3 |
| 1966 | 8,376,993 | 658,123 | 9,035,116 | 7.3 |
| 1965 | 8,763,197 | 569,415 | 9,332,612 | 6.1 |

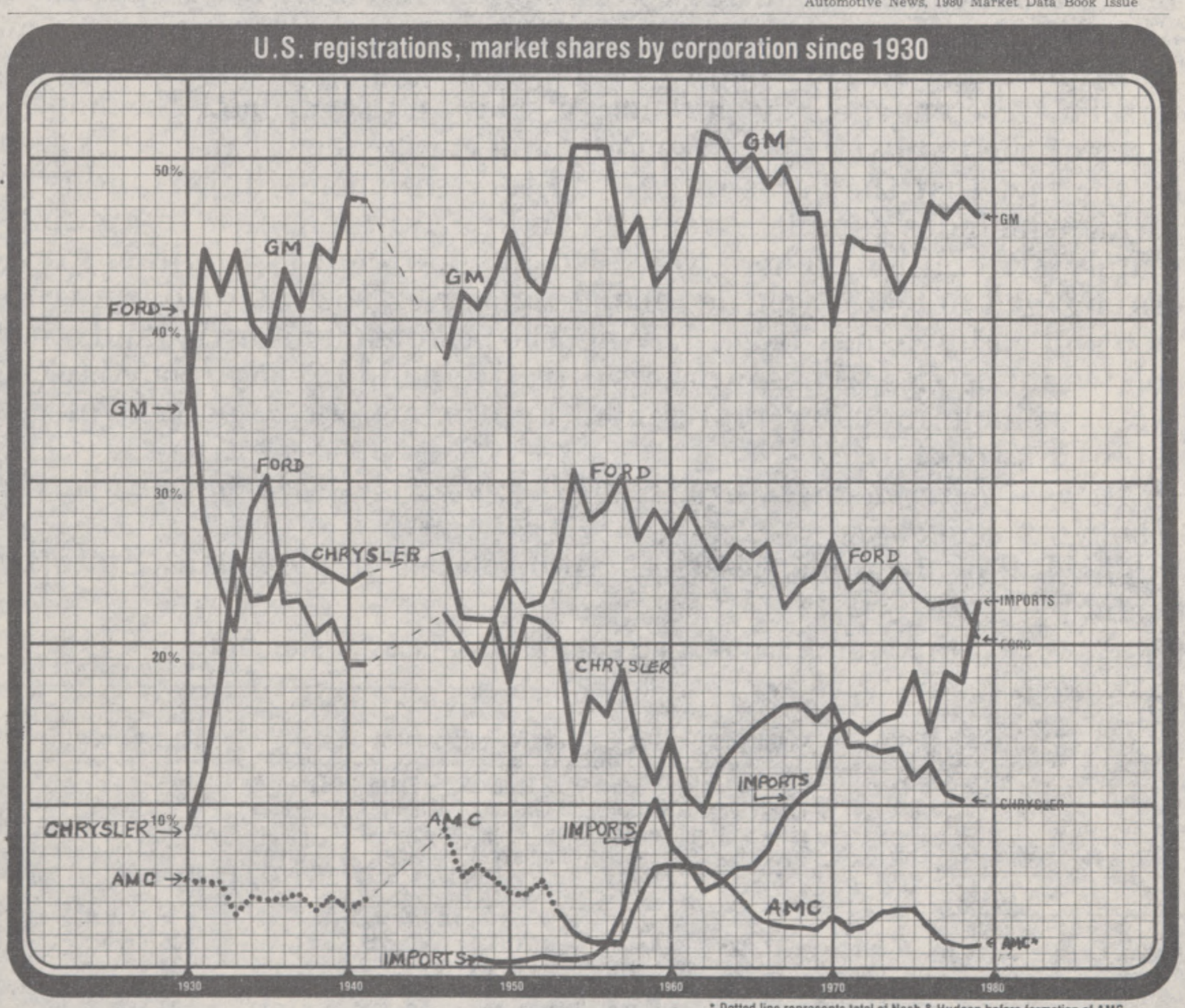
[1] "Automotive News" and "Ward's Automotive."
[2] Excludes U.S. imports from Canada.
[3] Data for 1980 includes January to April only.

## B. Domestic Producers

The domestic automobile industry is composed of five producers: General Motors, Ford, Chrysler, American Motors (now affiliated with Renault), and Volkswagen.[2] In addition to these five manufacturers, Honda Motor Co. of Japan has announced plans to build an assembly plant near Columbus, Ohio. According to Honda, it will be completed before 1983 and have a capacity of about 10,000 cars per month, and Honda recently announced capacity could be expanded to 16,500 per month.

In 1930 the dominant U.S. auto manufacturer was Ford Motor Co. However, Fords' share of the U.S. market deteriorated rapidly during the depression, and by 1935 both General Motors and Chrysler sold more cars than Ford. No domestic company has seriously challenged General Motors No. 1 position since 1932. Since 1970, American Motors, Ford, and Chrysler have all lost part of their U.S. market share, while imported autos now hold a larger share of the U.S. market than any domestic company except GM:

Automotive News, 1980 Market Data Book Issue




* Dotted line represents total of Nash & Hudson before formation of AMC.

The general nature and trends of the "big 3" manufacturers is reflected in the following data supplied to the subcommittee by the companies.

[2] Volkswagens assembled in the United States are still considered to be imports by the Department of Transportation because the U.S. content is less than 75 percent; however, for retail sales purposes, they are classified as domestic.

| | 1950 | 1960 | 1970 | 1979 |
|---|---|---|---|---|
| Worldwide sales (millions): | | | | |
| General Motors | 7,563 | 12,736 | [1] 18,752 | 66,311 |
| Ford | NA | 6,800 | 15,000 | 43,500 |
| Chrysler | 2,207 | 3,017 | 6,973 | 12,004 |
| Net income (millions) (total all operations): | | | | |
| General Motors | 834 | 959 | 609 | 2,893 |
| Ford | 260 | 428 | 516 | 1,169 |
| Chrysler | 128 | 32 | (7.6) | (1,097) |
| Total assets (millions): | | | | |
| General Motors | 3,444 | 7,838 | 14,174 | 32,216 |
| Ford | NA | 3,500 | 6,000 | 13,000 |
| Chrysler | 744 | 1,369 | 4,816 | 6,653 |
| Employees (U.S. average): | | | | |
| General Motors | NA | NA | NA | 623,267 |
| Ford | 142,000 | 160,200 | 229,400 | 239,500 |
| Chrysler | 117,405 | 105,410 | 129,127 | 109,306 |

[1] Data distorted because of 167-day strike.

## C. Employment

According to the 1977 Census of Manufacturers, the U.S. motor vehicle industry [3] directly employed almost 873,000 workers. According to a statement submitted to the subcommittee by the Department of Labor, for every auto production (assembly) worker, there are an additional 3.3 workers employed in auto support firms. Another 3 million were engaged in automotive sales and servicing. The importance of the industry to the economy and employment can also be seen by the fact that the value of 1977 factory shipments in this industry (which includes complete vehicles and parts) amounted to approximately $120 billion.[4] There were also an additional 14.5 million workers engaged in motor vehicle related industries, such as road construction and maintenance, truck driving, the petroleum industry, and other related industries.[5] Thus, workers directly and indirectly related to the motor vehicle industry represented approximately 20 percent of the total US. workforce.

*Autos—their manufacture, servicing, and use—are the key to the American economy.*

The following table describes auto-related employment, State by State.

EMPLOYMENT IN MOTOR VEHICLE AND RELATED INDUSTRIES BY STATE

| State | Motor vehicle related industries employment | | | | | | Total motor vehicle related industries | |
|---|---|---|---|---|---|---|---|---|
| | Motor vehicle and parts Mfgs. (1977) | Automotive sales and servicing (1977) | Road construction and maintenance (1977) | Trucks drivers and other employees (1977) | Petroleum refining and wholesaling (1977) | Passenger transportation [1] (1977) | Employment | Percent of State employment |
| Alabama | 5,691 | 42,225 | 18,873 | 163,600 | 3,591 | 1,631 | 235,611 | 24.7 |
| Alaska | (*) | 4,225 | 4,416 | 15,200 | 806 | 1,166 | 25,810 | 24.3 |
| Arizona | 852 | 32,234 | 6,314 | 116,000 | 1,265 | 3,014 | 159,684 | 26.3 |
| Arkansas | 4,110 | 24,636 | 8,996 | 135,400 | 2,229 | 912 | 176,283 | 33.5 |
| California | 46,672 | 290,077 | 44,684 | 1,197,900 | 10,861 | 21,208 | 1,611,402 | 24.1 |
| Colorado | 1,661 | 39,459 | 10,115 | 146,900 | 2,996 | 1,632 | 202,763 | 25.2 |
| Connecticut | 3,528 | 36,676 | 8,892 | 127,700 | 2,885 | 6,687 | 186,128 | 17.1 |
| Delaware | (2) | 7,104 | 2,193 | 29,900 | 421 | 1,139 | 40,757 | 21.1 |

[3] The motor vehicle industry includes the production and assembly of: passenger automobiles, trucks, buses, truck trailers, and the parts and accessories used in the production and assembly of these vehicles.

[4] 1977 Census of Manufacturers. Bureau of the Census, Department of Commerce (preliminary reports).

[5] Estimate for 1977 based upon "MVMA Motor Vehicle Facts and Figures 1979," published by the Motor Vehicle Manufacturers Association.

EMPLOYMENT IN MOTOR VEHICLE AND RELATED INDUSTRIES BY STATE—Continued

| State | Motor vehicle related industries employment | | | | | | Total motor vehicle related industries | |
|---|---|---|---|---|---|---|---|---|
| | Motor vehicle and parts Mfgs. (1977) | Automotive sales and servicing (1977) | Road construction and maintenance (1977) | Trucks drivers and other employees (1977) | Petroleum refining and wholesaling (1977) | Passenger transportation [1] (1977) | Employment | Percent of State employment |
| Florida | 2,726 | 116,572 | 31,102 | 283,900 | 6,039 | 6,772 | 447,111 | 19.1 |
| Georgia | (2) | 67,789 | 22,154 | 217,200 | 4,381 | 2,241 | 313,765 | 21.2 |
| Hawaii | (*) | 12,566 | 3,002 | 21,200 | 215 | 3,408 | 40,391 | 15.3 |
| Idaho | 355 | 11,835 | 4,0 4 | 49,700 | 1,340 | 659 | 67,943 | 31.0 |
| Illinois | 26,403 | 139,633 | 20,780 | 341,600 | 13,915 | 15,585 | 557,916 | 14.3 |
| Indiana | 66,537 | 73,820 | 11,685 | 321,700 | 7,895 | 3,101 | 484,738 | 28.7 |
| Iowa | 7,995 | 40,550 | 10,865 | 165,600 | 3,918 | 1,797 | 230,725 | 28.1 |
| Kansas | (2) | 32,071 | 12,673 | 149,500 | 2,517 | 2,365 | 199,126 | 30.3 |
| Kentucky | 12,012 | 39,972 | 10,173 | 154,500 | 3,083 | 2,033 | 221,773 | 25.8 |
| Louisiana | 989 | 45,168 | 20,635 | 168,100 | 13,186 | 3,237 | 251,315 | 24.1 |
| Maine | 84 | 13,608 | 4,707 | 55,700 | 1,747 | 1,050 | 76,896 | 27.3 |
| Maryland | (2) | 53,771 | 9,739 | 123,400 | 2,822 | (2) | 189,732 | 17.0 |
| Massachusetts | 5,841 | 62,607 | 14,771 | 168,000 | 3,956 | 19,647 | 274,822 | 14.1 |
| Michigan | 306,438 | 113,671 | 19,938 | 318,300 | 7,223 | 4,737 | 770,307 | 28.5 |
| Minnesoto | 4,549 | 51,902 | 12,291 | 192,100 | 5,459 | 7,987 | 274,288 | 22.2 |
| Mississippi | 4,529 | 25,400 | 8,953 | 106.700 | 2,701 | 959 | 149,242 | 26.9 |
| Missouri | 36,642 | 65,445 | 16,027 | 241,800 | 4,525 | 5,960 | 372,399 | 25.0 |
| Montana | 107 | 11,641 | 4,512 | 51,100 | 1,303 | 884 | 69,247 | 39.4 |
| Nebraska | 2,792 | 23,330 | 7,008 | 92,300 | 1,996 | 1,019 | 128,445 | 29.2 |
| Nevada | 90 | 10,719 | 2,882 | 42,700 | 356 | 2,805 | 59,552 | 25.2 |
| New Hampshire | (2) | 11,530 | 4,174 | 28,700 | 882 | 1,179 | 46,465 | 18.1 |
| New Jersey | 15,140 | 80,803 | 21,850 | 212,500 | 9,496 | 15,329 | 355,118 | 15.7 |
| New Mexico | 546 | 17,110 | 4,107 | 57,100 | 1,895 | 2,061 | 82,819 | 30.1 |
| New York | 34,515 | 150,642 | 51,428 | 408,500 | 10,753 | (2) | 656,358 | 11.9 |
| North Carolina | 8,186 | 66,841 | 22,942 | 314,300 | 7,027 | 2,959 | 422,255 | 24.5 |
| North Dakota | (2) | 10,307 | 3,059 | 37,600 | 1,606 | 52 | 52,674 | 36.4 |
| Ohio | 121,909 | 142,575 | 24,080 | 334,900 | 7,869 | 6,507 | 637,840 | 18.5 |
| Oklahoma | 4,431 | 34,648 | 8,439 | 168,400 | 3,304 | 1,186 | 220,408 | 29.6 |
| Oregon | 3,723 | 36,087 | 9,082 | 121,000 | 2,325 | 2,739 | 174,956 | 25.2 |
| Pennsylvania | 21,685 | 137,236 | 37,241 | 453,200 | 17,442 | (2) | 666,804 | 17.9 |
| Rhode Island | (2) | 9,510 | 1,921 | 35,900 | 936 | 1,979 | 50,246 | 16.2 |
| South Carolina | 2,714 | 31,715 | 11,078 | 145,600 | 3,043 | (2) | 194.150 | 23.1 |
| South Dakota | 435 | 8,927 | 3,542 | 38,400 | 1,549 | 65 | 52,918 | 35.7 |
| Tennessee | 15,113 | 57,466 | 18,048 | 143,700 | 3,525 | 2,914 | 240,766 | 18.8 |
| Texas | 13,480 | 180,869 | 30,198 | 685,000 | (2) | 10,462 | 920,005 | 23.1 |
| Utah | 1,024 | 18,253 | 4,141 | 60,400 | 1,012 | 569 | 85,599 | 24.1 |
| Vermont | 82 | 6,015 | 2,174 | 18,800 | 435 | 598 | 28,309 | 20.7 |
| Virginia | 7,250 | 65,915 | 22,715 | 182,000 | 4,941 | 5,309 | 288,170 | 21.1 |
| Washington | 2,439 | 48,185 | 14,618 | 195,500 | 4,072 | 3,078 | 267,887 | 26.4 |
| West Virginia | 747 | 21,141 | 9,455 | 88,400 | 1,458 | 1,363 | 123,116 | 27.4 |
| Wisconsin | 31,111 | 54,809 | 13,898 | 157,400 | 5,033 | 9,247 | 271,748 | 19.0 |
| Wyoming | (*) | 7,319 | 2,350 | 25,600 | 1,761 | 383 | 37,435 | 33.8 |
| District of Columbia | (*) | 7,045 | 1,028 | 10,900 | 268 | 2,007 | 21,268 | 7.1 |
| Total | 871,368 | 2,691,731 | 730,200 | 9,121,500 | 279,433 | 260,277 | 13,956,504 | 21.5 |

[1] Includes some local rail and subway employees.
[2] Withheld to avoid disclosure.
* Unknown or not available.

Note: Individual States may not add to totals due to rounding.

*The above table shows that motor vehicle and equipment employment and investment have been concentrated in the East North Central region of the United States.* Since 1967, the States of Wisconsin, Illinois, Indiana, Michigan, and Ohio have had 65 to 72 percent of employment in the industry and about 76 to 81 percent of the industry's investment. Data is available only through 1977 and does not show any trend for the industry to move South or westward. Since 1977, however, several major parts manufacturers have opened plants in the Carolinas, and GM has opened a new Oklahoma plant; *thus more recent data might show a declining geographical concentration.*

## D. Materials Use

The importance of autos to the economy can also be seen by its appetite for materials. The industry uses about 20 to 25 percent of all steel consumed in the United States, 50 percent of the malleable iron,

33 percent of the zinc, 17 percent of the aluminum, 13 percent of the copper, and 60 percent of the synthetic rubber.[6]

The next table shows, by weight, the materials used in a typical American car from 1976–79. The table is also interesting for showing the "downsizing" of American cars in recent years. (For a description of downsizing, see appendix A.)

ESTIMATED MATERIALS CONSUMPTION IN A TYPICAL U.S.-BUILT CAR

[Pounds]

| Material | 1979 | 1978 | 1977 | 1976 |
|---|---|---|---|---|
| High-strength steel | 155.0 | 133.0 | 127.5 | 120.0 |
| Aluminum | 129.0 | 112.5 | 98.5 | 85.5 |
| Plastics | 192.0 | 180.0 | 170.5 | 162.5 |
| Glass | 84.5 | 86.5 | 86.0 | 87.5 |
| Copper | 28.0 | 29.0 | 30.5 | 32.0 |
| Zinc die castings | 27.0 | 31.0 | 38.0 | 44.0 |
| Rubber | 143.0 | 146.5 | 150.0 | 153.0 |
| Lead | 24.0 | 25.0 | 25.0 | 25.0 |
| Stainless steel | 26.5 | 26.0 | 27.0 | 28.0 |
| Iron | 492.0 | 512.0 | 540.0 | 562.0 |
| Plain carbon steel | 1,813.0 | 1,915.0 | 1,995.0 | 2,075.0 |
| Fluids, lubricants | 183.0 | 198.0 | 200.0 | 190.0 |
| Other alloy, steel, cloth, cardboard, etc | 155.0 | 175.0 | 185.0 | 196.0 |
| Total | 3,452.0 | 3,569.5 | 3,673.0 | 3,760.5 |

Source: Ward's Automotive Yearbook.

## E. Auto Energy Use

In 1979 almost 6.7 billion barrels of refined petroleum products were supplied to end-use sectors. Over 3.5 billion barrels, or more than 50 percent, of this total was used in the transportation sector, with private automobiles accounting for the lion's share of the usage:

REFINED PETROLEUM PRODUCTS SUPPLIED BY TYPE AND TO END-USE SECTORS, 1977–79

| 1979,[1] refined product | Residential and commercial sector | | Industrial sector | | Transportation sector | | Electric utility sector | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Million barrels | Quadrillion Btu | Million barrels | Quadrillion Btu | Million barrels | Quadrillion Btu | Million barrels | Quadrillion Btu | Million barrels | Quadrillion Btu |
| Asphalt | 168 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 | 168 | 1.11 |
| Aviation gasoline | 0 | 0 | 0 | 0 | 14 | .07 | 0 | 0 | 14 | .07 |
| Distillate fuel oil | 513 | 2.99 | 191 | 1.11 | 432 | 2.51 | 70 | .41 | 1,205 | 7.02 |
| Jet fuel | 0 | 0 | 0 | 0 | 387 | 2.17 | 3 | .02 | 391 | 2.19 |
| Kerosene | 44 | .25 | 20 | .11 | 0 | 0 | 0 | 0 | 64 | .36 |
| Liquefied gases[2] | 359 | 1.44 | 224 | .90 | 8 | .03 | 0 | 0 | 591 | 2.37 |
| Lubricants | 0 | 0 | 34 | .21 | 32 | .20 | 0 | 0 | 67 | .40 |
| Motor gasoline | 20 | .11 | 31 | .16 | 2,515 | 13.21 | 0 | 0 | 2,566 | 13.48 |
| Residual fuel oil | 152 | .96 | 214 | 1.34 | 161 | 1.01 | 493 | 3.10 | 1,019 | 6.41 |
| Road oil | 4 | .02 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | .02 |
| All other[3] | 0 | 0 | 618 | 3.56 | 0 | 0 | 1 | .01 | 619 | 3.59 |
| Total | 1,259 | 6.88 | 1,332 | 7.40 | 3,549 | 19.21 | 567 | 3.53 | 6,707 | 37.02 |

[1] Preliminary.
[2] Includes ethane.
[3] Includes petrochemical feedstocks, special naphthas, wax, petroleum coke, natural gasoline burned directly, and miscellaneous products.

Note: Sum of components may not equal total due to independent rounding.

Source: Annual Report to Congress, 1979, Department of Energy, table 27.

[6] Statement of Abraham Katz, Assistant Secretary of Commerce for International Economic Policy before the Subcommittee on Trade, Committee on Ways and Means, Mar. 18, 1980.

Contrary to popular belief, passenger car fuel mileage efficiency is not rising at a rapid rate. Although the EPA "estimated" mileage has almost doubled for the domestic *new* car fleet since 1973, the miles per gallon (fuel rate) for the total U.S. auto fleet (includes domestic and imports) has risen only 1 mile per gallon since 1973—from 13.1 miles per gallon in 1973 to 14.1 in 1978. Fuel mileage has actually decreased from the 1960–64 period when the U.S. auto fleet was achieving over 14.1 miles per gallon:

AVERAGE[1] ANNUAL MOTOR VEHICLE MILEAGE AND FUEL CONSUMPTION, 1960–78

| | Passenger cars | | |
|---|---|---|---|
| | Mileage (thousand miles per vehicle) | Fuel consumption (gallons per vehicle) | Fuel rate (miles per gallon) |
| 1960[2] | 9.45 | 661 | 14.3 |
| 1961[2] | 9.47 | 658 | 14.4 |
| 1962[2] | 9.44 | 657 | 14.4 |
| 1963[2] | 9.24 | 648 | 14.3 |
| 1964[2] | 9.29 | 652 | 14.3 |
| 1965 | 9.39 | 667 | 14.1 |
| 1966 | 9.51 | 679 | 14.0 |
| 1967 | 9.53 | 684 | 13.9 |
| 1968 | 9.63 | 698 | 13.8 |
| 1969 | 9.78 | 718 | 13.6 |
| 1970 | 9.98 | 735 | 13.6 |
| 1971 | 10.12 | 746 | 13.6 |
| 1972 | 10.18 | 755 | 13.5 |
| 1973 | 9.99 | 763 | 13.1 |
| 1974 | 9.45 | 704 | 13.4 |
| 1975 | 9.63 | 712 | 13.5 |
| 1976 | 9.76 | 711 | 13.7 |
| 1977 | 9.84 | 706 | 13.9 |
| 1978[3] | 10.05 | 715 | 14.1 |

[1] Arithmetic mean.
[2] Motorcycles included with passenger cars, 1960–64.
[3] Preliminary.

Note: Sum of components may not equal total due to independent rounding.

Source: Annual Report to Congress, 1979, Department of Energy, table 73.

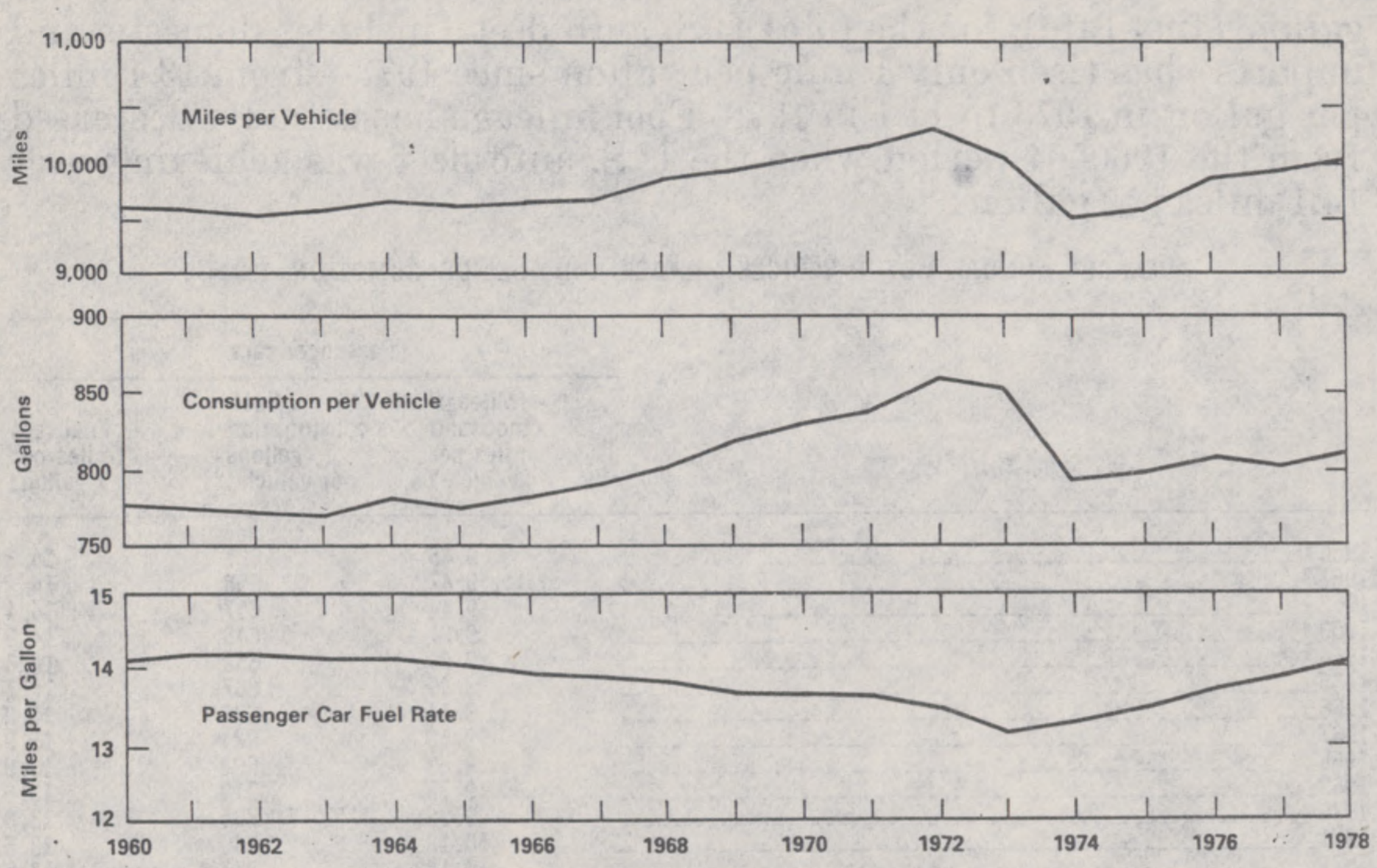
However, fuel consumption per auto seems to have peaked in 1973 (763 gallons per year), but increased slightly in 1978 from the previous year.

The following chart illustrates average fuel consumption and miles per vehicle for all motor vehicles, along with the average passenger car fuel rate.

While the level of mileage improvement in the existing auto fleet has been disappointing to date, it is projected to start showing a steady and significant improvement in the 1980's as older autos are retired. For example, by 1985, the average mileage efficiency of all autos in use is expected to climb to 20 miles per gallon. "Overall, the Department of Transportation estimates that the combined fuel consumption of passenger cars and light trucks will drop from just over 100 billion gallons in 1978 to about 95 billion gallons in 1985." [7]

[7] Lester R. Brown, Christopher Flavin, Colin Norman, "Running on Empty." W. W. Norton & Co., New York, 1979, p. 54.

## Average Annual Motor Vehicle Mileage and Fuel Consumption




Average fuel consumption for all motor vehicles in the United States increased at an average annual rate of 0.8 percent from 1962 through 1977. The trend reversed in 1973 as a consequence of the Arab oil embargo and the resultant motor fuel price rises and supply restrictions. During 1975 through 1978, however, average fuel consumption again increased, demonstrated by an average annual gain of 1.4 percent. Average mileage traveled by all motor vehicles reflects similar trends.

The fuel usage rate for passenger cars in the United States declined from 14.4 miles per gallon in 1962 to 13.1 miles per gallon in 1973. Since then, the fuel usage rate has increased steadily, reaching 14.1 miles per gallon in 1978, the equivalent rate for 1965.

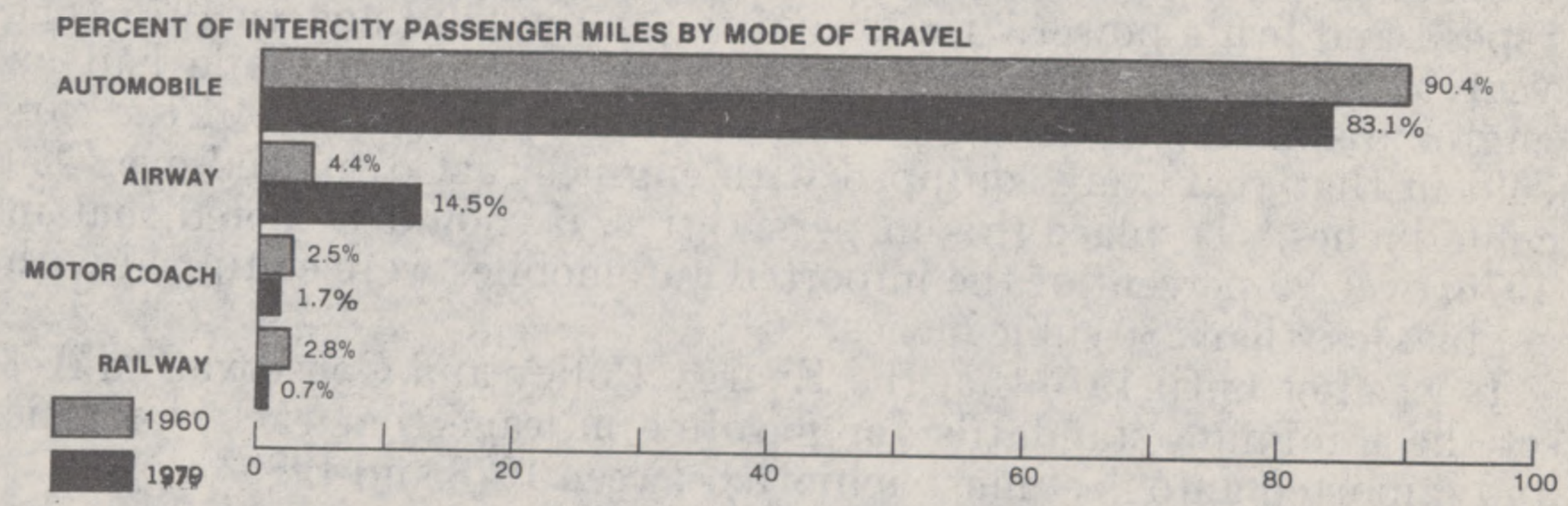
Source: DOE, Energy Information Administration, Annual Report to Congress, 1979, vol. 2, p. 174.

# III. Autos and the Energy Crisis

## A. Growth of the American Gas Guzzler: Groundwork for Disaster

The post-World War II "auto policy" of the United States has been
—low taxes on gasoline;
—low taxes and fees on automobiles (although an excise tax on autos existed for 30 years, and was only phased out in the early 1970's); and
—the development of a magnificent system of generally toll-free superhighways.

The result of these policies was almost total reliance on personal vehicles for transportation and a lack of consumer demand for fuel efficiency:




Source: MVMA "Motor Vehicle Facts and Figures, 1980."

For example, automobile and airplane travel accounted for 97.6 percent of all intercity travel in 1979, while these two modes of transportation accounted for 94.8 percent in 1960. This increase (2.8 percent) was at the expense of bus and rail travel, which declined from 5.3 percent in 1960 to 2.4 percent in 1979.

If all traveling (not just intercity) is included, automobiles and trucks account for 90.8 percent, mass transit for 3.9 percent, school bus—2.6 percent, and the remaining—2.7 percent (walking, motorcycles, bicycles, airplanes, and other forms of travel).[1]

The principal means of transportation to and from work for Americans is:[2]

| | *Percent* |
|---|---|
| Automobiles (no passengers) | 70.9 |
| Car pools | 15.5 |
| Mass transit | 5.5 |
| Walk | 3.9 |
| Use no transportation (work at home) | 2.6 |
| All other transportation | 1.6 |
| Total | 100.0 |

[1] Based upon unpublished data from the "1969 Nationwide Personal Transportation Study," U.S. Department of Transportation.
[2] U.S. Bureau of Census, Current Housing Reports, Annual Housing Survey, 1978.



63-000 O - 80 - 2

With superhighways crisscrossing the United States and cheap fuel available to use these highways, the postwar automobile boom was born and nurtured.

The marketing policies of the U.S. auto industry also were a leading factor which encouraged the use of large cars. As a Ford executive said, "Traditionally, small cars haven't been profitable." [3] Advertising by the auto industry stressed power, roominess, and luxury; not fuel economy, maneuverability, or practicality. The industry could receive a much better return on investment if it sold an auto equipped with a large V–8 with a four-barrel carburetor and dual exhaust than a small four-cylinder engine. Along with heavy cars go almost mandatory options, such as power steering and brakes, much larger tires, more powerful engines; and automatic transmissions. During the height of the horsepower craze in the early 1960's, each of the "big three" U.S. producers was selling a car that had over 400 horsepower and an engine with well over a 400-cubic-inch displacement. Most of these models averaged less than 10 miles per gallon except on the freeways where they may have averaged 13 miles per gallon.

Yet, when the high horsepower ratings receded in the mid-1960's because of public pressure on the auto companies to stop advertising "speed and brute power," the size of the engines did not. In 1975 (one year after the oil embargo) one U.S.-produced automobile had an engine displacement of 500 cubic inches. Over 35 percent of the cars sold in that year were equipped with engines that displaced over 350 cubic inches.[4] To place this in perspective, it should be noted that in 1976, over 99 percent of the imported automobiles were equipped with engines less than 280 cubic inches.[5]

It was not until 1975 that the Energy Policy and Conservation Act set the minimum standards for gasoline mileage that each domestic and imported auto fleet must achieve between 1978 and 1985.[6]

The objections to these standards were almost unanimous from the U.S. auto manufacturers. First, they claimed the technology was not available to achieve these standards; but, more importantly, the U.S. auto consumer would not buy the small auto that would be required to meet the standards. In short, the U.S. auto industry would collapse because of the lack of consumer acceptance.

While the 1973–74 oil embargo and rapid increase in the price of gasoline temporarily changed the U.S. consumers' mind and led to the passage of the Energy Policy and Conservation Act (EPCA) of 1975, it took the 1979 increases in the price of gasoline to change the consumer's mind permanently. Large, inefficient sedans were effectively buried and the new, fuel-efficient car emerged as the car of the 1980's. In fact, the auto that the domestic industry said it could not possibly

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[3] "The U.S. Auto Industry—Under Foreign Seige," Robert J. Samuelson, "The National Journal," Mar. 15, 1980, p. 427.

[4] "Wards Automotive Yearbook" (1979) Wards Publications.

[5] Ibid.

[6] See app. B.

It is interesting that Detroit still plans to make a major investment to market gas guzzlers. For example, it plans to "modernize" the Corvette and maintain its image as a racing car. While imported cars are currently averaging 31 miles per gallon, the Corvette averages 14 miles per gallon. GM now plans to increase the gas mileage of the 1983 Corvette to 20—the average import will probably be over 40 miles per gallon by then. As Chairman Vanik noted:

"I am disappointed over this majestic dedication to the dragstrip set—particularly when millions of other Americans will be confronting more critical decisions of whether to walk or ride.

"If GM is making these tremendous plans for the Corvette, I hope the company plans on a backlog of orders from abroad. It ought to sell well in Saudi Arabia and Kuwait." (Statement by Congressman Charles A. Vanik before the House of Representatives, Apr. 22, 1980.)

sell (as late as 1979), was selling at a rate much faster than the industry could possibly produce. Since the domestic industry could not fill the demand, the U.S. consumer had to turn to imports.

## B. 1979 Decline in Sales, Rise of Imports— The Demand for Smaller Cars

*The domestic industry and its workers have beeen devastated by the sudden shift in consumer demand caused by the 1979 fuel cost increases and gas lines.* Total domestic sales dropped from the 1978 level of 9.3 million units to 8.3 million units in 1979; 1980 sales will be only about 7 million units. However, because of the U.S. automobile buyers' conception that imported autos are more fuel-efficient, imported auto sales increased by about 300,000 units to 2.3 million in 1979. American small car plants were running at or near capacity most of the year, thus U.S. consumers could not have purchased additional U.S.-built small cars, even if they wanted to. These same trends have continued during the first 4 months of 1980, although there are more U.S. small cars available now than during most of 1979. The ratio of imported auto sales, however, increased even more during January–April 1980. The import share of the U.S. market for these 4 months was about 26.7 percent of total sales, the highest import penetration in U.S. history.

Trade Subcommittee Chairman Vanik pointed out during the subcommittee's hearings that the import penetration ratio could increase dramatically under certain conditions. If the credit restraints continue, if the recession is deeper and longer than anticipated, and if public awareness of higher gasoline prices is heightened by further oil price hikes (such as those which have occurred through May), then the demand for domestic autos could fall far below the 7 million level while the demand for foreign autos would continue strong. Under these conditions, it would be easy to see an import ratio above the 30-percent mark.

Although sales of U.S.-built automobiles were fairly constant during 1976 through 1979, the mix of automobiles sold gradually changed, and by the January to April 1980 period a dramatic shift was observable. Automobiles are classified by market-class, which is determined by their relative size (primarily wheelbase). The following table shows the percentage of retail sales of both domestically built cars and imported cars by market class.

MARKET-CLASS COMPARISONS FOR UNITED STATES AND IMPORTED AUTOMOBILES, 1970–80 [1]

[In percent]

| | U.S. small [2] | Imports [3] | Total small | U.S. large [4] |
|---|---|---|---|---|
| 1970 | 21.57 | 15.26 | 36.83 | 63.17 |
| 1971 | 23.21 | 15.22 | 38.43 | 61.57 |
| 1972 | 23.51 | 14.76 | 38.27 | 61.73 |
| 1973 | 28.31 | 15.83 | 44.14 | 55.86 |
| 1974 | 33.32 | 15.85 | 49.17 | 50.83 |
| 1975 | 35.18 | 18.29 | 53.47 | 46.53 |
| 1976 | 33.12 | 14.78 | 47.90 | 52.10 |
| 1977 | 29.68 | 18.55 | 48.23 | 51.77 |
| 1978 | 31.67 | 17.69 | 49.36 | 50.64 |
| 1979 | 33.75 | 21.85 | 55.60 | 44.40 |
| 1980 [5] | 37.49 | 26.40 | 63.89 | 36.11 |

[1] "Automotive News" and "Ward's Automotive."
[2] Subcompact and compact.
[3] Small.
[4] Intermediate and luxury.
[5] 1st 3 mo. of 1980.

If all imports are classified as subcompacts (which over 90 percent are), then a definite trend is noticeable in the U.S. consumers' buying habits—yet the production pattern of U.S. manufacturers was not able to meet changing consumer tastes. Sales of small cars accounted for only 47.9 percent of the total market in 1976, but increased each year since that time, enjoying almost 56 percent of the market in 1979. For the first 3 months of 1980, small cars accounted for almost 64 percent of the U.S. auto market.

Because of the rapid increase in the price of gasoline during 1979, a dramatic increase in the sale of small cars occurred in that year, increasing by almost 6 percent in 1 year. A large share of this increase was gained by imports (4 percent) while domestically produced autos accounted for only 2 percent of the small car market gain. Moreover, about one-half of the U.S. small car increase was attributable to Volkswagen, which had begun producing Rabbits in its Westmoreland, Pa., plant. Thus, the "big four" U.S. producers (GM, Ford, Chrysler, and AMC) actually lost almost all of the small car gain to imported models, at the expense of their large car sales.

## C. Reason for Demand Switch: Rising Costs of Auto Operation

There is little, if any, doubt that the switch to smaller autos was caused by a combination of higher gasoline prices and a shortage of gasoline and gasoline lines during the spring and summer of 1979. While gasoline prices, in constant (1972) dollars remained relatively steady from 1960 to late 1978, they increased substantialy during 1979, as shown on the following table.

AVERAGE GASOLINE PRICES[1]

| | Current dollars | Constant (1972) dollars |
|---|---|---|
| 1960 | 31.8¢ | 44.4¢ |
| 1965 | 33.0¢ | 42.8¢ |
| 1970 | 37.3¢ | 40.3¢ |
| 1971 | 37.5¢ | 38.8¢ |
| 1972 | 37.8¢ | 37.8¢ |
| 1973 | 41.1¢ | 38.9¢ |
| 1974 | 54.3¢ | 46.5¢ |
| 1975 | 57.8¢ | 45.7¢ |
| 1976 | 59.8¢ | 45.0¢ |
| 1977 | 62.9¢ | 44.8¢ |
| 1978 | 65.5¢ | 43.7¢ |
| 1979 (all) | 88.3¢ | 54.0¢ |
| 1979 (December) | 105.2¢ | 61.7¢ |

[1] Department of Commerce, Bureau of Economic Affairs.

The average price of gasoline in January 1979, in current dollars, was 69 cents while the price in December 1979 was 105.2 cents. The current price is between $1.20 and $1.30.

In addition to last year's gasoline price rises, there are numerous predictions that prices will keep rising for a variety of reasons. *The fact of ever-rising gasoline prices faces consumers who are shopping for new autos.*

For example, on April 2, 1980, President Carter issued Presidential Proclamation 4744 which created a petroleum import adjustment program. The purpose of this proclamation was to impose a "gasoline

conservation fee" of about $4.62 per barrel on imported crude oil. This fee, through a process of gasoline purchase entitlements to be paid by domestic gasoline producers or importers, would ultimately increase the retail price of gasoline by approximately 10 cents a gallon. Although the fee is being seriously challenged in the courts and in the Congress and may not come into effect, it has contributed to the perception that prices will continue to rise. There is widespread speculation that the retail price of gasoline will reach $1.50 per gallon by midsummer and as much as $2 by the end of 1980. The decontrol of gasoline prices, for example, will permit prices to rise about 2 cents per gallon a month betweeen now and final decontrol in September 1981. To maintain highways, many States have proposed or passed legislation increasing the State tax on gasoline. It is possible that the OPEC nations will increase the price of petroleum later this year. The only question seems to be: How much will the increase be?

There is also no guarantee that gasoline will be available in sufficient quantity to satisfy consumer demand. Because of the political instability in many oil-producing countries, a disruption in U.S. petroleum supplies is always possible. Thus, the United States is not only unsure of the price of petroleum in the near future, it is also unsure of the availability.

These two factors will continue to influence U.S. consumer demand for fuel-efficient autos. It appears that, unlike the years following the 1973–74 oil embargo and subsequent price increases, the U.S. auto buyers will not return to large, inefficient automobiles. The recent doubling of gasoline prices and last spring-summer's shortage have permanently changed their buying habits.

While the fear of energy shortages and further gasoline price hikes seem to be the principal cause in the fall of large car sales, there are other factors compounding the misery. Auto sales in total are down as the Nation finally enters a recession. Record interest rates and the general credit crunch are making it very difficult for millions of families to afford a new auto.

Another factor in making Americans consider the wisdom of auto ownership has been the growing publicity about the cost of operating an auto per mile. Runzheimer & Co., for example issues periodic reports on the comprehensive cost of operating a new auto in the United States. In 1970, the cost per mile for operating an auto was 4 cents, while the operating cost increased by 150 percent to about 10 cents per mile in 1980.[7]

The result of higher gasoline prices and the corresponding cost of driving, coupled with the high interest rates and rapidly rising retail prices, is that *the U.S. consumer is keeping his car for a longer period of time before trading it in for a new or used one.* This is confirmed by the fact that the average age of autos in the United States has been steadily increasing since 1969. For 1979, the average age of an auto in the United States was 6.4 years, the highest since 1952. The following table shows the average age of U.S. autos for 1941 through 1979.

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[7] The cost per mile includes gasoline, oil, and normal maintenance only; fixed costs such as depreciation, insurance, and taxes are not included.

AVERAGE AGE OF PASSENGER CARS IN USE IN UNITED STATES[1]

| Year | Years old | Year | Years old | Year | Years old | Year | Years old |
|---|---|---|---|---|---|---|---|
| 1979 | 6.4 | 1971 | 5.7 | 1963 | 6.0 | 1955 | 5.9 |
| 1978 | 6.3 | 1970 | 5.5 | 1962 | 6.0 | 1954 | 6.2 |
| 1977 | 6.2 | 1969 | 5.5 | 1961 | 6.0 | 1953 | 6.5 |
| 1976 | 6.2 | 1968 | 5.6 | 1960 | 5.9 | 1952 | 6.8 |
| 1975 | 6.0 | 1967 | 5.6 | 1959 | 5.8 | 1950 | 7.8 |
| 1974 | 5.7 | 1966 | 5.7 | 1958 | 5.6 | 1946 | 9.0 |
| 1973 | 5.7 | 1965 | 5.9 | 1957 | 5.5 | 1941 | 5.5 |
| 1972 | 5.7 | 1964 | 6.0 | 1956 | 5.6 | | |

[1] Estimated by the Motor Vehicle Manufacturers Association.

## D. Permanent Shift to Smaller Cars

Unlike the aftermath of the 1973–74 oil embargo, there is fairly clear evidence that the consumer is not going to switch back to the large V–8 sedan in a year or two. The dramatic shift in demand to small, fuel-efficient cars (see table at p. 13) will not reverse. One of the primary reasons for this prediction is that the cost, in constant dollars, of gasoline and diesel fuel will not remain stable, as it did from 1973 through 1978. OPEC price hikes and possible increases in State taxes on gasoline will further heighten the demand for small cars.

A study completed by the Arthur D. Little Co. in 1979 concluded:

> Trends in U.S. demographics and social values—smaller families, two-income families, increased suburban living, more affluent population—will continue to favor shifts toward the smaller, more fuel-efficient vehicles.[8]

A further study by the Congressional Budget Office projected what share of the market each of the three size classes of automobiles would hold, based upon the price of gasoline.[9] The report separated the U.S. market into three classifications: Small, intermediate, and full. These classifications were based upon a combination of wheelbase and interior volume. Because of the "downsizing" efforts of the U.S. industry, the traditional size classifications, by wheelbase, were no longer valid after 1976, since the new "downsized" models had shorter wheelbases than the models they replaced, yet the interior volume was equal to or greater than the previous models.

The market share, by size, was derived by assuming that the elasticities of new car shares continue to decline as retail prices of gasoline increase:

FORECASTS OF MARKET SHARES[1]

| | Market share by size class in percent | | |
|---|---|---|---|
| | Small | Medium | Large |
| Gasoline price (in December 1979 dollars): | | | |
| $1 | 58.0 | 23.0 | 19.0 |
| $1.50 | 66.4 | 19.1 | 14.5 |
| $2 | 71.4 | 16.6 | 12.0 |
| $2.50 | 73.4 | 15.6 | 11.0 |
| $3 | 74.9 | 14.8 | 10.3 |
| $4 | 77.0 | 13.7 | 9.3 |
| $5 | 78.4 | 13.0 | 8.6 |

[1] Congressional Budget Office, Mar. 17, 1980.

[8] "Study Examines Auto Industry Through Year 2000," Automotive News, Feb. 11, 1980, p. 28.

[9] "Projected Composition of Sales of New Cars," Congressional Budget Office, Mar. 17, 1980.

As of May 1, 1980, the average price of gasoline in the United States was approximately $1.25 per gallon. The U.S. market share by size class for the first 3 months of 1980 was as follows: [10]

[In percent]

| | Actual | CBO projection for $1.50/gal |
|---|---|---|
| Small | 63.89 | 66.40 |
| Intermediate | 19.74 | 19.10 |
| Large | 16.37 | 14.50 |

It is, of course, impossible to predict how consumer demand for small autos will be affected by sudden changes in petroleum supplies. Some sort of breakout of war or revolution in the Persian Gulf area could so disrupt oil supplies to the United States and its allies that severe rationing of gasoline would be required immediately, and for an indefinite period. *Conjectures on what a severe rationing requirement would mean for the auto industry—both domestic and foreign—are simply "blue-skying", but the impact could clearly make the present difficulties seem like child's play.*

## E. Impact of Gasoline Price Increases on Domestic Industry

As the 1979 gasoline price approached the $1 a gallon level, the bottom dropped out of the U.S. large car market. Large autos simply sat on the dealers lots, and even with a several hundred dollar rebate and/or a substantial reduction from the suggested retail price, consumers would not purchase the large, fuel-inefficient autos.

By late May of 1980, over 300,000 auto workers were on indefinite layoff, over four times as many as in September 1979.[11] The decline in employment is particularly troubling to the industry's workers, because unlike past periods of high unemployment, the current layoffs may be more prolonged and part of a structural change:

> "What's happening has a kind of permanence to it," says Irving Bluestone, a retiring UAW vice president. He says that because small cars are generally simpler, often require fewer parts and carry less gadgetry, their manufacture requires fewer workers. In addition, Detroit's overhaul of its factories is introducing new automation faster than expected, further reducing the size of the work force. And over the long term, demand for new cars in the U.S. simply isn't expected to grow as fast as it did from the 1950s through the 1970s. "Employment will never get back to where it was," Mr. Fraser says.[12]

Some U.S. plants have been closed permanently, while others are forecasted to be closed for up to 1½ years or more. As of April 1980, few plants that build large cars were running anywhere near capacity; while some small car plants (Volkswagen and General Motor's X-body plants) were running at full capacity, and still not matching demand.

The declining sales levels during 1979 gravely affected financial performance. Chrysler Corp., the third largest U.S. car producer, lost $205 million in 1978, $1.1 billion in 1979, and is currently predicting a loss of $1 billion in 1980. Two consecutive years of losses severely strained Chrysler's cash flow and it was forced to ask for governmental

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[10] World's Automotive Reports, Apr. 7, 1980.
[11] United Auto Workers estimate, including parts supplier workers, as of May 28, 1980.
[12] Robert L. Simison, "UAW Changes Tactics," Wall Street Journal, May 30, 1980.

aid to survive. Ford Motor Co., the second largest U.S. automaker, reported losses of almost $1 billion on its 1979 North American operations [13] and a net loss of $164 million in the first quarter of 1980 for all operations compared to profits of $595 million in the same quarter of 1979. Further, during the March 18 auto hearing, Mary Ann Keller, an auto analyst from Paine, Webber, Mitchell, and Hutchins stated:

> Ford Motor Co.'s earnings (for 1980) will probably drop about 62 percent, to about $450 million, the bulk of which, all of which, will be earned overseas since the company will incur a substantial loss in North America.

General Motors recorded a profit of $2.9 billion in 1979, down 20 percent from 1978. Only American Motors recorded a net increase in profits for fiscal year 1979 over the previous year, but by the first quarter of 1980, it too was predicting a loss for the 1979–80 fiscal year (AMC fiscal year is July–June).[14]

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[13] "Ford in Red for Final Quarter," William Jones, Washington Post, Feb. 20, 1980.
[14] 1978/1979 data for Chrysler, GM, and AMC from company annual reports and various newspaper articles.

## IV. Domestic Industry's Response to Crisis

*America's premier industry, the traditional bellwether of the Nation's economic health, is in serious trouble today.*

Profound shifts in consumer demand toward smaller, more fuel-efficient autos, coupled with Detroit's inability to meet this new consumer demand have caused—

Domestic sales to plunge and imported auto sales to soar;

Cash flow and profits to wither at a time when capital needs for retooling are at staggering levels; and

1980 domestic auto unemployment to reach a projected high of more than 300,000 hourly and salaried workers.

*The major problem facing the domestic auto industry today is: How can it satisfy the U.S. auto consumers' demand for small, fuel-efficient autos when over half of its production facilities are geared to produce large, less fuel-efficient autos? Cash flow is needed to retool, but imports are eating into the profits needed for $80 billion in new investment.*

### A. Downsizing and Redesign of the Auto

To meet the public's demand for quality, fuel-efficient autos, Detroit is undertaking the biggest retooling effort in its peacetime history. This new investment and retooling effort has been described by one auto executive as "the most massive and profound industrial revolution in peacetime history." [1]

The domestic industry has estimated it will spend $80 billion over the next 3 to 5 years in redesigning and downsizing its auto fleet to achieve improved mileage efficiency and quality.[2]

Most of the easy mileage improvements have already been achieved by downsizing. For example, automakers predict that it will cost a company about $2.5 billion to achieve a half mile per gallon improvement in the overall fuel efficiency of its auto fleet. This compares to a cost of about $1 billion for the same mileage improvement in the late 1970's.[3]

General Motors has already downsized much of its fleet, while Ford, Chrysler, and American Motors are on the way. However, this does not solve their short-term problem. If they cannot generate enough cash flow to finance redesigning their cars, they cannot produce fuel-efficient cars. But, if they cannot sell their current line of autos, they cannot generate the needed cash flow.[4] Chrysler has already had 2

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[1] Quote from Philip Caldwell, Chairman of the Board, Ford Motor Co., by Ambassador Reubin Askew, during Mar. 18, 1980, hearing before Subcommittee on Trade.

[2] "Unprecedented Change Seen in Next Decade," Robert W. Irwin, Automotive News, Jan. 7, 1980, p. E–1.

[3] Newsweek, April 21, 1980.

[4] For a discussion of capital formation problems, see p. 62.

consecutive years of losses, while Ford suffered severe 1979 losses in the North American market. American Motors will be able to produce a fuel-efficient line of automobiles only because of its profitable Jeep line and an infusion of capital from Renault of France.[5] It appears that only General Motors can generate the necessary cash for a complete redesigning program which will produce large quantities of the types of fuel-efficient autos the American consumer will demand in the early 1980's.

Following is a discussion of the steps the domestic industry is taking to become more competitive in the production of fuel-efficient models during the next several years.

### B. Projected Capacity for Fuel-Efficient U.S. Auto Production

The United States currently has the capacity to produce about 1.8 million of the newly designed fuel-efficient cars per year (primarily the General Motors Chevette and "X-bodies" such as the Citation, the Chrysler Omni/Horizon, and the Volkswagen Rabbit). However, by the end of 1982, U.S. producers will have the capacity to produce almost 4 million of these models. By 1985, it is estimated that the American industry will be able to produce about 10 to 11 million per year. The following table illustrates the 1980 through 1985 estimated capacity for U.S.-built, newly designed automobiles.

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[5] Sales of AMC Jeeps are already down 29 percent from last year, causing a predicted "sizable loss" for fiscal year 1980 (Wall Street Journal, May 29, 1980).

ESTIMATED U.S. NEWLY-DESIGNED FUEL-EFFICIENT CAPACITY, 1980–85

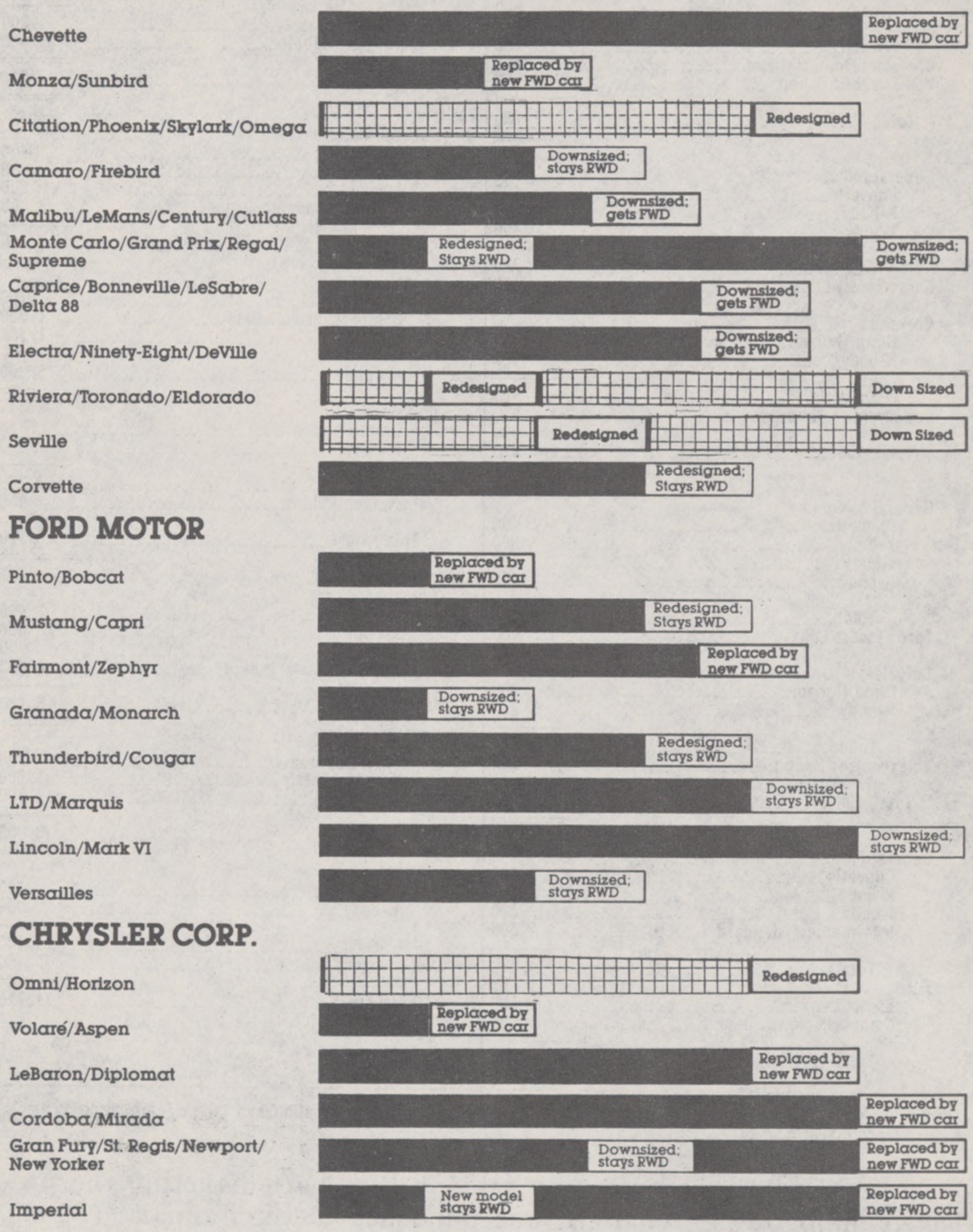
[In thousands]

| | |
|---|---|
| 1980: | |
| General Motors: | |
| Chevette | 400 |
| X-body | 800 |
| Total | 1,200 |
| Chrysler: Omni/Horizon | 300 |
| Volkswagen: Rabbit | 250 |
| Total, 1980 | 1,750 |
| 1981: | |
| General Motors: | |
| Chevette | 400 |
| X-body | 860 |
| J-body | 450 |
| Total | 1,710 |
| Ford: Escort/Lynx | 485 |
| Chrysler: | |
| Omni/Horizon | 300 |
| K-body | 525 |
| Total | 825 |
| Volkswagen: Rabbit | 250 |
| Total, 1981 | 3,270 |
| 1982: | |
| General Motors: | |
| Chevette | 400 |
| X-body | 860 |
| J-body | 500 |
| A-body | 400 |
| Total | 2,160 |
| Ford: Escort/Lynx | 600 |
| Chrysler: | |
| Omni/Horizon | 300 |
| K-body | 700 |
| Total | 1,000 |
| Volkswagen: Rabbit | 250 |
| Total, 1982 | 4,010 |
| 1983: | |
| General Motors: | |
| Chevette | 400 |
| X-body | 860 |
| J-body | 500 |
| Intermediate/standard | 2,500 |
| Total | 4,260 |
| Ford: | |
| Escort/Lynx | 600 |
| Compact/intermediate | 700 |
| Total | 1,300 |
| Chrysler: | |
| Omni/Horizon | 300 |
| K-body | 900 |
| Total | 1,200 |
| Volkswagen: Rabbit | 450 |
| Total, 1983 | 7,210 |
| 1984: | |
| General Motors: | |
| Chevette | 400 |
| X-body | 860 |
| J-body | 900 |
| Intermediate/standard | 3,000 |
| Total | 5,160 |
| Ford: | |
| Escort/Lynx | 700 |
| Compact/intermediate | 1,300 |
| Standard | 1,300 |
| Total | 3,300 |
| Chrysler: | |
| Omni/Horizon | 300 |
| K-body | 900 |
| Total | 1,200 |
| Volkswagen Rabbit | 450 |
| Total, 1984 | 10,110 |
| 1985: | |
| General Motors: | |
| Chevette | 400 |
| X-body | 860 |
| J-body | 900 |
| Intermediate/standard | 4,000 |
| Total | 6,160 |
| Ford: | |
| Excort/Lynx | 700 |
| Compact/intermediate | 1,300 |
| Standard | 1,300 |
| Total | 3,300 |
| Chrysler: | |
| Omni/Horizon | 300 |
| K-body | 900 |
| Total | 1,200 |
| Volkswagen: Rabbit | 450 |
| Total, 1985 | 11,110 |

Note: All data based upon estimates made by U.S. Department of Transportation and public information available through trade magazines.

In addition to the preceding table, a bar chart depicting the projected major design changes was published in the January 7, 1980, issue of Automotive News. The introduction dates for each company's newly designed front-wheel drive models on this chart coincide very closely to the introduction dates (shown on the preceding table), estimated by the Department of Transportation and from news articles that have appeared in various auto trade magazines.

# U.S. AUTO MAKERS SHIFT TO FRONT-DRIVE




NOTE.—Graph lines indicate redesigned models, while solid lines indicate either no change downsizing only (see appendix B).

Source : Automotive News, January 7, 1980.

As the above chart indicates, some of the long-awaited and much talked about new, small fuel-efficient models will not eliminate large and intermediate size "gas guzzler" models, but will be replacements

for current smaller-sized models. For example, the Citation replaced the compact Nova, the Escort/Lynx will replace the Pinto, and the K-body Chrysler will replace the Volare-Aspen.

All are in the same size category, but the new vehicles are smaller and more fuel-efficient. In other words, *many of the new models do not replace big car production lines as much as they replace existing lines of fast-selling small cars. The result is a slower shift toward increased fuel efficiency and small car production than many have assumed.*

## C. Company Plans for Production of New Autos

It is worth discussing briefly the plans of the various American companies to downsize and redesign their auto fleets. This material is drawn from the trade press and statements of the various companies. *It should be remembered that while it appears that the U.S. industry is making great progress in improving their average fleet mileage, the foreign competition will not be standing still.*

On a company-by-company basis, it appears that General Motors will be in the best market position throughout the 1980 through 1985 period. Starting with the current model year (1980), GM's only subcompact, the Chevette, is not a very technologically innovative model, but Ford offers very little competition (the 10-year-old Pinto/Bobcat design). Chrysler and Volkswagen sell all the small models they can build, and American Motors offers little competition in the subcompact market. There is little domestic competition for the GM compact, or X-body, model. Most of the remainder of GM's line, which has been downsized but not redesigned, competes with models in the same position as the other American automakers. For the 1981 to 1985 time frame, General Motors appears to be at least 1 year ahead of its primary competition (Ford) on every model, except the subcompact.

Ford, which currently produces no front-wheel drive (FWD) auto, will introduce its first domestic FWD in late 1980. This will be the 1981 subcompact called the Escort (the American counterpart of the European Erica). Capacity will be about 500,000 units in 1981, rising to about 600,000 by 1983. The only other new model from Ford before 1984 will be introduced in late 1982—a compact/intermediate size car which will compete with the General Motors X body (introduced in 1979) and J body (to be introduced in 1981), and the Chrysler K body (to be introduced late in 1980).

If it survives its current cash flow crisis, Chrysler will replace its compact line (Volare/Aspen) with a newly designed FWD model (now called the K body) in late 1980. However, this will be the last new model to be introduced by Chrysler until the 1984 model year. Thus, Chrysler will be competitive with Ford, General Motors, and the imports in two basic lines (subcompact and compact), but will not be competitive with Ford and GM in the intermediate models until late 1984. In addition, Chrysler's luxury compact/ intermediate (LeBaron/ Diplomat) will not be replaced until late 1983. As can be seen from the Automotive News chart (see page 22), Chrysler could very well lose almost all of its large car market (intermediate, luxury intermediate,

and standard) by 1985, since both Ford and GM will have introduced a newly designed, FWD model in most of these classes by 1983.[6]

Chrysler's survival could very well depend upon the success of the new FWD K body introduced in late 1980. Chrysler's larger cars are not selling very well today, and there is no reason to expect them to start selling at a higher rate until they are reduced in size, are equipped with FWD, and are redesigned.

Volkswagen of America will continue running at near capacity (250,000) until production begins in its second U.S. assembly plant, projected for startup in 1982, at a site in Michigan.[7] At this time, there is a very good chance that the second plant will also be able to operate near capacity (175,000), based upon estimated demand at this time for the only U.S.-produced VW model, the Rabbit.

It is generally believed that American Motors' only hope for U.S. passenger car survival rests in its joint venture with Renault. AMC will probably begin assembling a small/medium-size Renault in 1982 or 1983, since it apparently does not have the cash flow necessary to design and produce a completely new model.

## D. U.S. Fuel-Efficient Auto Production Unlikely To Meet Demand for Some Time

As shown, the demand for small cars is about 60 to 65 percent (or 6 to 6.5 million units out of a 10 million-car market). Yet as the above tables and illustration show, American capacity to produce new fuel efficient autos is only 4 million through the summer of 1982. *Supply does not equal demand until the autumn of 1982—and that assumes that the demand for small cars does not increase further as gasoline prices rise.* Therefore, the U.S. auto industry will probably continue to lose much of the small car market to imported models until at least the 1983 model year introduction—September 1982. If gasoline prices have continued to rise faster than the general inflation rate, American production levels will be inadequate until late 1983.

The 1980 through 1983 data for capacity is estimated using Department of Transportation figures and the introduction dates are pretty well set. Since the lead time for introducing a completely redesigned automobile is 3 to 4 years, there can be little change or acceleration in the dates that the new models will be introduced.

In addition, the capacity data is probably somewhat overstated. The estimates assume that there will be no problems encountered by any of the four producers which would cause either a later introduction date or the inability to produce at capacity. Many times a producer cannot operate at capacity during the initial production phase of a new model because of technical problems or the unavailability of component parts. Also some of the current production, such as the Chevette, which was introduced in 1975, can hardly be called a newly designed, fuel-efficient car, and has a rather conventional mechanical design. However, GM sold all the Chevettes it could produce in 1979 and is running near

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[6] Chrysler recently announced that it will probably not compete in the full size or standard market by the mid-1980's.

[7] "VW Board Backs 2d U.S. Plant", Washington Post, Apr. 12, 1980.

capacity during the first 4 months of 1980, so it is being accepted as a fuel-efficient auto by the American consumer, even though it may technically not be classified as a new design.

Based upon the estimates from the preceding table and chart, the capacity for the newly designed, fuel-efficient autos for 1980 is about the same as 1979, or 1.8 million units. The estimated capacity for these models increases to 3.2 million units in 1981 because of the new GM "J-body," the new Ford replacement for the Pinto/Bobcat, and the new Chrysler "K-body." However, there is only a 700,000 increase in capacity projected for 1982. The large jump in capacity will not occur until the 1983 model year when about 7 million of the new models could, theoretically, be produced.

In other words, while the industry is desperately trying to meet the public's demand for new, fuel-efficient autos, it will take some years before Detroit is able to make an adequate number of fuel-efficient autos. Thus, *while the industry's unemployment and cash flow problems are probably temporary, the problem is likely to be more prolonged than some analysts have predicted. The domestic industry's problems will not be solved by the introduction of new model lines this fall or next spring. Recession aside, the American industry and its workers appear to be in for a tough 2½ to 3½ years.*

## E. U.S. Small Cars Not Selling as Well as Assumed

The preceding analysis assumes that domestic smaller car capacity can be equated with demand. This, of course, is not necessarily true, since there is no guarantee that the U.S. auto consumer will purchase every newly designed auto that Detroit can produce. The import penetration ratio for February 1979, was 19.7 percent, yet it increased to a new "any-month" record of 27.1 percent 1 year later (February 1980). This increase of 7.4 percentage points happened while the stock of many U.S.-produced small autos actually increased. Following is a table which compares May 1, 1980, new car stock (basically, this is inventory at the retail dealer level) with May 1, 1979, new car stock of U.S. small cars.

NEW-CAR STOCK; NEW-CAR DAYS-SUPPLY FIGURES, U.S. MAKES

| | May 1, 1980 | May 1, 1979 |
|---|---|---|
| Spirit | 69 | 61 |
| Concord | 57 | 65 |
| American Motors | 77 | 69 |
| Horizon | 90½ | 24 |
| Volare | 150 | 69 |
| Omni | 92 | 25 |
| Aspen | 178 | 79 |
| Chrysler Corp | 121 | 83 |
| Pinto | 110 | 47 |
| Mustang | 88 | 48 |
| Fairmont | 60 | 63 |
| Granada | 123 | 76 |
| Bobcat | 100 | 53 |
| Capri | 87 | 44 |
| Zephyr | 63 | 92 |
| Monarch | 102 | 98 |
| Ford Motor Co | 93 | 80 |
| Skyhawk | 77 | 42 |
| Skylark | 23½ | 9 |
| Chevette | 37 | 23 |
| Monza | 48 | 26 |
| Citation | 34 | 28 |
| Camaro | 94 | 32 |
| Starfire | 67 | 27 |
| Omega | 28 | 23 |
| Sunbird | 35 | 23½ |
| Phoenix | 26 | 31½ |
| Firebird | 97 | 28 |
| General Motors | 66½ | 53 |
| Volkswagen | 28 | 16 |
| Total cars, United States | 76 | 63 |

Note: Totals for each company include all models days-supply.
Source: Automotive News, May 19, 1980.

The phenomenon of the increase in American smaller car inventory was not reflected in the administration's testimony before the subcommittee. During our second auto hearing, Ambassador Askew stated,

> * * * that Americans are buying small, fuel-efficient cars made by American industry as fast as American industry can produce them.

Further, he said,

> * * * and repeating again that the American automobile industry is selling fuel-efficient cars as fast as they can make them. In some instances, you have waiting periods to 6 or 7 months.[8]

Contrary to these statements by representatives of the administration, there are small cars available for immediate delivery. True, the above figures are an average day's supply; there could easily be a 1 to 2 month waiting period in some cities. But, on the average, there is no, or else a very short, wait for almost all of the small cars except the new GM "X-bodies" (Skylark, Citation, Omega, and Phoenix). Even many of these models are available from dealer stock. The four cylinder models are the most difficult to find, but the wait is only about 2 to 4 weeks.[9]

The popular misconception that Detroit can sell all of their newly designed, and even older small cars, simply is not sustained by the facts. The Omni/Horizon days supply increased from a May 1, 1979 figure of 25/24 days to a May 1, 1980 figure of 92/90½ days. Even the U.S.-produced Rabbit increased from 16 to 28 days supply.

*If the major U.S. firms are not going to be able to produce the newer models in quantity until 1983 and if there is "softness" in their small car sales, then what will happen to their profits between now and then?* Also, if imports remain at the current level (about 23 to 27 percent of the U.S. automarket), what are the chances that Ford, Chrysler, and even General Motors will quickly recapture—as the administration testified—the share of the market lost to imports? [10]

*While the incredible rise in interest rates and the arrival of the long-predicted recession may be one reason for the inventory growth of some smaller American autos, there may be other, more fundamental reasons relating to quality of product and public perception of these automobiles.* This report discusses those "quality" issues beginning on page 47.

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[8] Testimony of Ambassador Askew before the Subcommittee on Trade. House Ways and Means Committee, Mar. 18, 1980.

[9] Discounts and softness in the price of U.S. small cars is also cited in Consumer Union report of April 1980, p. 220.

[10] George Eads, a member of the Council of Economic Advisers at the Mar. 18 hearing, testified as follows:

> Mr. VANIK. . . . What is the percentage of imports next year based on your projections?
>
> Mr. EADS. This figure—I am citing a Data Resource table which came out this month which I assume has a little more updated numbers than we do. They are projecting a total import share of around 25 percent of this year's, falling to 22 percent by 1982. The Japanese, of course, have the lion's share of that.
>
> Mr. VANIK. And you don't anticipate any problems with that becoming a permanent loss as people's habits or commitments to an automobile is made?
>
> Mr. EADS. If the U.S. industry introduces fuel-efficient cars they will be bought. There is no inherent preference for the imports.

As a contary point of view, Mr. Robert Reilly, executive director of business strategy development at Ford is quoted in the New York Times of Apr. 20, 1980, as saying, "It's no secret that in this industry when people buy a car they tend to be loyal to that brand. It's going to be tough to get all that (Japanese) share back."

# V. Auto Imports

## A. Retail Sales

Retail sales of imported automobiles have increased from 29,000 in 1952 to over 2.3 million units in 1979.[1] During the same period of time, the import share of the total U.S. auto market has risen from 0.7 percent to 21.9 percent in 1979. For the first 4 months of this year, the import penetration level has been 26.7 percent of total U.S. sales. The following table illustrates not only the unit increase for each year since 1970, but also the increase in the import ratio.

IMPORT AUTOMOBILE SALES BY COUNTRY OF ORIGIN AND TOTAL IMPORT SALES AS A PERCENTAGE OF TOTAL (IMPORT AND DOMESTIC) U.S. RETAIL SALES, 1970–80[1]

[In percent]

| Year | Japan | West Germany | All other | Total | Percent total to U.S. sales |
|---|---|---|---|---|---|
| 1980 [2] | 80.6 | 12.0 | 7.4 | 100 | 26.7 |
| 1979 | 76.0 | 15.0 | 9.0 | 100 | 21.9 |
| 1978 | 67.8 | 21.8 | 10.4 | 100 | 17.7 |
| 1977 | 67.0 | 22.0 | 11.0 | 100 | 18.5 |
| 1976 | 62.8 | 23.8 | 13.4 | 100 | 14.8 |
| 1975 | 51.7 | 31.1 | 17.6 | 100 | 18.3 |
| 1974 | 41.1 | 42.2 | 16.7 | 100 | 16.1 |
| 1973 | 42.3 | 44.7 | 13.0 | 100 | 15.4 |
| 1972 | 38.1 | 46.6 | 15.3 | 100 | 14.8 |
| 1971 | 35.3 | 48.4 | 16.3 | 100 | 15.3 |
| 1970 | 24.4 | 57.4 | 18.2 | 100 | 15.2 |

[1] Canadian imports excluded.
[2] January–April only.

Source: Automobile News and Ward's Automotive.

A significant number of the imports from Japan are on behalf of American companies. For example, as the following table shows, "captive imports" in 1979 constituted 8.6 percent of all Japanese imports of passenger cars, while "captive imports" of light trucks accounted for 48.3 percent of total Japanese light truck imports. This phenomenon has created considerable ambivalence among the auto producers concerning trade policy. For example, some of Chrysler's best selling products are produced by Mitsubishi, and Chrysler appears to have been low key in discussing auto import limitations during the current crisis.

[1] Automotive News, 1979, Market Data Book Issue.



63-000 O - 80 - 3

U.S. IMPORTS OF PASSENGER CARS AND LIGHT TRUCKS, 1978–79

| | Passenger cars | | Light trucks [1] | |
|---|---|---|---|---|
| | 1979 | 1978 | 1979 | 1978 |
| Ford Courier (Toyo Kogyo) | | | 78,088 | 70,557 |
| Dodge Colt/D–50 (Mitsubishi) | 62,705 | 44,570 | 32,233 | 1,929 |
| Dodge Challenger (Mitsubishi) | 14,166 | 17,649 | | |
| Plymouth Arrow (Mitsubishi) | 48,860 | 28,296 | 14,897 | 1,215 |
| Plymouth Sapporo (Mitsubishi) | 12,322 | 12,777 | | |
| Buick Opel (Isuzu) | 13,815 | 19,222 | | |
| Chevrolet LUV (Isuzu) | | | 100,192 | 67,035 |
| Total of all imports from Japan | 1,769,631 | 1,355,869 | 465,703 | 335,030 |
| Captive imports from Japan [2] | 151,868 | 122,514 | 225,410 | 140,736 |
| Percent of total U.S. sales | 8.6 | 9.1 | 48.3 | 42 |

[1] Includes vans and 4-wheel drive recreational vehicles.
[2] Captive imports are sold under American nameplates.

Source: Automotive News, Jan. 14, 1980, p. 34 and Jan. 21, 1980, p. 14.

## B. History of Imports

The imported car market has gone through three phases. Basically, there were very few imported automobiles sold in the United States before 1948, except for very expensive models such as the Rolls Royce or Ferrari. After World War II, servicemen brought back to the United States, a few English MG's, Triumphs, and Jaguars, and a few West German Volkswagens and Mercedes Benz. Since the U.S. market for sports cars was fairly limited, imports of MG's, Triumphs, and Jaguars leveled off by the mid-fifties, but the number of Volkswagens continued to increase.

The second phase of the imported car market began during the midfifties and ended in the early seventies. Volkswagen, and to some extent the German Opel and the French Renault, accounted for the largest percentage of the imported car market during most of this period. Volkswagen sold over 50,000 units in the United States in 1956, representing a little over 50 percent of the U.S. imported car market. Volkswagen's predominance in the market continued until 1975 when it was pushed out of the No. 1 spot by Toyota. During this period, the German maker was able to increase its U.S. sales from about 50,000 in 1956 to over 500,000 in 1968. While the U.S. manufacturers were changing body styles on a regular once-every-3-year basis, Volkswagen was able to sell almost 5 million units of one model—the "Beetle"—during a 30-year period, without changing the basic design. Perhaps some U.S. manufacturers have copied this; for example, the Ford Pinto has now used the same basic design for 10 years.

The last phase of the imported auto market really began in the mid-sixties, but did not become distinct until 1975. This phase belongs entirely to the Japanese auto producers, and their very accurate reading of the U.S. auto market and "prediction" that petroleum prices could only rise, thus making high-mileage-efficiency an ever more effective selling point.

The first year for any recorded sales of Japanese models was 1958 when 274 Toyotas and 52 Datsuns were registered. Sales of these two models remained under 10,000 units per year until 1965 when 13,000 Datsuns and 3,000 Toyotas were sold. In 1965, Datsun had risen to the

6th position and Toyota to the 18th position in the rankings of imported auto sales. Volkswagen, the No. 1 importer in sales, sold 370,000 cars and small trucks in 1965. But, as shown on the following table, U.S. sales of the two Japanese makes increased steadily from 16,000 in 1965 to a total of almost 1.8 million in 1979. In fact, 1975 marked the first year in U.S. imported auto history that a Japanese auto recorded more sales than any other imported auto, displacing Volkswagen's leadership. In 1979, Japanese autos accounted for over 76 percent of U.S. imported car sales. *For at least the next several years their share of not only the U.S. import market, but the total U.S. auto market as well, will probably continue to increase, barring governmental interventions.*

This prediction is based on: The continuing inability of the domestic producers to supply the demand for quality, fuel-efficient autos; the demand will continue to rise for small, fuel-efficient autos vis-a-vis larger vehicles; and the public will continue to perceive Japanese autos as being of very high quality.

U.S. RETAIL SALES OF IMPORTED AUTOMOBILES, 1956–79 [1]

[Units]

| Year | Total [2] | Volkswagen | Japanese | Japanese percent of total imports |
|---|---|---|---|---|
| 1956 | 98,000 | 50,000 | ---------- | 0 |
| 1957 | 207,000 | 64,000 | ---------- | 0 |
| 1958 | 378,000 | 78,000 | 320 | .08 |
| 1959 | 609,000 | 120,000 | 1,100 | .1 |
| 1960 | 480,000 | 160,000 | 2,000 | .4 |
| 1961 | 378,000 | 177,000 | 1,600 | .4 |
| 1962 | 339,000 | 207,000 | 2,400 | .7 |
| 1963 | 385,000 | 238,000 | 3,000 | .8 |
| 1964 | 484,000 | 276,000 | 8,000 | 1.7 |
| 1965 | 502,000 | 319,000 | 18,000 | 3.6 |
| 1966 | 609,000 | 376,000 | 38,000 | 6.2 |
| 1967 | 729,000 | 409,000 | 69,000 | 9.5 |
| 1968 | 960,000 | 518,000 | 112,000 | 11.7 |
| 1969 | 1,044,000 | 499,000 | 190,000 | 18.2 |
| 1970 | 1,261,000 | 570,000 | 313,000 | 24.8 |
| 1971 | 1,541,000 | 523,000 | 552,000 | 35.8 |
| 1972 | 1,592,000 | 485,000 | 615,000 | 38.6 |
| 1973 | 1,753,000 | 476,000 | 742,000 | 42.3 |
| 1974 | 1,409,000 | 335,000 | 597,000 | 42.4 |
| 1975 | 1,580,000 | 267,000 | 817,000 | 51.7 |
| 1976 | 1,499,000 | 203,000 | 937,000 | 62.5 |
| 1977 | 2,069,000 | 261,000 | 1,388,000 | 67.1 |
| 1978 | 1,977,000 | [3] 217,000 | 1,336,000 | 67.6 |
| 1979 | 2,321,000 | [3] 126,000 | 1,770,000 | 76.3 |

[1] Compiled from Ward's Automotive Reports and Automotive News.
[2] Does not include imports from Canada.
[3] Does not include sales from Pennsylvania plant.

# VI. Japanese Auto Industry

## A. Production, Exports, and Imports

The production of automobiles in Japan has increased from the post-World War II year of 1946 when only 110 autos were manufactured to 6,175,771 in 1979. Japan did not export over 10 cars in any year until 1956 when 46 were exported. In 1979, Japanese manufacturers exported 3.4 million units; over 1.5 million of these were shipped to the United States.

Imports of autos, on the other hand, reached a level of 25,929 in 1953, steadily declined until 1960 when only 3,540 autos were imported, and gradually increased to the 1979 figure of 64,808. While the share of total autos imported into Japan from the United States has steadily decreased (the U.S. imports accounted for 83.4 percent in 1958, but only 20.6 percent in 1979), the share of Japanese exports to the United States has remained fairly stable. However, in actual numbers, the imports into Japan from the United States have remained small (13,353 in 1979) while the exports from Japan have increased dramatically (from 942 in 1960 to 1.5 million in 1979).[1] The above data is illustrated on the following table for the years 1956 to 1979, while the accompanying chart illustrates the rapid growth in Japanese production, exports, and exports to the United States.

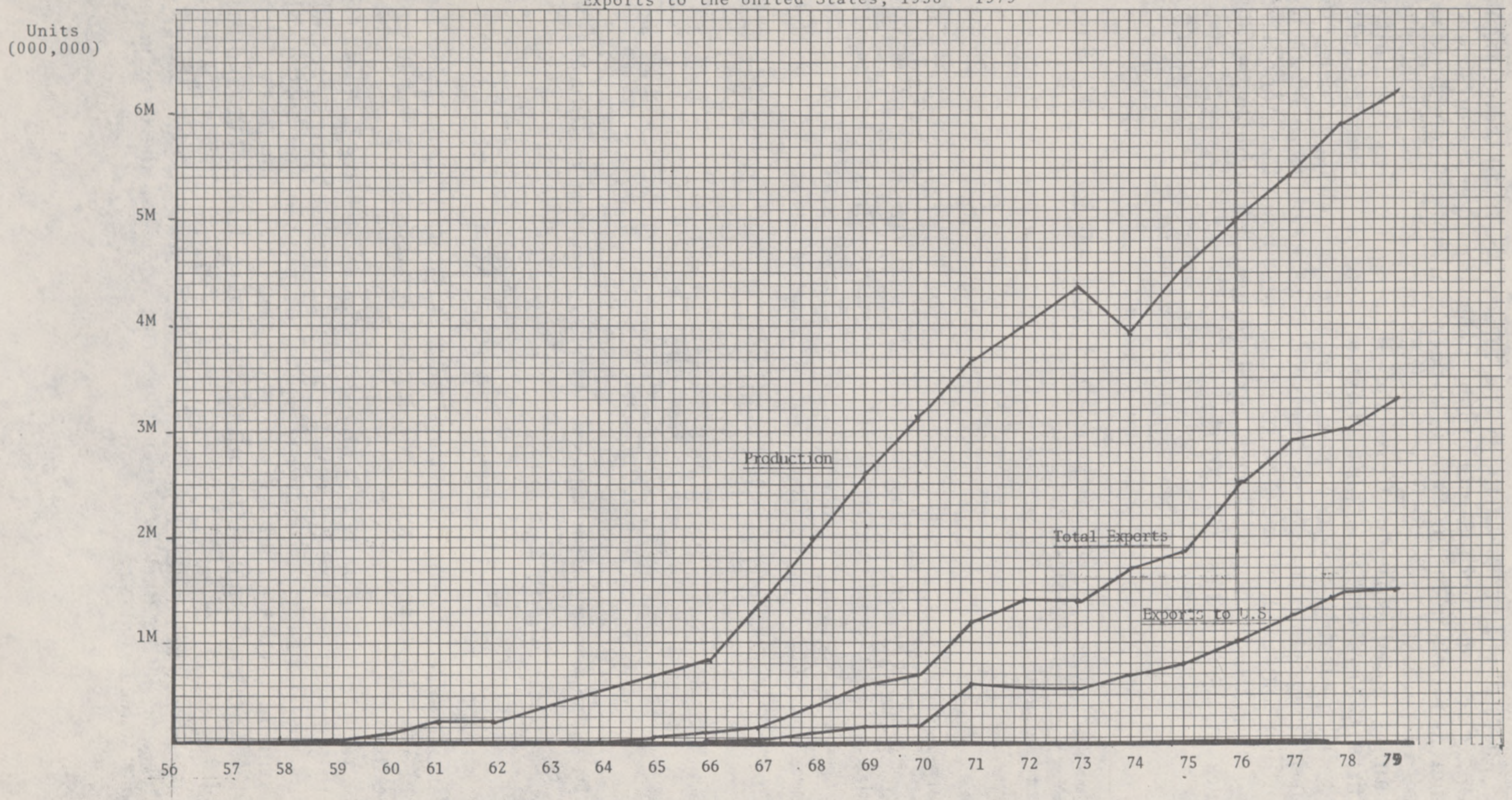
NEW PASSENGER AUTOMOBILES: JAPANESE PRODUCTION, IMPORTS, EXPORTS, AND APPARENT CONSUMPTION
1956–79[1]

| Year | Production | Total exports | Exports to United States | Total imports | Imports from United States | Apparent consumption | Import penetration ratio[2] (in Japan) | Import penetration ratio[3] (in United States) |
|---|---|---|---|---|---|---|---|---|
| [1]956 | 32,056 | 46 | ---------- | 6,684 | ---------- | 38,694 | 17.27 | 1.87 |
| 1957 | 47,121 | 410 | 11 | 6,179 | ---------- | 52,890 | 11.68 | 4.16 |
| 1958 | 50,643 | 2,356 | 1,479 | 5,450 | 4,546 | 53,737 | 10.14 | 9.50 |
| 1959 | 78,598 | 4,884 | 2,696 | 5,994 | 5,376 | 79,708 | 7.52 | 10.85 |
| 1960 | 165,094 | 7,013 | 942 | 3,540 | 2,679 | 161,621 | 2.19 | 6.35 |
| 1961 | 249,508 | 11,531 | 972 | 4,310 | 2,852 | 242,287 | 1.79 | 4.89 |
| 1962 | 268,784 | 16,011 | 2,795 | 5,646 | 3,287 | 262,899 | 2.15 | 5.23 |
| 1963 | 407,830 | 31,447 | 2,942 | 9,339 | 3,666 | 385,722 | 2.42 | 5.17 |
| 1964 | 579,660 | 66,965 | 12,680 | 12,185 | 3,316 | 524,880 | 2.32 | 6.52 |
| 1965 | 696,176 | 100,703 | 22,127 | 12,881 | 3,168 | 617,600 | 2.09 | 5.42 |
| 1966 | 877,656 | 153,090 | 50,520 | 15,244 | 3,402 | 739,810 | 2.06 | 8.01 |
| 1967 | 1,375,755 | 223,491 | 66,417 | 14,352 | 2,798 | 1,166,616 | 1.23 | 8.54 |
| 1968 | 2,055,821 | 406,250 | 152,100 | 15,000 | 4,043 | 1,664,571 | .90 | 11.04 |
| 1969 | 2,611,499 | 560,431 | 218,109 | 15,748 | 4,133 | 2,066,816 | .76 | 11.86 |
| 1970 | 3,178,708 | 725,586 | 232,671 | 19,080 | 5,281 | 2,472,202 | .77 | 15.95 |
| 1971 | 3,717,858 | 1,299,351 | 653,695 | 18,551 | 4,633 | 2,437,058 | .76 | 16.59 |
| 1972 | 4,022,289 | 1,407,340 | 590,150 | 24,759 | 5,445 | 2,639,708 | .94 | 15.07 |
| 1973 | 4,470,550 | 1,450,884 | 583,861 | 36,922 | 11,981 | 3,056,588 | 1.21 | 13.46 |
| 1974 | 3,931,842 | 1,727,396 | 683,580 | 42,218 | 14,880 | 2,246,664 | 1.88 | 18.85 |
| 1975 | 4,567,854 | 1,827,286 | 711,902 | 45,480 | 16,469 | 2,786,048 | 1.63 | 16.40 |
| 1976 | 5,027,792 | 2,539,117 | 1,050,685 | 40,416 | 13,809 | 2,529,091 | 1.60 | 16.52 |
| 1977 | 5,431,045 | 2,958,879 | 1,339,023 | 41,395 | 14,441 | 2,513,561 | 1.65 | 17.18 |
| 1978 | 5,975,968 | 3,042,237 | 1,407,669 | 54,517 | 13,293 | 2,988,248 | 1.82 | 19.07 |
| 1979 | 6,175,771 | 3,383,000 | 1,547,000 | 64,808 | 13,353 | 2,857,579 | 2.27 | 21.80 |

[1] 1956–78 data from Japanese Auto Manufacturers Association. 1979 data from Japanese Economic Journal.
[2] Import penetration ratio determined by using production, imports, and exports, not retail sales.
[3] Excludes imports from Canada for 1964–79.

[1] 1979 edition, World Motor Vehicle Data, Motor Vehicle Manufacturers Association.

New Automobiles: Japanese Production, Total Exports,
Exports to the United States, 1958 - 1979




1956 - 1978 data from Japanese Auto Manufacturers Association.
1979 data from Japanese Economic Journal.

The Japanese auto manufacturers are not waiting for the United States to catch up with them. While most U.S. manufacturers are shutting down or "mothballing" plants, the Japanese manufacturers are increasing their motor vehicle capacity, mainly automobiles, by almost 10 percent this year. By the beginning of 1981, Japan will have an estimated capacity of over 11 million units, with over half of this figure targeted for export. Toyota, Japan's largest manufacturer, will probably produce over 3 million assembled vehicles for the first time, while the No. 2 producer, Nissan, plans to break the 2.5 million mark. The third and fourth largest manufacturers, Toyo Kogyo and Mitsubishi, will each produce over 1 million assembled vehicles in 1980; a first for both:

JAPANESE AUTOMAKERS' BUSINESS PLANS FOR 1980

[Year-to-year change in percent]

| Maker | Production | Domestic sales | Exports |
|---|---|---|---|
| Toyota Motor | 3,220,000 (+ 7.5) | 1,700,000 (+ 5.5) | 1,520,000 (+ 9.9) |
| | 80,000 (+ 4.0) | | 80,000 (+ 1.9) |
| Nissan Motor | 2,559,000 (+ 9.5) | 1,325,000 (+ 7.3) | 1,234,000 (+ 8.7) |
| | 186,000 (+ 6.7) | | 186,000 (+ 4.5) |
| Toyo Kogyo | 1,070,000 (+10.1) | 440,000 +( 8.8) | 630,000 (+ 8.4) |
| | 80,000 (+27.7) | | 80,000 (+22.2) |
| Mitsubishi Motors | 1,035,000 (+10.3) | 600,000 (+ 9.7) | 435,000 (+16.9) |
| | 65,000 (− 2.1) | | 65,000 (+ 4.4) |
| Honda Motor | 946,000 (+18.0) | 320,000 (+21.7) | 626,000 (+14.5) |
| | 4,000 (−42.9) | | 4,000 (−25.9) |
| Isuzu Motors | 465,000 (+ 9.5) | 223,000 +(11.1) | 252,000 (+13.1) |
| | --------- (------) | | --------- (------) |
| Daihatsu-Motor | 412,000 (+12.5) | 312,000 (+ 8.8) | 100,000 (+26.9) |
| | --------- (------) | | --------- (------) |
| Suzuki Motor | 380,000 (+10.0) | 325,000 (+10.0) | 54,000 (+10.0) |
| | --------- (------) | | --------- (------) |
| Fuji Heavy Industries | 372,000 (+11.3) | 185,000 (+12.9) | 187,000 (+ 7.1) |
| | 13,000 (− 5.1) | | 13,000 (− 5.1) |
| Hino Motors | 74,500 (− 2.6) | 51,500 (−11.2) | 23,000 (+26.6) |
| | --------- (------) | | --------- (------) |
| Nissan Diesel Motor | 41,700 (− 1.7) | 28,000 (− 5.5) | 13,700 (+15.5) |
| | --------- (------) | | --------- (------) |
| Total | 10,575,000 (+ 9.7) | 5,510,000 (+ 8.2) | 5,065,000 (+11.0) |
| | 428,000 (+ 6.6) | | 428,000 (+ 6.2) |

Note: Upper Figures—assembled cars; lower figures—knocked-down sets. Estimated figures are included in the column for Suzuki.

Source: Japan Economic Journal, Feb. 5, 1980.

## B. History of Protectionism

The phenomenal growth of the Japanese industry, from zero after World War II to the world's No. 1 producer today, is a fascinating story.

The rebirth of the Japanese industry appears to have been strictly due to a group of highly creative entrepeneurs and engineers who rebuilt the industry without the initial backing or support of the Government or the nation's credit resources. Tokai University Prof. Hajime Karatsu described the initial reaction to the new auto industry as follows:

As Japan once again started production of automobiles after World War II, the Governor of the Bank of Japan who often represents the Government's opinions, stated as follows:

"It is enough for Japan to manufacture trucks only; Japanese passenger cars are uncomfortable and often have troubles. There is no reason to believe that we may stay competitive with the imported cars. Stop manufacturing passenger cars in Japan!"

For this reason, the Japanese auto makers had to develop their cars with the little capital they possessed.[2]

When it began to appear, however, that auto production could become a major engine of economic growth and eventually a major earner of international foreign exchange, the Japanese Government began to provide assistance through protectionism, which preserved the domestic market for domestic producers, and with access to credit, which insured the necessary money for large, modern plant investment.

In late 1951, the Ministry of International Trade and Industry (MITI) met with the four Japanese motor vehicle manufacturers (Nissan, Toyota, Prince, and Isuzu) and prepared an agenda for motor vehicle development in Japan. The policies discussed were: Protection from foreign producer's onshore investment and imported vehicles; admission of foreign technology for domestic manufacturers' use under favorable terms; and financial assistance from the Government.[3]

These policies were closely followed by the Japanese Government until 1969 when it began to soften its stance concerning protectionism toward its auto industry. Although negotiated reduction on automobile duty rates called for a gradual decline over a 5-year period (1967–72), the Japanese reduced the duty from 35 to 17.5 percent in only 2 years (1967–69). The duty was then unilaterally reduced to 10 percent in 1971, and the current temporary rate of zero became effective in 1978. (This zero-applied duty compares to a current U.S. tariff of 2.9 percent, being reduced to 2.5 percent in 1987.)

Foreign capital investment in autos was not formally authorized by MITI until April 1971, even though Japan had exported 2.5 million autos to the world during the previous decade. This liberalization permitted automatic approval of new ventures of equal Japanese and foreign ownership in automobile production, auto sales, and auto parts sales. Only 1 month after the official announcement that joint ventures would be approved, Mitsubishi Heavy Industries announced its intention to affiliate with Chrysler. Since 1971, General Motors has entered into an agreement with Isuzu, and Ford with Toyo Kogyo (Mazda).

Today the Japanese auto industry receives no special governmental financial assistance, although Toyo Kogyo was saved from bankruptcy in 1975 by a wide-ranging effort on the part of banks and both local and central governments.

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[2] Speech of Prof. H. Karatsu at Quality Control Seminar in Washington, D.C., Mar. 25, 1980, sponsored by the Electronic Industries Association of Japan.

This early Government reaction to the Japanese auto industry makes another interesting point. The term "Japan, Inc." has gained popularity, yet clearly, there have been cases when the Japanese establishment did not support a development (such as an auto industry), and businessmen proceeded, nevertheless. Currently the Ministry of International Trade and Industry is urging Toyota and Nissan to undertake auto assembly plant investment in the United States. The companies have been resisting, once again, raising some question about the validity of the "Japan, Inc." concept.

[3] "Japan: The Government-Business Relationship," February 1972, U.S. Department of Commerce, Bureau of International Commerce. (For a summary of how these three policies were made and implemented—and the failure of U.S. firms to buy into Japan—see app. C).

## C. Auto Imports Into Japan

In 1979, Japan imported 64,808 autos, while exporting 3.4 million autos. Although there is no tariff levied upon autos imported into Japan, there still remain nontariff barriers. Many of these are "barriers" which affect not only U.S. autos, but autos from other countries and Japanese vehicle sales as well.[4]

Of the 64,808 autos imported into Japan in 1979, only 13,353 were from the United States. The poor sales of U.S. autos in Japan can be attributed to the following four factors:[5]

1. A 20-percent commodity tax for most U.S. cars.
2. Extensive documentation and testing in Japan to insure that autos meet safety and environmental standards.
3. Homologation (modification) of U.S. autos in order to meet Japanese standards (pollution and safety).
4. Distribution costs.

The following table summarizes the price increases which three typical imported autos are subject to in Japan.

PRICES IN JAPAN COMPARED WITH THE UNITED STATES FOR SELECTED MODELS[1]

| | 1979 models | | |
|---|---|---|---|
| | Subcompact | Small sporty car | Compact size |
| U.S. effective retail[2] | $4,810 | $4,915 | $6,635 |
| Additional Japanese costs: | | | |
| Ocean freight and insurance | [3] 225 | 175 | 210 |
| Port handling and make-ready | 105 | 125 | 125 |
| Japanese commodity tax | 700 | 850 | 1,200 |
| Net homologation costs | 110 | 435 | 535 |
| Dealer incentives | 0 | 500 | 500 |
| Higher dealer margin | 950 | 1,425 | 2,100 |
| Other costs and profits (net) | 205 | 180 | 760 |
| Effective retail in Japan | 7,105 | 8,605 | 12,065 |

[1] "United States-Japan Trade: Issues and Problems" (automobile section), Report by the Comptroller of the United States, September 21, 1979.
[2] Including options standard in Japan.
[3] Produced in Europe, hence the higher freight.

Each of these increases requires some degree of explanation.

*Commodity tax.*—The commodity tax for almost all autos imported into Japan from the United States is 20 percent. This 20 percent is not based strictly upon the cost of the vehicle (manufacturer's cost) but includes insurance, shipping charges, port costs (unloading, etc.) and "make ready" changes. Thus, the commodity tax or an auto produced in Japan is based upon ex-factory costs, while the tax on imported autos includes all of the above factors.

In addition to this basis used for determining the commodity tax, some have said that the tax rate paid on most U.S. cars is discriminatory, because most U.S. cars are levied the higher commodity tax, 20 percent, compared to 15 percent on smaller, lighter "Japanese-type" vehicles. Whether there is intended discrimination against U.S. cars,

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[4] Japan Automobile Manufacturers Association, Washington, D.C.
[5] "United States-Japan Trade: Issues and Problems" (automobile section). Report by the Comptroller of the United States, Sept. 21, 1979.

or the higher tax is merely a way to keep large cars off the roads, is debatable.

*Homologation and standards.*—Homologation is the term used to describe the process of making an auto "salable" in Japan; changes that are made primarly to meet Japanese safety standards. Below is a list of these changes.[6]

Amber front end and rear turn signal.
Exhaust temperature alarm.
Exhaust heat shielding.
Head restraints to Japanese standards.
Low current overnight park lamps.
Kilo speed with red ban 100 kilometer per hour (KPH).
Tail (exhaust) pipe outlet direction.
Front side marker lamp location.
License plate brackets.
Outside rear view mirrors—Japanese field of view and breakaway design.
Headlamps—LH rule of road.
License lamp illumination.
Overspeed warning device.
Rear bumper clothing device.
Seating dimensional compliance.
Back-up lamp—intensity, aim and leakage.
Turn signal operation—flash rate and positive out between flashes.
Rear reflectors to Japanese standards.
Instrument control symbols.

Homologation costs can be a serious bar to offering a reasonably priced auto for sale. As the subcommittee's United States-Japan Trade Task Force noted in its January 2, 1979 report:

> Because of the relatively small number of auto imports, Japanese government requirements that result in extra engineering, manufacturing changes, and paperwork, have an especially heavy impact on the pricing and sale of foreign autos. A requirement imposed on a widely sold automobile model can be complied with at the original assembly line for relatively little costs. The same requirement imposed on an auto of which only a few thousand are sold means that the auto must be overhauled at a special plant (generally "homogolation plants" at dockside in Japan) at enormous cost.
>
> Thus, during the period in which only a few thousand of each model of foreign car are sold in Japan, it is important that government requirements be held to a minimum—otherwise the cost of the auto rises inordinately, thus creating a vicious downward spiral as fewer and fewer of the higher priced autos can be sold.

On May 15, 1980, the Government of Japan announced a number of steps it will take to help ease the standards problem U.S. auto companies face when exporting to Japan. U.S. manufacturers gave Ambassador Askew a list of 15 problem areas concerning standards to raise in the mid-May auto negotiations with Japan. The Japanese agreed to alleviate 12 of these areas, including many of the homologation items listed above. For full text of May 15 announcement, see appendix D.

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[6] "United States-Japan Trade: Issues and Problems," Report by the Comptroller of the United States, Sept. 21, 1979.

Many of the documentation and testing hassles cited in the subcommittee's United States-Japan Task Force report and in the GAO report have been resolved by the Japanese during the past year. While some burdens remain, great progress has been made.

*Distribution costs.*—Distribution costs are, by far, the most important factor causing the high retail price of U.S. autos. A combination of dealer incentives and dealer margins account for 13 percent of the retail price of an imported subcompact, 22 percent for a small "sporty car," and 22 percent for a compact. According to the September 21, 1980, GAO report:

> These added selling costs (dealer incentives and dealer margins) are 19.8 percent above those in the U.S. for a subcompact and 39 percent above those in the U.S. for a "sporty car" and a compact.[7]

For a standard model the difference would be even greater.

In addition to the preceding reasons why U.S. autos have not been able to penetrate the Japanese market, it is worth noting that the United States has never produced the type of auto the average Japanese car buyer wants. Most U.S. cars sold in Japan are purchased by the rich. American cars are considered to be a luxury and have "snob appeal," or they are used by certain Japanese subculture groups.

From after World War II until the mid-1970's, U.S. auto manufacturers produced few autos that displaced 2,000 cc.'s (which would be levied only at the 15-percent commodity tax). All Japanese cars are equipped with right-hand drive, while U.S. cars are shipped to Japan with standard left-hand drive. If the U.S. manufacturers were seriously interested in selling cars in Japan, they would not have to "homologize" their cars in Japan. Instead, they would produce cars strictly for the Japanese market, just as the Japanese have been doing for their imports to the United States for the last 20 years.

## D. Recent Government of Japan Efforts To Reduce Auto Trade Frictions

The Government of Japan has been seeking to reduce trade frictions in auto trade and, as previously noted, on May 15, 1980, announced a number of actions designed to help reduce the Japan-United States bilateral trade deficit in autos and auto parts [see appendix D].

In addition to the simplification of standards and licensing procedures mentioned earlier, the Government of Japan agreed to:

1. Continue to encourage Japanese auto manufacturers to invest in U.S. facilities;
2. Send a trade mission from the Japanese auto parts industry to the United States this summer to explore either investment in the United States or U.S.-licensed production of parts for use in Japan;
3. Seek to eliminate tariffs on most auto parts imported into Japan; and
4. Send a trade mission to United States to promote imports of U.S.-made parts to Japan.

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[7] "United States-Japan Trade: Issues and Problems," Report by the Comptroller of the United States, Sept. 21, 1979.

## E. Prospects of Japanese Building U.S. Assembly Plants

While testifying during the March 7 auto hearing, Douglas Fraser, president of the UAW commented:

> I might say that we for a long time have advocated that the Japanese auto industry locate plants in the United States. We had conversations with Nissan and Toyota as far back as 1977.[8]

A similar comment was made by Ambassador Askew at the March 18 hearing:

> It has been suggested that Japanese producers should begin making some of their automobiles here in the United States. Such investment in production and assembly for the U.S. market would have the dual advantage of creating jobs for American workers without reducing the numbers of small fuel-efficient cars available to American consumers.
>
> We agree within the administration that such investment by the Japanese companies would be both helpful and advisable. Personally, I have already conveyed my own strong belief in the wisdom of such investment to officials of the Japanese Government on several occasions. I will continue to do so at every opportunity.[9]

*Honda.*—Although the Japanese auto manufacturers have been encouraged by both their Government and various U.S. groups to build plants in the United States, the only Japanese firm that has announced its intention to build or assemble autos in the country is Honda.[10] Because Honda sells only two basic models in the United States (the Civic and the Prelude/Accord), and the plants in Japan are currently running at capacity, it is not surprising that Honda was the first Japanese manufacturer to announce plans for auto assembly in the United States. In addition to the two above factors, Honda exports about 40 percent of its production to the United States, while the two largest manufacturers (Toyota and Nissan) export only about 20 percent of their production to the United States.

*Nissan.*—On April 17, 1980, Nissan announced its intention to assemble in the United States the small pickup truck it now imports.[11] The location of the plant has not yet been determined but, Niessen said that it would be located either in the Great Lakes region or the southeastern part of the United States. It will require an initial investment of $300 million, employ approximately 2,200, and have a production level of about 10,000 units per month. The initial vehicles

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[8] Testimony of Douglas Fraser, president, International Union, United Automobile, Aerospace, and Agricultural Implement Workers of America, before the Subcommittee on Trade, Committee on Ways and Means, Mar. 7, 1980.

[9] Testimony of Ambassador Reubin Askew before the Subcommittee on Trade, Comittee on Ways and Means, Mar. 18, 1980.

[10] Statement of William C. Triplett, Washington representative of American Honda Motor Co., before the Joint Economic Committee, Mar. 19, 1980:

"On Jan. 11, 1980, the President of Honda Motor Co., Ltd., Mr. K. Kawashima informed the press that Honda plans to manufacture automobiles in Marysville, Ohio, in a new facility adjacent to the existing motorcyc'e plant. It is expected that this facility will require approximately U.S. $200 million in new investment. The production rate would be 10,000 automobiles per month (120,000 per year) and it would employ about 2,000 American workers.

"Groundbreaking is expected before the end of this year. We plan to start production 2 years later with 1983 models. The model or models to be produced in Marysville has not yet been decided."

Note: Many analysts expect that the Honda p'ant's production will eventually increase to more than 10,000 a month. Honda sells more than 150,000 of each of its two basic models in the United States. It would make considerable sense to produce at least all of one of the two models in the United States.

[11] Press Release, Nissan Motor Co., Apr. 17, 1980.

will be composed of 40 percent U.S.-made components—a local content expected to rise to 50 percent within a year of operation.

Nissan has stated that a 500-acre site will be sought so that it can expand the truck plant to include the assembly of automobiles. However, executive vice president Masataka Okuma reiterated Nissan's intention not to build automobiles in the United States. Mr. Okuma said,

> * * * economies of scale, the expected competition from U.S. makers, higher labor rates, and the lack of secure parts supplies were all factors working against a U.S. auto assembly plant.[12]

Nissan's decision was probably prompted more by an upcoming U.S. Custom's decision than by pressure on the company by the administration and union officials. Most small trucks that are now imported by Toyota, Nissan, Mazda, GM, Ford, and Chrysler are currently subject to a duty rate of 4 percent, because they are classified as truck chassis. However, some U.S. manufacturers and Government agencies argue that the importers' practice of importing a cab/chassis and then quickly bolting on the cargo bed, often at the docksite, is simply a ruse to avoid the temporary 25-percent duty rate which is applicable to imported trucks.[13]

On May 20, Customs announced their decision that these imports should be classified as trucks subject to the 25-percent duty. Because both Ford and GM will begin producing their now-imported pickups in the United States in the next 2 years, the Japanese importers will be at a distinct cost disadvantage because they will be assessed a 25-percent rate of duty. The disadvantage can be overcome, of course, by establishing plants in the United States.

*Toyota.*—Toyota has decided to make a "full-scale survey" of automotive investment in the United States. The study will be conducted by Stanford Research Institute, Arthur P. Little Co., and Nomura Research Institute at a cost of approximately $1 million. The deadline for completion is tentatively scheduled to be the end of 1980. Toyota may also decide to build a truck plant in the United States as a result of the "cab chassis" decision of May 20.

*Mitsubishi.*—In the last few days, there have been reports of discussions between Mitsubishi Motors Corp. and Chrysler concerning the possible joint production of vehicles in the United States. It is too early to predict the probable outcome of these talks.

## F. Position of Toyota and Nissan

One of the main reasons why extensive U.S. assembly of Toyota and Nissan autos is difficult is that Toyota and Nissan, unlike Volkswagen and Honda, build many different models. The following table shows the 1979 retail sales of all Toyota, Nissan, Honda, and Volkswagen models in the United States:

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[12] "Nissan Confirms its 1983 Plan to Build Light Pickups in United States," Jake Kelderman, Automotive News, Apr. 21, 1980.

[13] See Ways and Means Committee Print 96–22, June 7, 1979, "Report on the Cab/Chassis Issue."

U.S. RETAIL SALES, BY MODEL, OF TOYOTA, DATSUN, HONDA, AND VOLKSWAGEN, FOR 1979

| | 1979 | 1978 |
|---|---|---|
| Toyota: | | |
| Corolla | 257,096 | 212,757 |
| Tercel | 17,838 | ---------- |
| Celica | 146,653 | 167,366 |
| Supra | 26,162 | ---------- |
| Corona | 36,570 | 34,823 |
| Cressida | 11,910 | 12,484 |
| Land Cruiser | 5,716 | 8,858 |
| Total | 501,945 | 436,288 |
| Datsun (Nissan): | | |
| 210 | 216,812 | 133,785 |
| 280ZX | 71,983 | 64,462 |
| 510 | 53,949 | 57,826 |
| 310 | 75,466 | 785 |
| 200SX | 30,214 | 38,037 |
| 810 | 12,116 | 21,351 |
| F–10 | 5,752 | 27,134 |
| 710/610 | ---------- | 527 |
| Total | 466,292 | 333,907 |
| Honda: | | |
| Civic | 155,541 | 154,035 |
| Accord | 157,919 | 120,841 |
| Prelude | 39,831 | ---------- |
| Total | 353,291 | 274,876 |
| Volkswagen: | | |
| Rabbit [1] | 215,289 | 149,170 |
| Rabbit convertible | 42 | ---------- |
| Dasher | 24,492 | 28,739 |
| Scirocco | 26,088 | 28,137 |
| Bus/Camper | 15,940 | 23,322 |
| VW convertible | 10,691 | 9,932 |
| Total | 292,542 | 239,300 |

[1] Volkswagen Rabbit retail sales include both the U.S.-built model and the imported model.

Source: Wards' Automotive Reports, Jan. 7, 1980.

The only model that Volkswagen sells in quantity is the Rabbit sedan, all of which are now assembled in the Westmoreland, Pa., plant. The Rabbit convertible, the Scirocco (basically a Rabbit with a different body), the Dasher, and the bus/camper are produced in West Germany.

Honda has not yet announced whether it will assemble the Civic or the Accord/Prelude in the United States.[14] Because the Accord/Prelude is gradually taking a larger share of total Honda sales in the United States, there is a strong possibility that this will be the model assembled in North America.

For Toyota and Datsun, the table shows that each of these companies sold over 200,000 of one model in 1979 in the United States, (Toyota Corolla—257,096, and Datsun 210—216,821). Since unit sales of 200,000 for one model is considered to be the economy-of-scale, breakeven point for establishing an efficient assembly plant, these two companies could justify a U.S. assembly plant. (Honda is currently estimating an annual production run of only 120,000 units for its Ohio plant.)

[14] See quote by Mr. William Triplett, Honda Motor Co., p. 37.

Toyota and Nissan are now giving the following reasons for not establishing U.S. facilities: [15]

1. U.S. labor rates are much higher in the United States than in Japan.

2. Quality would suffer because U.S. auto workers are not as conscientious as Japanese workers.

3. There are more work stoppages in the United States.

4. Most of their suppliers are in Japan.

5. The yen/dollar relationship is unpredictable.

6. The initial capital investment would be very high, yet there will be no guarantee that the assembly plant would be profitable.

7. General Motors, Ford, and Chrysler will soon be building autos that directly compete with fuel-efficient Japanese models, thus there will be a glut of small cars on the U.S. market by the time the U.S. plant would be operative.

It is worth reviewing each of these issues, since they explain a great deal of the difference between the two nations' auto industries.

1. *Labor costs.*—Labor rates in the U.S. auto industry are higher than in Japan; in fact, U.S. hourly compensation rates are higher than any other auto-producing country except West Germany. However, the gap between the United States and the Japanese rate has been slowly narrowing. In 1975, the U.S. rate was almost triple the Japanese rate, while by mid-1979, the U.S. rate was about twice the Japanese rate.

Looking only at Japanese hourly rates can be misleading because the average Japanese auto worker receives more nonwage benefits than the average U.S. auto worker. In Japan, many workers are provided very inexpensive housing, recreational facilities, subsidized meals (lunch may be provided for workers for only $1.25) [16] and the security of permanent employment with the company.

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[15] The following is an excerpt from the testimony given by Yasuhiko Suzuki, vice president, external relations, Nissan (Datsun) Motor Corp., U.S.A., Washington corporate office, before the Joint Economic Committee, Mar. 19, 1980:

"First of all, of course, is the cost. An investment of several hundreds of millions of dollars would be necessary to buy or build and equip a plant large enough for mass production utilizing economies of scale sufficient to compete in this market. A minimum capacity of 20,000 units per month would be required. The recent firming of the dollar against the yen has made such an investment far less attractive than it would have been a year ago, when we were in the early stages of exploring investment possibilities.

"Second, the timing of an investment at this point would be extremely bad. As I have indicated, the big three are already well along in their conversion to small-car production. If we were to begin investment in similar plants today, our first production models several years from now would face powerful competition from companies whose production capacity of small cars will be millions of units. The imbalance in economies of scale and a projected small car glut in the U.S. market make a potential investment extremely risky.

"Finally, the Japanese pattern of automobile production relies heavily on components manufactured by suppliers rather than by the automobile company itself. Whereas Japanese companies manufacture only 30 percent of their components, General Motors manufactures 50 percent to 60 percent in house. It would be difficult for us to transplant this pattern to the United States without facing serious problems of both quantity and quality of the supply of parts and components. Our competitiveness might therefore be seriously endangered by impairment of two cornerstones of our reputation, quality and reliability.

"Some have asked why Nissan finds it difficult to decide to invest in the United States when Volkswagen has done so and Honda has decided to do so. We think our circumstances are quite different from theirs. Volkswagen made its investment decision at a time when the Deutschmark had experienced a substantial appreciation against the dollar, which nearly priced their product out of the U.S. market and also reduced the cost of the investment for the German company. Our situation is reversed. The yen, on the other hand, has lost approximately 30 percent of its value over the past year in relation to the dollar.

"At the present time there is little economic justification for Nissan to contemplate the $300 to $400 million investment required to establish a production plant in the United States."

[16] Representatives Vanik and Jones discussion with plant manager, Oppama Plant, Nissan Motor Co., Apr. 2, 1980.

ESTIMATED HOURLY COMPENSATION OF PRODUCTION WORKERS IN THE MOTOR VEHICLES AND EQUIPMENT INDUSTRIES, 14 COUNTRIES, MID-YEAR 1979, AND CALENDAR YEARS, 1975–78

[Provisional estimates]

| Country | 1975 | | 1976 | | 1977 | | 1978 | | 1979 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | U.S. dollars | Index U.S. =100 | U.S. dollars | Index U.S. =100 | U.S. dollars | Index U.S. =100 | U.S. dollars | Index U.S. =100 | U.S. dollars | Index U.S. =100 |
| United States | 9.60 | 100 | 10.37 | 100 | 11.61 | 100 | 12.66 | 100 | 13.72 | 100 |
| Canada | 7.50 | 78 | 8.77 | 85 | 9.13 | 79 | 9.19 | 73 | 9.46 | 69 |
| Brazil | 1.59 | 17 | 1.82 | 18 | 2.06 | 18 | 2.35 | 19 | 2.53 | 18 |
| Mexico | 2.95 | 31 | 3.16 | 30 | 2.92 | 25 | 3.39 | 27 | 3.91 | 28 |
| Japan [1] | 3.56 | 37 | 4.02 | 39 | 4.82 | 42 | 6.68 | 53 | 6.85 | 50 |
| Korea | .50 | 5 | .63 | 6 | 1.01 | 9 | 1.32 | 10 | 1.58 | 12 |
| Belgium | 7.58 | 79 | 8.14 | 78 | 9.51 | 82 | 11.45 | 90 | 13.06 | 95 |
| France | 5.22 | 54 | 5.46 | 53 | 6.12 | 53 | 7.47 | 59 | 8.97 | 65 |
| Germany | 7.69 | 80 | 8.13 | 78 | 9.67 | 83 | 11.77 | 93 | 14.05 | 102 |
| Italy | 5.11 | 53 | 4.93 | 48 | 5.59 | 48 | 6.68 | 53 | 7.90 | 58 |
| Netherlands | 6.83 | 71 | 7.14 | 69 | 8.38 | 72 | 10.30 | 81 | 11.94 | 87 |
| Spain | 7.44 | 78 | 8.44 | 81 | 4.40 | ------- | 5.03 | ------- | 7.39 | ------- |
| Sweden | 3.95 | 41 | 3.75 | 36 | 9.01 | 78 | 9.80 | 77 | 11.46 | 84 |
| United Kingdom | ------- | ------- | ------- | ------- | 3.91 | 34 | 4.85 | 38 | 6.36 | 46 |

[1] Japan data includes spring and year-end bonuses averaged in. For 1979 this was estimated, based on negotiated settlement for the industry and spring bonus percentage.

Source: BLS: U.S. Department of Labor.

According to a recent article:

> Labour costs per head in Japanese car firms have been higher than most European (except West German) firms and almost as high as American manufacturers for at least (the last) three years. Daimler-Benz's costs are the highest (an annual $19,100 per worker in 1976), General Motors is next, followed by Volkswagen, Ford, Chrysler, then Toyota and Nissan ($14,400 and $14,300 respectively). Fiat, by contrast, spent very little on its labour force ($8,400) and British Leyland even less ($5,500).[17]

2. *Labor quality.*—The second argument that the Japanese firms use for not building a U.S. plant, is the quality control issue. Japan has been extraordinarily careful to develop a quality automobile and believes that American workers and parts suppliers will not provide the same attention to detail that Japanese workers give. Thus, it is feared that the use of American workers and parts suppliers will lead to an erosion of the quality and reputation of Japanese autos.

The issue of quality (and quality control) in Japanese products versus American products is extraordinarily complex—and extraordinarily important. (For further discussion, see p. 47). The issue arises in areas other than automobiles, such as televisions and semiconductors. The subcommittee's Task Force on United States-Japan Trade is in the process of exploring the reality and perception of this quality "difference". To the extent there is a "real" difference in quality, Japanese import competition may provide lessons for America that can help improve the quality of our own manufacturing processes and our labor-management relations. *These lessons may be the most important product we can ever import from Japan.*

It is not clear, however, how much of the "quality gap" is "real" and how much is "perception" by Japanese producers and some American consumers.

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[17] "The Age of Maturity", World Motors, Valery Nicholas, Mar. 19, 1979. According to Mr. Valery, these costs reflect a comparison of total cost of labor included in each automobile, not the hourly rate. In other words, the Japanese hourly rate may be only one half the U.S. rate, but the total labor involved in producing the auto would be greater per unit. If accurate, this might also help to explain the differences in quality between a United States and a Japanese-built car.

During testimony before the Joint Economic Committee on March 19, 1980, Philip Hutchinson, director of government and industry relations, Volkswagen, was asked by Chairman Lloyd Bentsen if Volkswagen is able to produce as good a product in the United States as it does in West Germany. Mr. Hutchinson responded. "We are pleased with our labor force and the ability of U.S. suppliers to meet our exacting specifications."

He continued by saying that the workmanship in an American-built Rabbit was equal, if not superior, to a Rabbit produced in West Germany. Mr. Hutchinson said that they experienced some labor problems, but they were minor and easily settled.

He did comment, however, upon some quality problems Volkswagen had with initial shipments of component parts from some U.S. suppliers: "After the company rejected the first one or two shipments (from suppliers) because of low quality, the suppliers got the message.[18] In other words, it appears that some suppliers (many of whom supply the domestic auto industry) may have been used to their other customers accepting a product not up to standards, thus they expected the same treatment from VW. However, VW, and most likely Honda, will not accept a product unless it meets their specifications.

In its announcement of the decision to expand the motorcycle facility in Marysville, Ohio, to include auto production, Honda officials noted, "The motorcycle facility was our first experience in U.S.-production and it has been very successful. Product quality is at least as high as in Japan." [19]

Other Japanese firms have been pleased with their labor relations and quality of output in the United States. Sony, which has a television assembly plant in San Diego, notes that that plant holds the Sony record for defect-free production days, doubling a record held by its Japanese assembly plants.[20]

Three members of the subcommittee met with representatives of the Japanese External Trade Organization in Toyko on April 3. During the discussion, Mr. Shinsaku Sogo, cochairman of the United States-Japan Trade Study Group, noted that in 1979 he led a group of about 50 Japanese businessmen on a tour of some 23 Japanese-owned plants in the United States. At each plant, the Japanese inquired as to labor relations and quality control and, according to Mr. Sogo, the replies were very encouraging. Japanese managers who have been working with Americans reported that problems could be overcome to achieve quality work in a good atmosphere of cooperation.

Whether these "good" quality experiences of Japanese firms in the United States are factual [21] and are due to innate characteristics of American workers or whether they are due to some new elements in Japanese management styles is a fascinating question, which, as noted above, the subcommittee is exploring. *It does appear to be a fact that Japanese firms can operate in the United States and maintain an extraordinary degree of quality output.*

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[18] Statement of Philip A. Hutchinson, director of government and industry relations, Volkswagen of America, before the Joint Economic Committee, Mar. 19, 1980.

[19] Statement of William C. Triplett, II, Washington representative, American Honda Motor Co., Inc., on the American Automobile Industry, before the Joint Economic Committee, Mar. 19, 1980.

[20] Conversation with Mr. Chris Wada, SONY of America, N.Y., Spring, 1980.

[21] It may be difficult to obtain empirical data on this issue. Japanese plant managers are not likely to say they are turning out a crummy product in the United States.

*3. Strikes and work stoppages.*—There are also the issues of strikes and labor relations problems. If the Japanese build U.S. plants, there is no argument that compared to Japan, there will be more work stoppages due to labor problems. There is a different relationship between labor and management in Japan than in the United States. However, this has not stopped Volkswagen (or Honda and Kawasaki motorcycle operations) from being successful in the United States. It is just a "fact of labor life" in the United States; a cultural adjustment that a company must learn to live with in producing in the United States.

*4. Access to parts suppliers.*—An important issue for the Japanese firms relates to constant access to a network of parts suppliers.

The fact that most of the Japanese automakers' supplies are located in Japan is undeniable. They are located in Japan because:

Some are tied financially to the manufacturers;

The Japanese Government has "encouraged" the use of Japanese suppliers as opposed to foreign suppliers, even if a Japanese supplier might charge a higher price than a foreign supplier;

It is much easier for a Japanese automaker to control the quality of the components if the supplier is located within Japan.[22]

A quote from World Motors further illustrates the Japanese automaker/supplier relationship:

Most Japanese manufacturers of car components (brakes, springs, axles, transmission shafts, bearings, oil pumps, sparking plugs and so on) grew up under the wing of either Toyota or Nissan. In the early 1960's, the leading motor manufacturers organized the ramshackle-components firms into 'mutual prosperity associations.' They were given lucrative contracts on the strict understanding that they would modernize their own factories and boost production so as to lower unit costs. Toyota organized 300 suppliers into a gigantic production pyramid made up of 10 satellite companies each with 1,000–3,000 employees, some 25 medium-sized firms of 200–400 employees each and several hundred small subcontractors supplying either a single product (such as brake hose) or a special service (such as crankshaft grinding).

A number of those component manufacturers are on the way to becoming nearly as big as their parents. Practically all have severed their exclusive ties with Toyota and Nissan and now supply parts to rival car manufacturers. As a result, they can, and do, tool up for manufacturing runs measured in millions. They can afford the latest production equipment and they pay even higher wages than many of the car firms (which means that they get the pick of the engineering graduates). Not surprisingly, their products are thoughtfully designed and made to very fine tolerances. Not even Detroit can turn out parts so well made and on such a scale, while Europe is about 10 years behind in terms of productions.[23]

During a recent visit to Japan, three members of the subcommittee raised the issue of auto parts trade and in particular, the possibility that Japanese firms would subcontract the replacement parts business to American parts suppliers—a business estimated to equal $8 billion annually in the near future. This proposal was very well received by both Japanese officials and officials of Japanese auto firms. The subcommittee believes that the possibility of increased American involvement in supplying parts to Japanese manufacturers and in repairing the cohort of Japanese autos now in America offers the chance for a major reduction in what will otherwise be a widening deficit in autos and auto parts over the next several years. Appendix E includes a

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[22] "The Age of Maturity", World Motors, Valery Nicholas, Mar. 10, 1979.
[23] Ibid.

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letter from the Ministry of International Trade and Industry to Subcommittee Chairman Vanik describing some successful efforts to improve trade in the auto parts sector (also, see parts references in appendix D). In 1980, the United States will ship about $250 million in automotive parts to Japan for use in the assembly of Japanese cars, double the level of parts shipments in 1979.[24] It is possible that as Japanese producers review the parts sector, they will find additional parts which they will want to procure in the United States.

If other parts companies move in the same direction as described in appendix F, the level of automotive trade from the United States to Japan could increase significantly and/or the auto trade imbalance could be narrowed. The development of sources of parts in the United States could also make it easier to open assembly line plants in this country.

*5. Yen/dollar exchange rate fluctuations.*—The relationship between any two countries' currency is inherently unpredictable, especially during today's economic instability caused, in part, by the OPEC oil pricing policy. In addition, recent U.S. efforts to fight internal inflation through high interest rates have also contributed to the fluctuation of the U.S. dollar on the world markets. The following table shows the relationship between the U.S. dollar and eight major countries that export automobiles to the United States.

AVERAGE APRIL RATES OF EXCHANGE FOR CURRENCIES FOR THE 8 LEADING COUNTRIES THAT EXPORT PASSENGER AUTOMOBILES TO THE UNITED STATES, 1964–80

[In U.S. cents per unit of foreign currency]

| Year | Canada (dollar) | Japan (yen) | West Germany (mark) | Belgium (franc) | Italy (lira) | United Kingdom (pound) | Sweden (krona) | France (franc) |
|---|---|---|---|---|---|---|---|---|
| 1964 | 92.38 | 0.28 | 25.16 | 2.01 | 0.16 | 280.06 | 19.45 | 20.41 |
| 1965 | 92.67 | .28 | 25.13 | 2.01 | .16 | 280.00 | 19.37 | 20.40 |
| 1966 | 92.92 | .28 | 24.88 | 2.01 | .16 | 279.44 | 19.34 | 20.41 |
| 1967 | 92.38 | .28 | 25.16 | 2.01 | .16 | 279.94 | 19.36 | 20.27 |
| 1968 | 92.73 | .28 | 25.08 | 2.01 | .16 | 239.81 | 19.32 | 20.26 |
| 1969 | 92.97 | .28 | 25.17 | 1.99 | .16 | 238.88 | 19.33 | 20.10 |
| 1970 | 93.21 | .28 | 27.51 | 2.01 | .16 | 240.62 | 19.21 | 18.11 |
| 1971 | 99,10 | .28 | 28.17 | 2.02 | .16 | 241.94 | 19.35 | 18.14 |
| 1972 | 100.17 | .33 | 31.46 | 2.27 | .17 | 261.10 | 20.91 | 19.87 |
| 1973 | 99.90 | .38 | 35.25 | 2.48 | .17 | 248.88 | 22.05 | 21.88 |
| 1974 | 104.12 | .36 | 40.87 | 2.66 | .16 | 243.28 | 23.42 | 20.51 |
| 1975 | 98.91 | .33 | 42.11 | 2.84 | .16 | 237.02 | 25.16 | 23.83 |
| 1976 | 101.70 | .33 | 39.43 | 2.57 | .11 | 184.80 | 22.72 | 21.41 |
| 1977 | 97.29 | .35 | 41.60 | 2.71 | .11 | 171.00 | 23.55 | 20.09 |
| 1978 | 89.84 | .42 | 48.19 | 3.10 | .12 | 193.98 | 21.54 | 20.07 |
| 1979 | 87.24 | .46 | 52.81 | 3.33 | .12 | 207.33 | 22.78 | 22.99 |
| 1980 | 83.95 | .39 | 51.16 | 3.19 | .11 | 215.38 | 22.23 | 22.17 |

Source: Compiled from data published monthly by the International Monetary Fund in International Financial Statistics

The U.S. dollar has gained in value since 1964 in Canada, Italy, the United Kingdom, Sweden, and France; while it has lost value in Japan, West Germany, and Belgium. The most dramatic decrease in the value of the U.S. dollar has been in West Germany, where it has lost almost 50 percent of its value in relation to the mark. This change in the value of the West German mark (accompanied by threats of an antidumping investigation) is one of the primary reasons why Volks-

[24] "Japan Firms To Buy More U.S. Car Parts", The Journal of Commerce, A. E. Cullson, Apr. 22, 1980.

wagen decided to assemble automobiles and small trucks in the United States.

Although the Japanese yen remained constant in relation to the U.S. dollar during 1964–71, the trend from 1972–79 was generally for an appreciation of the yen (depreciation of the dollar). However, the yen reached a peak of 177 during October 1978, and has since declined to a low of about 260 yen per dollar. In recent weeks, it has again begun to appreciate dramatically and is 225 yen to the dollar as of May 29, 1980.

It can be strongly argued that the yen/dollar relationship was badly out of line and that the yen had depreciated too far. See, for example, the Economic Report of the President, January 1980.

> The substantial depreciation of the yen is perhaps the most striking aspect of exchange market developments during the year (1979). Some portion of the decline may represent a reversal from the overshooting during the yen's previous period of appreciation, but the reversal went beyond that . . . Changes in long-term trade volume in response to exchange rate changes are large, however, and the actual depreciation of the yen may have exceeded the requirement of the adjustment process (p. 175).

The recent yen/dollar imbalance is likely to result in a major increase in the bilateral trade imbalance between the United States and Japan beginning in 1981, as Japanese exports benefit from the depreciation of the yen while American exports to Japan suffer as a result of the more "expensive" dollar. Already, the excessive depreciation of the yen has made Japanese auto sales to the United States extraordinarily profitable. The following article from the English language version of the Japan Economic Journal (Nihon Keizai), November 6, 1979, illustrates one reason why a high volume of Japanese auto exports is of particular interest to the Japanese at this time:

> The greater part of the portion of the yen's weakening against the dollar will become profits for the auto, electric machinery and precision instrument makers who put the rate at which they can make a profit at $1=¥190.
>
> In the case of Nissan Motor, it is believed that its average export rate in the period ending September 30 reached about $1=¥215 against $1=¥195 in the preceding term ending March 31.
>
> Since its dollar-denominated exports in the half year reached about $1.5 billion, it means that the increase of its export intake from the cheapening of the yen alone amounted to ¥30 billion. With the increase of its car exports from the popularity abroad of low fuel consumption Japanese autos, the value of its exports rose by 27 percent over the preceding half to ¥550 billion.
>
> The greater part of the income from the yen's cheapening tied up with its profit gain. As a result, Nissan's pretax recurring profits in the April to September term are expected to reach ¥85 billion, or ¥20 billion more than its initial outlook.

However, the fact that the yen has depreciated too far and that our trade imbalance with Japan is likely to widen means that there will be a future counterswing of the yen/dollar exchange rate. Indeed, this counterswing appears to be underway. By the nature of such adjustments, the counterswings may well be excessive, and then Japanese auto exports will become much less attractive. A Japanese firm—such as Honda—which establishes an auto plant in the United States, may be largely insulated from these currency swings and may in the future find itself in a very favorable position vis-a-vis its Japanese based competitors. *The Japanese concern about the uncertainty of*

*exchange rates may be more an argument for investment in the United States than an argument for not investing.*

*6. Capital investments.*—The statement that an automobile plant involves a very high capital investment and that there will be a glut of small autos in the U.S. market by 1985 is probably the main reason why the Japanese are reluctant to build U.S. assembly plants. Tied very closely to this is the fact that Toyota, and possibly Nissan, are either presently increasing their capacity in Japan or plan to increase their capacity and do not see the need for additional plant capacity overseas. The statement is accurate that the three major U.S. companies will be producing a great number of light, fuel-efficient autos by 1984–85 and competition will be stiffer. However, by that time, it is possible that the small car portion of the U.S. market will have further increased, making room for Japanese production, either in the form of imports or Japanese production in the United States.

Traditionally, the Japanese have invested abroad to "get behind" or "over" foreign tariff and nontariff barrier walls. The following portion of a survey by the Department of Commerce reveals the extraordinary number of trade barriers throughout the world affecting autos. These barriers help explain the nature and reason for U.S. and Japanese investment.

Assuming the continuation of open trading practices in the United States, this sort of often uneconomical "tariff factory" would not be required in the United States.

On the other hand, *the "good will" which an investment in job-producing plants in the United States would create could be an important reason for investment in the United States.* Honda's decision to invest in the United States has been very well received; it would be easy to see Honda gaining market share at the expense of its Japanese-based competitors, particularly if the pattern of cyclical trade disputes with Japan becomes more serious in the future.

## VII. Quality Issue

When imported car buyers are asked why they purchased an imported car, the answer invariably involves the high quality of the product. This is especially true of Japanese models, which are known for their high-mileage efficiency, good design and engineering, and quality of workmanship.

### A. Letters Submitted to the Subcommittee

Many U.S. consumers are not only impressed with the quality of Japanese autos but also highly critical of the quality of many U.S. built autos. Appendix F is a sampling of some of the many letters which were received by the Subcommittee on Trade concerning auto quality.[1] These letters from concerned citizens make a number of good points. *Detroit needs to listen to and respond to these complaints more visibly than it has in the past.*

The superior quality image of Japanese autos will be the major stumbling block that the four major U.S. manufacturers will have to overcome in order to adequately compete in the small car market. *The quality gap is both real and imagined—and regardless of the validity of the image, it still must be surmounted.*

### B. Poll of Auto Engineers

According to an annual survey conducted by Ward's Auto World, even automotive engineers from the five domestic automobile companies were of the opinion that the best quality cars in the world are produced in Japan. When asked, "As of today, the best quality cars are produced in what country?" almost half (47 percent) of the engineers responded Japan, 27 percent said the United States, 23 percent said West Germany, and 3 percent said France.[2] However, these same engineers said that the Japanese lead in quality not because of superior technology but from (1) better workmanship on the production line, (2) attention to fine detail (both in design and assembly line), and (3) better rapport between workers and management. Almost all of the engineers surveyed agreed that in order for Detroit to compete not only in the U.S. market but the world market as well, quality will have to improve.[3]

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[1] Much of the mail the subcommittee received reflects the consumer message seen by Transportation Secretary Neil Goldschmidt:

"They don't trust the industry, and they're not overly concerned by the industry's problems, which they believe are self-inflicted. (Consumers) are quite content to see the industry stew in its own juice." Newsweek, Apr. 28, 1980.

[2] "U.S. Engineers Rank Imports Tops," by Ervin Maus and Richard Waddel, Ward's Auto World, March 1980, p. 48.

[3] It is interesting that the po'l of engineers tends to blame poor workmanship on the assembly line for the quality problems of American autos. The workers, of course, tend to blame poor engineering and the speed of the assembly line set by the foremen and management.

## C. Magazine Rates Automobiles

Consumer Reports, a monthly publication of the nonprofit organization Consumers Union, publishes an annual issue which is devoted solely to automobiles (domestic and imported). This issue includes specifications of most new domestic and imported autos, list prices, body dimensions, gasoline mileage ratings, ratings of selected new models, and specific articles relating to autos. In addition to the sections on new autos, the magazine also publishes articles and ratings of many used autos. Two of these sections are entitled "Frequency-of-Repair Records" and "Good Bets in Used Cars." [4]

In the 1980 auto issue, the magazine rated 85 new domestic and imported models. The ratings are based upon a combination of price, fuel mileage, predicted repair incidence (based primarily upon previous similar models), comfort, and performance/handling. Consumers Reports divided the ratings into three separate categories: small (subcompact/compact), medium (intermediate) and large (standard). According to the report, "Most of the top-rated small cars are imports." [5] Of the 41 small cars rated, 13 were top rated. Only three of these were domestic models, and two of these were designed and originally built in West Germany. Thus, only 1 U.S.-designed model was top rated out of 11 U.S. small cars.

Consumer Reports also rates about 160 domestic and imported cars and lightweight trucks. These ratings are based upon 250,000 replies to questionnaires from CR readers who own one or more of these 160 models. The questionnaires cover mechanical (steering, brakes, engines, et cetera) and body (paint resistance to corrosion, body integrity, etc.) problem areas experienced by the owners. In addition to these two areas, the owners are also asked to give their cars and trucks an overall rating. Each category (mechanical, body, and overall) is rated according to one of the following: (1) much better than average; (2) better than average; (3) average; (4) worse than average, and (5) much worse than average.

The results of the poll for 1978 models (based upon overall rating) were as follows (as summarized in table form by the subcommittee staff):

| | Domestic | Percent of total | Imports | Percent of total | Japanese imports | Percent of total |
|---|---|---|---|---|---|---|
| Much better than average | 0 | 0 | 20 | 50 | 15 | 68 |
| Better than average | 10 | 11 | 15 | 38 | 7 | 32 |
| Average | 47 | 51 | 3 | 8 | 0 | 0 |
| Worse than average | 20 | 22 | 1 | 2 | 0 | 0 |
| Much worse than average | 15 | 16 | 1 | 2 | 0 | 0 |
| Total | 92 | | 40 | | 22 | |

## D. U.S. Quality Not as Bad as Often Perceived

Letters received by the Subcommittee on Trade seem to indicate that, although there are many valid complaints concerning the quality of U.S. autos, the perception of poor quality may be worse than the reality. Many of the letters are from auto owners who have had

[4] Consumer Reports, "Annual Auto Issue," April 1980.
[5] Ibid.

a lot of problems with their U.S. car, thus they believe that imports have to be better. Some letters are from owners who previously owned domestic makes, had numerous problems with them, then bought imported models, and are now satisfied.

*Since future sales of domestic cars will be based as much on perception as on reality, it is important for U.S. manufacturers to produce a fuel-efficient small car that not only is built as well as any Japanese model, but is perceived as being equal or better by the auto buyer.*

A recent study by the Highway Loss Data Institute reports which cars registered in the United States have the best collision coverage loss experience (lowest repair expenses) and which have the worst collision coverage loss experience. Of the top 11 high-volume models (at least 1 percent of total exposure for one of the model years) which fell into the best collision coverage loss experience, all were domestic models. The same is true for the low volume models (less than 1 percent of total exposure for one of the model years). However, in the worst collision coverage loss experience (high volume), three of the top six were imports, while in the low volume worst category seven out of eight were imports.[6]

In addition to the Highway Loss Data Institute study, the National Highway Traffic Safety Administration (NHTSA) recently sponsored high-speed crash tests on the most popular U.S. and imported cars. To pass these tests, the automobiles had to provide a high level of occupant protection at an impact speed of 35 miles per hour instead of the current NHTSA standard of 30 miles per hour, along with meeting all other standards (fuel leakage, windshield extrusion, etc.).

Only four models passed both the frontal and rear crash tests; all four were domestics. In the "minicompact" class (where the Japanese are most competitive) only one model passed the test—the Chevrolet Chevette. *Foreign autos may run well, but they suffer accidents poorly.*

*The perception that imports achieve better fuel mileage than all domestics, for any given weight class, is not true.* In fact, many U.S.-produced models attain better mileage than a similar weight imported car, even in some subcompact categories where imports are their strongest.

For gasoline mileage ratings, the EPA divides automobiles into six basic categories: two-seaters, minicompacts, subcompacts, compacts, midsize, and large. Domestic and imported cars (especially Japanese imports) compete directly in only two of these classifications: minicompact and subcompact. However, the only U.S. minicompact is the Ford Pinto/Bobcat, and this automobile is classified as a minicompact only because of its extremely small interior space. (EPA bases its classifications upon interior space, not wheelbase or weight.)[7] Thus, almost all of the true "head-to-head" competition takes place in the subcompact class. If the U.S.-produced Volkswagen Rabbit diesel is not included in the EPA m.p.g. ratings, the Japanese

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[6] "Automobile Insurance Losses Collision Coverages, Variations by Make and Series," Highway Loss Data Institute, Washington, D.C., December 1979.

[7] "1980 Gas Mileage Guide," published by the Environmental Protection Agency, second edition:

"Vehicles are grouped in classes according to their interior size, an important measure of vehicle utility. This means that vehicles that are approximately the same size inside will be in the same class. Trucks are grouped by their capacity, in terms of gross vehicle rating."

imports hold the top 35 positions. However, the Chevrolet Chevette is 36th, followed by many Japanese models.

In the "sports-subcompact luxury" class, the Ford Mustang averages 23 miles per gallon compared to 21 miles per gallon for the Toyota Celica. Thus, many domestically produced cars actually do achieve better gas mileage than some Japanese cars which are directly competitive. Also, some of the larger U.S.-built cars get better gas mileage than do some of the smaller Japanese models.

The following EPA listing of U.S. and imported cars illustrates this point:

[Fuel system: Number of barrels, or fuel injection]

| Est. MPG | | Engine CID | Transmission | Fuel system |
|---|---|---|---|---|
| | **2-SEATERS** | | | |
| 25 | Fiat X1/9 | 91 | M5 | 2 |
| 22 | Fiat Spider 2000 | 122 | M5 | 2 |
| 22 | Triumph Spitfire | 91 | M4(OD) | 1 |
| 21 | Datsun 280ZX | 168 | M5 | FI |
| 21 | Fiat Spider 2000 | 122 | A3 | 2 |
| 21 | Triumph Spitfire | 91 | M4 | 1 |
| 21 | Triumph TR | 122 | M5 | 2 |
| 20 | Datsun 280ZX | 168 | A3 | FI |
| 19 | Datun 280ZX | 168 | A3 | FI |
| 19 | Porsche 924 Turbo | 121 | M5 | FI |
| 17 | Mazda RX-7 | 70 | M5 | 4 |
| 16 | Mazda RX-7 | 70 | A3 | 4 |
| 16 | Mazda RX-7 | 70 | M4 | 4 |
| 16 | MG MGB | 110 | M4 | 1 |
| 16 | MG MGB | 110 | M4(OD) | 1 |
| 14 | Chevrolet Corvette | 350 | A3 | 4 |
| 14 | Triumph TR | 215 | M5 | 2 |
| | **MINICOMPACT** | | | |
| 36 | Honda Civic | 91 | M5 | 3 |
| 35 | Honda Civic | 91 | M4 | 3 |
| 30 | Renault Le Car | 85 | M4 | 2 |
| 29 | Dodge Celeste | 98 | A3 | 2 |
| 29 | Dodge Celeste | 98 | M5 | 2 |
| 29 | Honda Civic | 91 | S2 | 3 |
| 29 | Plymouth Arrow | 98 | M5 | 2 |
| 29 | Plymouth Arrow | 98 | A3 | 2 |
| 24 | Ford Pinto | 140 | M4 | 2 |
| 24 | Mercury Bobcat | 140 | M4 | 2 |
| 23 | Dodge Celeste | 156 | A3 | 2 |
| 23 | Plymouth Arrow | 156 | A3 | 2 |
| 22 | Dodge Celeste | 156 | M5 | 2 |
| 22 | Ford Pinto | 140 | A3 | 2 |
| 22 | Mercury Bobcat | 140 | A3 | 2 |
| 22 | Plymouth Arrow | 156 | M5 | 2 |
| | **SUBCOMPACTS** | | | |
| 42 | VW Rabbit Diesel | 90 | M5 | FI |
| 40 | VW Rabbit Diesel | 90 | M4 | FI |
| 37 | Dodge Colt | 86 | M4 | 2 |
| 37 | Plymouth Champ | 86 | M4 | 2 |
| 36 | VW Dasher Diesel | 90 | M4 | FI |
| 35 | Dodge Colt | 86 | M4×2 | 2 |
| 35 | Plymouth Champ | 86 | M4×2 | 2 |
| 33 | Dodge Colt | 98 | M4×2 | 2 |
| 33 | Plymouth Champ | 98 | M4×4 | 2 |
| 33 | Toyota Tercel | 89 | M4 | 2 |
| 31 | Datsun 210 | 75 | M4 | 2 |
| 31 | Datsun 210 | 85 | M4 | 2 |
| 31 | Datsun 210 | 85 | M5 | 2 |
| 31 | Datsun 310 | 85 | M4 | 2 |
| 31 | Datsun 310 | 85 | M5 | 2 |
| 31 | Datsun 510 | 119 | M5 | 2 |
| 31 | Toyota Tercel | 89 | M5 | 2 |
| 30 | Datsun 510 | 119(CA) | M5 | 2 |
| 30 | Datsun 510 | 119 | M4 | 2 |
| 30 | Dodge Colt | 98 | A3 | 2 |
| 30 | Mazda GLC | 86(CA) | M5 | 2 |
| 30 | Plymouth Champ | 98 | A3 | 2 |
| 29 | Datsun 210 | 85(CA) | M4 | 2 |
| 29 | Datsun 210 | 85(CA) | M5 | 2 |
| 29 | Datsun 210 | 85(CA) | M4 | 2 |
| 29 | Datsun 310 | 85(CA) | M5 | 2 |
| 29 | Datsun 310 | 85(CA) | M4 | 2 |
| 29 | Datsun 510 | 119(CA) | M4 | 2 |
| 29 | Mazda GLC | 86(CA) | M4 | 2 |
| 29 | Toyota Tercel | 89 | A3 | 2 |
| 28 | Datsun 200SX | 119 | M5 | FI |
| 28 | Datsun 210 | 91 | A3 | 2 |
| 28 | Datsun 510 | 119 | A3 | 2 |
| 28 | Toyota Corolla | 108 | M4 | 2 |
| 27 | Datsun 200SX | 119(CA) | M5 | FI |
| 27 | Datsun 510 | 119(CA) | A3 | 2 |
| 27 | Mazda GLC | 86 | A3 | 2 |
| 27 | Toyota Corolla | 108 | M5 | 2 |
| 26 | Chev. Chevette | 98 | M4 | 2 |
| 26 | Datsun 200SX | 119 | A3 | FI |
| 26 | Datsun 210 | 91(CA) | A3 | 2 |
| 26 | Toyota Corolla | 108 | A3 | 2 |
| 25 | Chev. Chevette | 98 | A3 | 2 |
| 25 | Datsun 200SX | 119(CA) | A3 | FI |
| 25 | VW Rabbit | 97 | M5 | FI |
| 25 | VW Scirocco | 97 | M5 | FI |
| 24 | Chev. Monza | 151 | A3 | 2 |
| 24 | Dodge Omni/ DeTomaso | 105 | A3 | 2 |
| 24 | Mazda 626 | 120(CA) | A3 | 2 |
| 24 | Mazda 626 | 120(CA) | M5 | 2 |
| 24 | Mazda 626 | 120(CA) | M4 | 2 |
| 24 | Olds. Starfire | 151 | A3 | 2 |
| 24 | Plymouth Horizon/ Turismo | 105 | A3 | 2 |
| 24 | Pontiac Sunbird | 151 | A3 | 2 |
| 24 | VW Rabbit | 97 | M4 | FI |
| 24 | VW Scirocco | 97 | M4 | FI |
| 23 | Dodge Omni/De Tomaso | 105 | M4 | 2 |
| 23 | Ford Mustang | 140 | M4 | 2 |
| 23 | Mercury Capri | 140 | M4 | 2 |
| 23 | Plymouth Horizon/ Turismo | 105 | M4 | 2 |
| 23 | Toyota Celica | 134 | M4 | 2 |
| 23 | Toyota Corona | 134 | M4 | 2 |
| 23 | VW Dasher | 97 | M4 | FI |
| 23 | VW Rabbit | 97 | A3 | FI |
| 23 | VW Scirocco | 97 | A3 | FI |
| 22 | AMC Spirit | 151 | M4 | 2 |
| 22 | Audi 4000 | 97 | M4 | FI |
| 22 | Chev. Monza | 151 | M4 | 2 |
| 22 | Datsun 810 | 146(CA) | M5 | FI |
| 22 | Dodge Challenger | 156 | A3 | 2 |
| 22 | Fiat Brava | 122 | M5 | 2 |
| 22 | Ford Mustang | 140 | A3 | 2 |
| 22 | Mercury Capri | 140 | A3 | 2 |
| 22 | Olds. Starfire | 151 | M4 | 2 |
| 22 | Plymouth Sapporo | 156 | A3 | 2 |

See footnote at end of table.

[Fuel system: Number of barrels, or fuel injection]

| Est. MPG | | Engine CID | Trans-mission | Fuel system |
|---|---|---|---|---|
| | SUBCOMPACT—Con. | | | |
| 22 | Pontiac Sunbird | 151 | M4 | 2 |
| 22 | VW Dasher | 97 | A3 | FI |
| 21 | Datsun 280ZX 2+2 | 168 | M5 | FI |
| 21 | Datsun 810 | 146 | M4 | FI |
| 21 | Datsun 810 | 146(CA) | A3 | FI |
| 21 | Datsun 810 | 146 | A3 | FI |
| 21 | Datsun 810 | 146(CA) | M4 | FI |
| 21 | Datsun 810 | 146 | M5 | FI |
| 21 | Dodge Challenger | 156 | M5 | 2 |
| 21 | Ford Mustang | 200 | M4 | 1 |
| 21 | Mercury Capri | 200 | M4 | 1 |
| 21 | Plymouth Sapporo | 156 | M5 | 2 |
| 21 | Toyota Celica | 134 | M5 | 2 |
| 21 | Toyota Celica Supra | 156(CA) | A4 | FI |
| 21 | Toyota Corona | 134 | M5 | 2 |
| 21 | Toyota Cressida | 156(CA) | A4 | FI |
| 20 | AMC Spirit | 151 | A3 | 2 |
| 20 | Chevrolet Camaro | 229 | M3 | 2 |
| 20 | Datsun 280ZX 2+2 | 168(CA) | M5 | FI |
| 20 | Datsun 280ZX 2+2 | 168 | A3 | FI |
| 20 | Fiat Brava | 122 | A3 | 2 |
| 20 | Ford Mustang | 200 | A3 | 1 |
| 20 | Mercury Capri | 200 | A3 | 1 |
| 20 | Pontiac Firebird | 231 | A3 | 2 |
| 20 | Pontiac Sunbird | 231 | A3 | 2 |
| 20 | Toyota Celica | 134 | A3 | 2 |
| 20 | Toyota Corona | 134 | A3 | 2 |
| 19 | Buick Skyhawk | 231 | A3 | 2 |
| 19 | Chevrolet Camaro | 229 | A3 | 2 |
| 19 | Chevrolet Monza | 231 | A3 | 2 |
| 19 | Datsun 280ZX 2+2 | 168 | A3 | FI |
| 19 | Olds Starfire | 231 | A3 | 2 |
| 19 | Toyota Celica Supra | 156(CA) | M5 | FI |
| 18 | AMC Spirit | 258 | M4 | 2 |
| 18 | AMC Spirit | 258 | A3 | 2 |
| 18 | Ford Mustang | 225 | A3 | 2 |
| 18 | Mercury Capri | 225 | A3 | 2 |
| 17 | Chevrolet Camaro | 305 | A3 | 4 |
| 16 | Pontiac Firebird | 301 | A3 | 4 |
| 15 | Buick Skyhawk | 231 | M4 | 2 |
| 15 | Chevrolet Monza | 231 | M4 | 2 |
| 15 | Olds. Starfire | 231 | M4 | 2 |
| 15 | Pontiac Sunbird | 231 | M4 | 2 |
| 14 | Chevrolet Camaro | 350 | A3 | 4 |
| 14 | Pont. Firebird Turbo | 301 | A3 | 4 |
| | COMPACTS | | | |
| 25 | Fiat Strada | 91 | M5 | 2 |
| 24 | Buick Skyhawk | 151 | M4 | 2 |
| 24 | Fiat Strada | 91 | A3 | 2 |
| 24 | Olds. Omega | 151 | M4 | 2 |
| 22 | AMC Concord | 151 | M4 | 2 |
| 22 | Buick Skyhawk | 151 | A3 | 2 |
| 22 | Olds. Omega | 151 | A3 | 2 |
| 20 | AMC Concord | 151 | A3 | 2 |
| 20 | Buick Skylark | 173 | A3 | 2 |
| 20 | Buick Skylark | 173 | M4 | 2 |
| 20 | Olds. Omega | 173 | A3 | 2 |
| 20 | Olds. Omega | 173 | M4 | 2 |
| 19 | Ford Granada | 250 | M4 | 1 |
| 19 | Mercury Monarch | 250 | M4 | 1 |
| 18 | AMC Concord | 258 | A3 | 2 |
| 18 | AMC Pacer | 258 | A3 | 2 |
| 17 | AMC Concord | 258 | M4 | 2 |
| 17 | AMC Pacer | 258 | M4 | 2 |
| 17 | Audi 5000 | 131 | A3 | FI |
| 17 | Audi 5000 | 131 | M5 | FI |
| 17 | Ford Granada | 302 | A3 | 2 |
| 17 | Ford Granada | 250 | A3 | 1 |
| 17 | Mercury Monarch | 302 | A3 | 2 |
| 17 | Mercury Monarch | 250 | A3 | 1 |
| 15 | Lincoln Versailles | 302 | A3 | 2 |
| 10 | Rolls-Royce Bentley Camargue | 412 | A3 | 2 |
| 10 | Rolls-Royce Bentley | 412 | A3 | 2 |
| | MID-SIZE CARS | | | |
| 24 | Chev. Citation | 151 | M4 | 2 |
| 24 | Pontiac Phoenix | 151 | M4 | 2 |
| 23 | Ford Fairmont | 140 | M4 | 2 |
| 23 | Mercury Zephyr | 140 | M4 | 2 |
| 22 | Chev. Citation | 151 | A3 | 2 |
| 22 | Ford Fairmont | 140 | A3 | 2 |
| 22 | Mercury Zephyr | 140 | A3 | 2 |
| 21 | Ford Fairmont | 200 | M4 | 1 |
| 21 | Mercury Zephyr | 200 | M4 | 1 |
| 21 | Pontiac Phoenix | 151 | A3 | 2 |
| 20 | Buick Century | 231 | A3 | 2 |
| 20 | Buick Regal | 231 | A3 | 2 |
| 20 | Chev. Citation | 173 | A3 | 2 |
| 20 | Chev. Citation | 173 | M4 | 2 |
| 20 | Chev. Malibu | 229 | M3 | 2 |
| 20 | Ford Fairmont | 200 | A3 | 1 |
| 20 | Mercury Zephyr | 200 | A3 | 1 |
| 20 | Olds. Cutlass | 231 | A3 | 2 |
| 20 | Olds. Cutlass Sup | 231 | A3 | 2 |
| 20 | Pontiac Grand Prix | 231 | A3 | 2 |
| 20 | Pont. LeMans/ Grand Am | 229 | M3 | 2 |
| 20 | Pontiac Phoenix | 173 | A3 | 2 |
| 20 | Pontiac Phoenix | 173 | M4 | 2 |
| 19 | Chev. Malibu | 229 | A3 | 2 |
| 19 | Chev. Monte Carlo | 229 | A3 | 2 |
| 19 | Olds. Cutlass | 260 | A3 | 2 |
| 19 | Olds. Cutlass Sup | 260 | A3 | 2 |
| 19 | Pont. LeMans/ Grand Am | 229 | A3 | 2 |
| 18 | Buick Century Turbo | 231 | A3 | 4 |
| 18 | Buick Regal Turbo | 231 | A3 | 4 |
| 18 | Chev. Monte Carlo Turbo | 231 | A3 | 4 |
| 18 | Ford Fairmont | 255 | A3 | 2 |
| 18 | Ford T-Bird | 255 | A3 | 2 |
| 18 | Mercury Cougar XR7 | 255 | A3 | 2 |
| 18 | Mercury Zephyr | 255 | A3 | 2 |
| 17 | Buick Century | 301 | A3 | 4 |
| 17 | Buick Regal | 301 | A3 | 4 |
| 17 | Chev. Malibu | 305 | A3 | 4 |
| 17 | Chev. Malibu | 267 | A3 | 2 |
| 17 | Chev. Monte Carlo | 305 | A3 | 4 |
| 17 | Chev. Monte Carlo | 267 | A3 | 2 |
| 17 | Chrys. Cordoba/300 | 225 | A3 | 1 |
| 17 | Chrysler LeBaron | 225 | A3 | 1 |
| 17 | Dodge Aspen | 225 | M3 | 1 |
| 17 | Dodge Aspen | 225 | A3 | 1 |
| 17 | Dodge Aspen | 225 | M4 | 1 |
| 17 | Dodge Diplomat | 225 | A3 | 1 |
| 17 | Dodge Mirada | 225 | A3 | 1 |
| 17 | Ford T-Bird | 302 | A3 | 2 |
| 17 | Ford T-Bird | 302 | A4 | 2 |
| 17 | Mercury Cougar XR7 | 302 | A3 | 2 |
| 17 | Mercury Cougar XR7 | 302 | A4 | 2 |
| 17 | Olds. Cutlass | 305 | A3 | 4 |
| 17 | Olds. Cutlass Sup | 305 | A3 | 4 |
| 17 | Olds. Toronado | 307 | A3 | 4 |
| 17 | Plymouth Volare | 225 | M3 | 1 |
| 17 | Plymouth Volare | 225 | A3 | 1 |
| 17 | Plymouth Volare | 225 | M4 | 1 |
| 17 | Pont. Grand Prix | 301 | A3 | 4 |
| 17 | Pont. LeMans/ Grand Am | 301 | A3 | 4 |
| 16 | Buick Riviera Turbo | 231 | A3 | 4 |
| 15 | Buick Riviera | 350 | A3 | 4 |
| 15 | Chrys. Cordoba/300 | 318 | A3 | 2 |
| 15 | Chrysler LeBaron | 318 | A3 | 2 |
| 15 | Dodge Aspen | 318 | A3 | 2 |
| 15 | Dodge Diplomat | 318 | A3 | 2 |
| 15 | Dodge Mirada | 318 | A3 | 2 |
| 15 | Olds. Cutlass Sup | 350 | A3 | 4 |
| 15 | Olds. Toronado | 350 | A3 | 4 |
| 15 | Plymouth Volare | 318 | A3 | 2 |
| 14 | Cadillac Eldorado | 368 | A3 | FI |
| 14 | Cadillac Seville | 368 | A3 | FI |
| 14 | Chevrolet Malibu | 350 | A3 | 4 |

Source: EPA 1980 Gas Mileage Guide.

*In addition to the lower collision repair expenses, many domestic autos cost less to maintain than a similar size import.* Using two domestic and two imported models, the Department of Transportation compared the cost of four repair/maintenance procedures in the Washington, D.C. area:

[Costs, including parts (P) and labor (L)]

| Repair | Datsun B–210 | Toyota Corolla | Chevrolet Chevette | Dodge Omni |
|---|---|---|---|---|
| Tune-up (4 cylinder electronic ignition) | $65 ($17P/$48L) | $60 ($16P/$44L) | $45 ($22P/$23L) | $80 ($30P/$50L) |
| Exhaust system (complete) | $85 ($65P/$20L) | $100 ($56P/$44L) | $150 ($100P/$50L) | $125 ($75P/$50L) |
| Brake job (complete: front disc, rear drum) | $145 ($85P/$60L) | $100 ($34P/$66L) | $204 ($70P/$134L) | $176 ($76P/$100L) |
| Routine checkups: | | | | |
| 1st | $170 | $105 | $40 | $45 |
| 2d | $225 | $160 | $40 | $175 |
| 1979 10-yr scheduled maintenance costs (using procedures stated in EPA certification process, parts and labor) | $1, 424 | $1, 391 | $1, 221 | $980 |

All of these prices are for 1980 models. The costs of scheduled maintenance are difficult to compare because more checks are performed on the imported models. The 10-year maintenance costs are based upon the recommendations of the owner's manuals.

### E. Consumer Experience With Japanese Autos Will Mean Difficulties for U.S. Companies in Reducing Import Share of Market

During the auto hearings held by the Subcommittee on Trade, Mr. F. G. Secrest, executive vice president of the Ford Motor Co. stated:

> Today, in small-sporty and compact market segments, the fuel economy of American cars is already competitive with the Japanese products. For example, Ford's Mustang and Fairmont mileage ratings are equal to Toyota's Celica and Corona. We're not yet fully competitive in the booming subcompact class, but in a few months Ford will resolve part of this problem—rather dramatically, we believe—with our all-new front-wheel-drive Escort and Lynx models. By 1985 we expect Ford's U.S. product lineup to be generally similar to the highly fuel-efficient offerings we have now in Europe. In the meantime, however, the Japanese will continue to have some degree of advantage in terms of product mix.[8]

However, what Mr. Secrest fails to mention is that just because U.S.-built autos are small and fuel efficient, there is no guarantee that they are also well constructed or that U.S. consumers will switch back to a U.S. auto after owning an imported auto. Not only is trend loyalty a factor, but the image that the U.S. autos are not quality automobiles is still going to be in the minds of millions of U.S. consumers.

*Detroit's failure to respond to imports.*—First, there has been an historical failure of the United States to produce quality small autos equal to imported autos. When imports began gaining a relatively

[8] Testimony of F. G. Secrest, executive vice president, environmental, safety and industry affairs, Ford Motor Co., before the Subcommittee on Trade, Committee on Ways and Means, Mar. 7, 1980.

large share of the U.S. market (over 600,000 were sold in 1959, representing 10 percent of the U.S. market), Detroit introduced the answer to the small import: the Corvair by GM, the Falcon by Ford, and the Valiant by Chrysler. The fate of the rear-engined Corvair is legend (cf. Ralph Nader's Unsafe at Any Speed), the Falcon grew into a larger car, and the Valiant died a quiet death.

During the 1970's Detroit again introduced its answer to imports: the Ford Pinto/Bobcat and the Maverick, the General Motors Vega/Astre, and the Chrysler Aspen/Volare. Many of the Vegas' engines failed after only 30,000 to 40,000 miles of use because of overheating. The early Pinto engines had underhood fire problems, while many of the later engines have failed because of premature camshaft wear or "piston scuffing." The Chrysler Aspen/Volare has been classified as "among one of the most recalled cars ever," mainly on account of faulty brakes and stalling engines.[9] In addition, Chrysler has agreed to recall 1976/77 Aspens in order to repair fenders that rusted after 2 years of use.[10]

Did these "import fighters" fail because the U.S. automakers did not have the technology available to produce a quality built, reliable small car or because they simply did not make the effort to compete seriously in the U.S. small car market? A quote from Robert R. Reilly, executive director for business strategy development for Ford Motor Co. may provide part of the answer: "Traditionally, small cars have not been profitable products . . . In simple terms, the cost-revenue structure hasn't been right." [11]

U.S. manufacturers believed that the investment in equipment needed to produce a small car simply would not guarantee the return that a similar amount invested in equipment for a large car would return. The rationale was that they could not load a small car with the high return options such as power steering, brakes, windows; large V–8 engines; air conditioning; and automatic transmissions. It appears their strategy could be stated as follows:

> We know we will lose the small market to imports, so what? Let them hold 15 percent of the U.S. market because these are low-profit models. We will produce a few small cars, but won't spend much to develop them, and maybe we can still make a little money on small cars.

Even when U.S. producers had the opportunity to drive out Japanese imports, they appeared to be more interested in increasing their profit margin on small cars than in increasing their market share.

For example, in 1978 the yen appreciated dramatically causing Japanese auto dollar prices to increase. Instead of capturing the market away from the suddenly more expensive Japanese cars, Detroit's prices floated up right behind the price of Japanese imports. Consumer Reports discusses this phenomena.[12]

> As the dollar cheapened in relation to the Japanese yen, Japanese subcompacts became expensive for artificial reasons. The quickly increasing prices of Japanese cars did not reflect increases in manufacturing costs or added quality so much

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[9] "Chrysler's New Models Get 'Dependable' Names," Wall Street Journal, Apr. 7, 1980, p. 10.

[10] "Chrysler Will Fix Rusted Fenders for $45 million," by Peter Behr, Washington Post, May 12. 1980.

[11] "The U.S. Auto Industry—Under Foreign Siege," National Journal, Mar. 15, 1980, p. 427.

[12] Consumer Reports, April 1980, p. 219.

as they did a change in the relative value of pieces of paper.

Assume that, four years ago, a Japanese maker was charging 900,000 yen for a subcompact in Japan. Since one dollar was then worth about 300 yen, the price of that subcompact on the American market was $3000. By 1978, however, the dollar had dropped in value until it was worth only 200 yen. If the Japanese manufacturer still charged 900,00 yen, that translated into $4,500 in the American showroom.

Freed from the restraints of Japanese competition, American manufacturers had two choices. They could keep their own price increases moderate, undersell the Japanese by more than $1000, offer huge bargains to the car-buying public, and try to regain at least some of the business captured by the imports in previous years. Or they could capitalize on the absence of price competition to maximize profits now, without regard for long-range market share—and, of course, add to inflation here in the U.S.

The numbers show Detroit's choice. When the 1978 *Chevrolet Chevette* was introduced in September 1977, it carried a base price of $3,354. During the year, GM raised the price of the *Chevette* twice. By the time the 1979 models came out, the price of the *Chevette* had increased 13 percent.

It was the same with the *Plymouth Horizon.* In November 1977, a four-door 1978 *Horizon* carried a base price of $3,706. A year later, a *Horizon* was up about 11 percent; now, a 1980 *Horizon* is up an additional 24 percent.

Thus, Detroit priced its small cars as if it were paying its bills in yen instead of dollars. (It is ironic that the auto industry, which once chose not to undersell the Japanese and therefore regain the market share lost to imports, now wants to get that market share back by restricting foreign-car sales. . . .).

*Detroit's failure to address energy crisis.*—In addition to quality and pricing problems, Detroit failed to prepare for serious changes in energy supply and price. They gambled on normalcy—and the whole Nation lost. Even after the initial increases and shortages in 1973–74, only General Motors began taking the energy crisis seriously. Because GM had the capital to play both sides—designs for fuel shortages and fuel gluts—it could "hedge" the future. In addition, if the American consumer did not like its new 1977 down-sized, standard models—Chevrolet, Buick, Pontiac, Oldsmobile, and Cadillac—GM had the resources to persuade—advertising expenditures—the public that it should purchase the new models.

The only two small, fuel-efficient automobiles that could even remotely be competitive with Japanese imports are the GM Chevette, introduced in late 1975 and the Chrysler Omni/Horizon, introduced in 1977. But there is little comparison between the design or quality levels of these two models to the Toyota Corolla or Datsun 210. (See Consumer Reports Frequency-of-Repair section.) The basic mechanical design of the Omni/Horizon is competitive with the Japanese/West German subcompacts, but according to most analysts, the quality is not.

*Japanese quality.*—A quote from a recent magazine article might help to explain why the Japanese small cars have been so successful in the U.S. market:

> No Japanese motorist would tolerate the number of breakdowns Europeans and American car owners put up with. As drivers, the Japanese make heavy demands on their brakes and tyres, but relatively little on the car's suspension and steering, for, in Japan, there are hardly any of the fast twisting roads which in Europe strain a car's roadholding and handling capabilities. What roads there are in Japan are either in cities (with traffic lights practically every 300 yards) or are fairly new intercity dual carriageways. Driving therefore tends to be in straight lines—as in the United States. For good reasons, then, the vast majority of Japanese cars resemble American cars, only scaled down to suit the more cramped urban conditions.

It was inevitable that Americans would take to Japanese cars. They have all the underlying strengths of their own vehicles (rugged simplicity, lightly stressed engines and so on) but with an even better quality of construction.[13]

Before the Japanese began their export drive in the late 1960's, the only real competition in the U.S. auto market came from Europe. Since the Japanese designed their cars to meet the reliability and quality standards of the Japanese consumer, it had already produced a car that exceeded what the U.S. consumer had come to expect. Once the Japanese auto manufacturers surmounted the image that Japanese autos were unreliable and "cheaply built"—a reputation the Japanese earned right after World War II concerning many of their exports—the European share of the U.S. import market began decreasing and the Japanese share began increasing.

*Reasons for quality gap.*—To the extent there is a "real" quality difference, even when America really wants to make a small auto, what is the cause of it?

The letters to the subcommittee tended to blame auto workers for shoddiness and lack of pride in workmanship. But this is an uncharitable and simplistic accusation.

Basic engineering by Detroit's designers is part of the problem. See, for example letters 6 and 8 in appendix F.

The method of assembly is part of the problem. The Japanese are world leaders in the use of robots in the assembly of autos. Each year, the United States produces about 2,000 industrial robots, about half of which are used in the auto industry. Japan, on the other hand, produces about 13,000 robots, of which half are used in auto assembly.[14] While the use of such machines obviously helps hold down labor costs and improve productivity, their real advantage may be the fact that they are consistently able to perform a quality job (whereas because of the tedium, and heavy, repetitive work involved, humans are less capable of consistent performance). If so, a substantial American increase in the use of robots could lead to a major increase in quality, and free workers to perform more quality control checks. As Detroit retools and modernizes, the improvements in the assembly process may automatically mean a major increase in quality of product.

Are there problems in U.S. labor-management relations which contribute to a lack of the type of quality control achieved by Japan? For example, in Japan, a very innovative practice was introduced in the early 1960's—the quality control circle. The groups are now used by almost all large Japanese manufacturers. QC circles are small groups of workers doing similar or related types of work who meet regularly, usually once a week after working hours) to "identify, analyze, and solve product/quality problems that arise during the week."[15]

These groups are strictly voluntary, but few workers turn down the chance to become a member. Not only are they paid overtime for attending and participating in the QC circles, but they receive the

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[13] Valery Nicholas, "The Age of Maturity," World Motors, Mar. 10, 1979.

[14] Written submission to the subcommittee from Ford Motor Co. available in subcommittee's auto hearings.

[15] "Made-in-Japan—Quality Control Circles," by Robert Cole, "Across the Board," November 1979. The issue of Japanese quality and quality control is discussed at length in the subcommittee's hearing on Semiconductors, held Apr. 28, 1980, in Farmingdale, Long Island. Also, see the subcommittee's hearing on "Competitive Factors Influencing World Trade in Semiconductors," San Jose, Calif., Nov. 30, 1979, p. 83.

self-satisfaction that management is willing to *listen* to their suggestions. Many times a member is asked by the circle's group leader to collect some line of information concerning the work area and present it to the group during the next session for discussion.

In the United States, on the other hand, there is a common complaint that management does not work with labor to produce quality. For example, an anonymous autoworker, John Jones, recently wrote a thought provoking article for the New York Times (Apr. 9, 1980):

Assembly-line jobs are repetitive, dreary, boring and draining. They require little or no initiative and allow for little or no creativity. Yet I have always tried to do my best, and so have most of the workers I have known in 12 years of working in various blue collar jobs. I do my best because there is more self-respect in doing even this type of job well than in doing it poorly, and because otherwise it would be impossible to get through the day—a day that sometimes stretches for 10 hours—because the boredom would be so intense. But there are limits.

I was working on a sub-assembly line in an auto-parts plant. We were expected to produce 330 fire-wall assemblies per hour—five and a half per minute. My job consisted of several motions: I put two separate pieces of metal in a press, then pushed buttons to close it and weld the metal together. One had to become as machine-like as possible, repeating each motion exactly. I could, and often did, do the job perfectly without looking. The only way to talk to me over the noise was to yell sentence fragments in my ear every few seconds when I briefly leaned away from the machine.

Though inspection wasn't part of my job, I picked out and threw aside defective pieces—until one day the foreman poured a box of the scrap I'd thrown aside into my bin and told me to use it. On another occasion, in a different auto plant, a foreman told me that he was getting in trouble for scrapping too many pieces—not that they weren't scrap, he realized.

In that same plant, on the main assembly line, I tighten bolts that hold a key part in place. Once the air wrench wasn't strong enough to do the job. The bolts weren't loose to the touch, which was the way the inspector down the line checked them, but they weren't tight enough to withstand the vibrations that they would take with the motor running. I complained to the foreman but the wrench wasn't changed and a day's worth of cars had bolts that looked tight but weren't.

In all the shops I've worked, there are signs on the walls about quality but the foremen concern themselves with what they know will get them promoted or chewed out—how many X's are being produced, at what cost? Corporate policy is not found in fancy phrases from executive suites about quality of products and concern for human life and injury; rather, it is found in how the shop floor is run and what affects the profit picture.

Recently, my company rented some foreign cars and brought in small groups of workers to compare them with the cars we make. There was a questionnaire distributed with the usual requests for suggestions (rumor had it that the most popular was "slow down the line"). We were also asked why we thought Japanese workers took more pride in their work. The company's apparent purpose was to encourage us to take more pride in our work.

I asked the supervisor running the comparison, "Isn't 90 percent of the difference between their cars and ours not better workmanship but rather better engineering and design and better-quality materials?"

"Yes," he agreed.

Knowing a case where the same car is made in two countries, I asked him, "Aren't the American-made VW Rabbits just as good as the German-made Rabbits?"

"No," he replied. "The American Rabbits are better."

If this is so, then American workers haven't lost pride in their work; those who control the workplace have.

There appears to be some organized concern about the quality issue and the role of foremen. For example, the April 21, 1980, Automotive News reported that Ken Bannon, UAW vice president and head of

the union's Ford Department, would raise the issue of worker say in quality control at an up-coming union convention (although Ford seems to be maintaining that there is no problem).

Bannon said the union wants to remove the "veto power" from the company supervisors in favor of the UAW inspector or a union team. He said currently the company supervisor can override the inspector and will sometimes pass cars that should not leave the factory, especially those that are selling well.

According to Bannon, Ford's 20 percent return on investment (ROI) target influences too many plant-level decisions.

"Supervisors are part of that 20 percent," he said. "They have an efficiency rating they must maintain and they say OK, let it go, let it go, let it go, pass it, pass it, even though our inspectors have red-tagged it."

He said the supervisor may order the car to the repair bay or ship it to the dealer for fixing.

Right now the small cars are selling well and Bannon said, "If they can sell all those small cars they build, they'll just push them out."

Ford said a line supervisor cannot actually override an inspector because the final determination concerning engineering specifications or a car is up to the quality control supervisor. A Ford spokesman said any bone of contention between the line supervisor and the union inspector would be brought to the quality control supervisor for final judgment.

The way that management and workers interact obviously can make a tremendous difference in the quality of the final product. Appendix G contains portions of a June 1, 1980 Washington Post article which discusses the difference in working conditions between two plants—one successful GM operation and one Ford shop in the process of being closed.

## F. Problems for the Future

*As a result of the quality issue, both perceived and real, even if U.S. manufacturers have the capacity by 1983–84 to meet the U.S. demand for newly designed, fuel-efficient autos, they will still have an image problem vis-a-vis the Japanese.* When comparing imports (especially Japanese imports) with domestically built cars, millions of U.S. consumers view the import as more fuel-efficient, higher in quality, more reliable, and competitive in price compared to the domestic models. Although the above four factors may not necessarily be true now or in 1983, the U.S. automakers must be able to convince the consumer of superior quality.[16] If they cannot, the import share of the U.S. market will remain fairly constant, even though U.S. manufacturers have the capacity to fill the small, fuel-efficient auto demand. By 1983, many buyers of imported automobiles will have already purchased their second or third imported auto. Assuming that the majority of these buyers have been satisfied with their previous auto or autos, the probability of U.S. manufacturers switching the consumer to U.S.-built products may be extremely slim.

It may be that there is a great deal of work already being done to improve auto quality and worker-management cooperation. For ex-

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[16] For example, quality is essential for the survival of Chrysler.

In the Treasury Department analysis of the feasibility of proceeding with the Chrysler loan guarantee, the GAO/Treasury staff placed great importance on the ability of Chrysler to market all of its production of K-cars. The report notes that the quality of those cars "appears critical to customer acceptance." New assembly equipment at the K-car plants will help improve the quality of the product, and the company "has taken seriously" its reputation for producing "less than the highest vehicle quality in the middle to late seventies," and intends to correct this image. (Quotes from Bill Neikirk, "Chrysler front-wheel-drive K-car rated 'excellent' by U.S. officials." Chicago Tribune, May 15, 1980, sec. 6, p. 1.)

ample, the following items appeared in a Washington Post article of April 27, 1980 (p. G–6) :

> A look at plant-level attempts to improve productivity shows some success stories—while challenging claims that a general decline in the American work ethic has occurred, several conference participants said.
>
> An example is General Motors, said D. L. "Dutch" Landen, director of GM's organizational research and development. In 1971, the company and the United Auto Workers began working together on improving the "quality of work life" in GM assembly plants. The year before, there was only one agreement between a local union and a local GM plant in force when the national GM/U.A.W. labor agreement was signed—a measure of labor-management antagonism at the local level.
>
> Today, there are more than 100 "quality circles" at GM plants—committees of employes who meet with management's support to review operating problems and morale issues, Landen said. The results are concrete, he said : Better quality of workmanship, better morale, less absenteeism, more ideas for assembly line improvements. In a word, better productivity, he said.

While a great deal of effort and progress may be underway on improving the quality of American auto products, the perception is that a great deal more remains to be done.

*The subcommittee hopes that the Nation's autoworkers and manufacturers can redouble their efforts to work together to make a quality product. We suspect that a return of the reputation of American auto quality would do more to reduce the unemployment and profit problems created by imports, than would any action by this subcommittee.*

*Unless there is a restoration of the reputation of quality, the American industry may be in permanent trouble.*

## VIII. Reasons for Past Failures

The major issue is how and when the auto industry can build the type of highly fuel-efficient, quality car that people want to buy.

But it may be instructive to look at how the Nation's major industry has developed such serious problems; perhaps an understanding of how we got to the present predicament can help guide us better in the future. The current problems of the U.S. auto industry cannot be attributed solely to poor judgment on the part of the industry itself.

### A. Corporate Responsibility

Nevertheless the major cause of its dilemma, the inability to produce enough small, fuel-efficient autos to meet U.S. consumer demand, has to rest upon earlier management decisions. There is no reason that Detroit should have not seen "the writing on the wall" after the 1973–74 gasoline price increases. However, as Chairman Vanik stated during the March 7 auto hearing, "Detroit wanted big cars because big cars meant big bucks." Detroit didn't mind losing 15 percent of the total U.S. auto market because this segment represented mostly small cars which had a low profit margin. Detroit's "efforts" during the 1960's and 1970's showed the U.S. public that it was willing to produce a small car, but the public really should not take the small car seriously. Not only have the Japanese manufacturers taken advantage of the U.S. automakers strategy not to develop a small, fuel-efficient auto, but they have proved that "small cars can mean big bucks" if you provide a reliable, quality-built product.

### B. Public Policy—and the Lack Thereof

The executive and legislative branches of the Government must also carry some of the blame for the current U.S. auto manufacturers' condition.

*Cheap energy/good highway policy.*—American policies concerning transportation have historically favored large autos to the detriment of mass transit and, indirectly, fuel-efficient autos. Few States penalize the use of large cars; and in the States that do, the increased taxes are relatively low. For example, 23 of the 50 States base some of the registration fees of automobiles upon the weight of the vehicle.[1] However, in most of these States, the difference between the fee for the lightest auto and the heaviest auto is less than $30. Only four States levy a fee of over $30 difference between the lightest and heaviest auto. An additional $30 per year can hardly be considered an incentive to purchase a smaller car.

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[1] Based upon unpublished data from the U.S. Department of Transportation: "Summary of State Motor Vehicle Registration Fee Schedules."



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While the retail price of gasoline in Europe last autumn ranged from a low of $2.09 per U.S. gallon in Norway—primarily because of the North Sea oil discovery—to a high of $3.08 per gallon in Greece, the average cost of a gallon of premium grade gasoline at the end of November 1979 in the United States was $1.06.[2] A comparison of retail gasoline prices on a worldwide basis is shown on the following table:

GASOLINE PRICE SUMMARY BY NATION: RETAIL, TAXES, AND EX-TAX

[In U.S. dollars per U.S. gallon. November 1979]

| Nation | Regular grade | | | Premium grade | | |
|---|---|---|---|---|---|---|
| | Retail | Taxes | Ex-tax | Retail | Taxes | Ex-tax |
| Australia | $1.17 | $0.21 | $0.96 | $1.21 | $0.21 | $1.00 |
| Belgium | 2.70 | 1.52 | 1.18 | 2.75 | 1.53 | 1.23 |
| Brazil | 2.69 | 1.08 | 1.61 | 4.13 | 1.65 | 2.48 |
| Canada | .75 | .23 | .53 | .83 | .23 | .60 |
| Egypt | .68 | 0 | .68 | .91 | 0 | .91 |
| France | 2.59 | 1.95 | .64 | 2.78 | 2.09 | .69 |
| Greece | 2.67 | 1.33 | 1.33 | 3.08 | 1.46 | 1.62 |
| Iran | .54 | .32 | .22 | .60 | .32 | .27 |
| Ireland | 2.15 | .99 | 1.16 | 2.19 | .99 | 1.20 |
| Italy | 2.83 | 2.12 | .71 | 3.06 | 2.30 | .77 |
| Japan | 2.19 | .83 | 1.36 | 2.35 | .83 | 1.52 |
| Lebanon | .93 | .37 | .56 | 1.16 | .46 | .70 |
| Luxembourg | 2.12 | .97 | 1.15 | 2.16 | 1.05 | 1.11 |
| Mexico | .47 | .15 | .31 | .67 | .22 | .44 |
| Netherlands | 2.52 | 1.51 | 1.01 | 2.59 | 1.55 | 1.04 |
| New Zealand | 1.53 | .49 | 1.05 | 1.65 | .49 | 1.16 |
| Norway | 2.09 | .35 | 1.74 | 2.12 | .35 | 1.77 |
| Philippines | 1.46 | .73 | .73 | 1.56 | .78 | .78 |
| Saudi Arabia | .21 | 0 | .21 | .21 | 0 | .21 |
| Spain | 2.32 | .38 | 1.93 | 2.90 | .65 | 2.25 |
| Switzerland | 2.82 | 1.42 | 1.40 | 2.84 | 1.42 | 1.42 |
| United Kingdom | 2.12 | .97 | 1.15 | 2.19 | .97 | 1.23 |
| United States | .99 | .14 | .86 | 1.06 | .14 | .92 |
| Venezuela | .18 | 0 | .18 | .31 | .13 | .18 |
| West Germany | 2.29 | 0.91 | 1.38 | 2.38 | .96 | 1.42 |

Source: Lundberg Letter, Dec. 14, 1979, vol. VII, No. 7, p. 2.

Some members of the subcommittee visited the Republic of Korea and Japan during an April 1980 trade mission and noted that the price of gasoline was about $4.50 and $2.60 a gallon, respectively.

Compared with the average U.S. retail price of $0.99 per gallon—regular—the median price of gasoline was $2.12 per gallon for the 25 countries listed on the previous table. The median tax was $0.73 per gallon for all 25 countries, compared to $0.14 for the United States. Comparing only the countries of Western Europe and Japan, the gap in both retail price and tax widens even more:

| | Regular | | Premium | |
|---|---|---|---|---|
| | Retail | Tax | Retail | Tax |
| United States | $0.99 | $0.14 | $1.06 | $0.14 |
| Western Europe [1] | 2.42 | 1.16 | 2.67 | 1.24 |
| Japan | 2.19 | .83 | 2.35 | [2] .83 |

[1] Median for 14 European countries.
[2] Lundberg Letter, Dec. 14, 1979.

*Our energy, tax, and highway building programs all favored public reliance on autos, regardless of their fuel efficiency, or lack thereof.*

[2] "The Lundberg Letter," vol. VII, No. 7, Dec. 14, 1979.

*Regulatory burdens.*—The domstic industry has frequently been critical of the burden of Government regulations on the industry. It is worth examining briefly the issue of safety and environmental controls and mileage standards as a possible burden on the industry.

The U.S. Government has, since the early 1970's, been heavily involved in regulating the domestic auto industry. These regulations have been concerned primarily with emission controls, fuel-efficiency standards, safety, and resistance to body damage caused by accidents. The Bureau of Labor Statistics has estimated that Federal requirements on the average 1978 automobile increased its retail price to the initial customer about $665.87. For a complete breakdown of the costs for each model year during the 1968 through 1978 period, see the following table:

INCREASE IN RETAIL PRICE OF AUTOMOBILES DUE TO FEDERAL REQUIREMENTS, 1968–78

| Model year and action | Initial retail price | Year total | Total adjusted for inflation [1] |
|---|---|---|---|
| 1968: | | | |
| Seat and shoulder belt installations | $11.51 | | |
| HEW standards for exhaust emissions systems | 16.00 | $27.51 | $47.84 |
| 1968–69: | | | |
| Windshield defrosting and defogging systems | .70 | | |
| Windshield wiping and washing systems | 1.25 | | |
| Door latches and hinge systems | .55 | | |
| Lamps, reflective devices and associated equipment | 6.30 | 8.80 | 14.53 |
| 1969: Head restraints | 16.65 | 16.65 | 27.48 |
| 1970: | | | |
| Lamps, reflective devices and associated equipment | 4.00 | | |
| Standards for exhaust emission systems | 5.50 | 9.50 | 14.77 |
| 1968–70: | | | |
| Theft protection (steering, transmission and ignition locking and buzzing system) | 7.85 | | |
| Occupant protection in interior impact (glove box door remains closed on impact) | .35 | 8.20 | 12.75 |
| 1971: Fuel evaporative systems | 19.00 | 19.00 | 28.33 |
| 1972: | | | |
| Improved exhaust emissions standards required by Clean Air Act | 6.00 | | |
| Warranty changes resulting from Federal requirement that all exhaust emissions systems be warranted for 5 yr or 50,000 miles | 1.00 | | |
| Voluntary added safety features in anticipation of future safety requirements | 2.00 | | |
| Seat belt warning system and locking device on reactors | 20.25 | 29.25 | 42.37 |
| 1972–73: Exterior protection (standard No. 215) | 69.90 | 69.90 | 95.29 |
| 1973: | | | |
| Location, identification and illumination of controls improvements | .60 | | |
| Reduced flammability of interior materials | 5.80 | 6.40 | 8.72 |
| 1969–73: Improved side-door strength | 15.30 | 15.30 | 20.85 |
| 1974: | | | |
| Interlock system and other changes to meet Federal safety requirements | 107.60 | | |
| Improved exhaust emissions systems to comply with the Federal Clean Air Act | 1.40 | 109.00 | 133.50 |
| 1975: | | | |
| Additional safety features associated with Federal motor vehicle safety standards Nos. 105, 208, and 216 | 10.70 | | |
| Installation of catalytic converter | 119.20 | 129.90 | 146.66 |
| 1975–76: Removal of interlock system (quality decrease) and additional installation of catalytic converters net effects (October 1976) | 18.00 | | |
| 1976: | | | |
| FMVSS No. 105 hydraulic brake system | 6.50 | | |
| FMVSS No. 215 improved bumpers | 4.80 | | |
| FMVSS No. 301 leak resistant fuel system | 2.10 | | |
| Improved emissions control system | 7.60 | 39.00 | 41.54 |
| 1977: | | | |
| FMVSS No. 215 improved bumpers | 1.30 | | |
| FMVSS No. 219 structural changes | .95 | | |
| FMVSS No. 301 leak resistant fuel system | 4.70 | | |
| Improved emissions control system | 14.30 | 21.25 | 21.25 |
| 1978: Redesign of emissions control systems to meet HEW air quality standards | 9.99 | 9.99 | 9.99 |
| Total | 519.65 | 519.65 | 665.87 |

[1] Yearly totals are expressed in 1977 dollars by use of the consumer price index.

Source: Compiled from data supplied by the U.S. Department of Labor, Bureau of Labor Statistics.

Additional amendments have been proposed but have not yet been enacted to change the future emission standards set by the clean air law. Some of the proopsals would make the standards more stringent. In the area of mileage efficiency standards (see appendix B), an amendment to the Energy Policy and Conservation Act (EPCA) has been proposed in the Senate which would require the corporate average fuel economy (CAFE) to be increased from the current 1985 figure of 27.5 miles per gallon to 40 miles per gallon by 1995. In the House, Congressman Charles Vanik, chairman of the subcommittee, has also introduced legislation to require that the CAFE for automobiles be 40 miles per gallon by 1995. Amendments are also pending in both chambers to provide certain exemptions from CAFE for AMC and Chrysler.

The industry has frequently complained about the burdensome nature of these standards. In the case of mileage requirements, however, if it had not been for congressional action in 1975, the domestic industry would now be in much deeper trouble. The Energy Policy and Conservation Act of 1975 forced the U.S. industry into producing a more fuel-efficient auto than it otherwise would have done.

*Possible Government role in capital formation 1980–85.*—Correctly or incorrectly, the auto industry has pointed to Government regulations as creating major expenses for the industry, thus draining away capital which has been needed to redesign and retool. Federal tax policies have also been cited as discouraging modernization. Therefore, the Government is now being called upon to assist with capital formation necessary for the industry to modernize and compete in an age of growing energy shortages. The Government appears to be giving serious consideration to this problem, and it is worth discussing the issue of capital formation at this point.

As mentioned earlier in this report, the U.S. auto industry has estimated that it will need about $80 billion in the first half of the decade in order to redesign and retool its entire auto fleet. The effort being planned by the industry is perhaps the largest and most expensive peacetime capital expenditure program ever contemplated by the private sector. It will strain the resources of all involved, even that giant of corporations, General Motors.

As discussed earlier in this report, the demand of the American public for small, fuel-efficient autos and the lack of capacity of domestic manufacturers to produce enough of the type of car desired, has resulted in soaring imports and plunging sales of domestic models. In addition, even smaller domestic autos are not always selling well for a variety of factors. The result is that the profits (capital) which the domestic industry could normally count on for a major redesigning and retooling effort have evaporated, and the industry is even experiencing daily losses at the same time it is faced with unprecedented demands for new capital commitments.

Therefore, the industry will have to seek new and expensive forms of capital if it is to survive in the era of world car competition. Such capital can come from outside borrowing or possibly some form of change in governmental tax and incentive programs, and regulatory burdens.

Chrysler has already received Federal capital assistance formation in the form of a special and presumably one-time loan guarantee by the Federal Government. Despite this major credit package, it may be touch and go for Chrysler for some period, and the company has taken major steps to pare back its future size; it will no longer be producing the full range of autos, but will concentrate on the smaller models.

While GM is announcing its plans to continue with some $40 billion in new investment in the next half decade, Ford has reportedly scaled back some of its similarly ambitious plans for the future.

Where will this money come from, at a time when the flow of capital from the sale of new cars is so throttled? There is increasing discussion about the possibility of capital formation assistance from the Federal Government, either in the form of—

Eased or special loan-credit programs for those purchasing new autos;

Government tax credits for the purchase of new autos (or the retirement of old gas guzzlers); or

Adjustments in depreciation schedules.

These various proposals are of particular concern to the Ways and Means Committee. A number of proposals providing "tax incentives" to individual car purchasers have just been introduced or are being circulated for comment, and it is too early to evaluate these proposals fully. It is important, of course, that any incentive not violate international trade agreements by discriminating against foreign producers. On the other hand, Federal treasury payments to individuals buying other than domestic autos would not assist Detroit and would probably be unacceptable to the public.

In terms of corporate tax relief, it is, of course, necessary for auto companies to have profits before they are able to take advantage of Government investment incentive programs. One of the top two auto companies is reported to have up to half a billion dollars worth of investment tax credits which it is unable to use because of a lack of offsetting profits. The companies do point out, however, that it would be helpful if the investment tax credit laws could be amended to provide that the credit could be available when the new equipment is ordered (rather than placed in service), thus providing additional relief during the costly start-up phase. In a submission to the subcommittee, the Ford Motor Co. has commented on the importance of tax assistance in the early period of an investment and pointed out that the Japanese receive some advantages in this area:

> The Japanese tax law continues to provide auto companies with an extraordinary additional first year writeoff of 25 percent of the cost of machinery and equipment. When combined with normal depreciation, this allows companies such as Toyota to write off as much as 45 percent of the cost of machinery and equipment in the first year of use. Under the U.S. tax system, Ford is generally limited to writing off about 11 percent of the cost of such fixed assets in the first year, plus the investment tax credit of 10 percent.

The allowable U.S. capital recovery does tend to equalize with the Japanese recovery over the useful life of machinery, equipment and tooling primarily because of the investment tax credit. Nevertheless, in this inflationary period, the very large first-year writeoffs available

to Japanese automakers are a substantial advantage, particularly considering the enormous capital, investments to retooling for fuel-efficient products and the uncertainty of life cycles for these products as technology advances, new U.S. Federal regulations are adopted, and U.S. energy policy evolves.

The subcommittee also notes that the Treasury Department has begun a review of the depreciation schedules used in the auto industry. This study, due to be completed early next year, may result in administrative changes providing for more rapid depreciation of automaking equipment, thus concentrating tax relief on the auto industry. Firms which do not have profits, however, will not be able to use this possible tax relief immediately.

### C. Role of Consumers

Although the domestic industry's drive for maximum profits by selling large autos and little governmental action to discourage their use influenced the U.S. consumers' decisions to purchase large cars, the public cannot escape some responsibility for the industry's problem. Even after the 1973–74 oil price increase, many U.S. consumers, albeit egged on by Detroit and Madison Avenue, refused to buy smaller, more fuel efficient cars.

The consumer not only switched back to larger cars after the oil price increases, but also opted for the larger, inefficient V–8 engines, just as though the 1973–74 fuel shortages never occurred.

Throughout the 1970's, large percentages of the American people did not believe there was an energy crisis; their disbelief appears to be reflected in their continued purchase of relatively fuel inefficient autos.

The chart on page 65 depicts U.S. car production by cylinder type for 1965–79.

After reaching a peak of 1.1 million installations in 1974, 4-cylinder engine installations decreased by almost 50 percent 1 year after the gasoline crisis. Engines that displaced over 400 cubic inches increased their share of the total market 2 years after the crisis.[3]

In other words, the average American auto buyer was accustomed to the powerful V–8 engine that could reach 60 miles per hour in 10–12 seconds, pull a large trailer, and carry six people comfortably. Even when the price of gasoline increased from 37.8 cents per gallon in 1972 to almost 60 cents in 1976, the average consumer either did not care or had not received a clear message that shortages and high prices were to be permanent—not just temporary. Whether this decision was made solely by the buyer, or "helped" by auto advertising and rebates, is not clear. However, when gasoline edged toward $1 per gallon, and consumers waited in line 1 to 2 hours to fill the tank of these large autos, the large car mentality rapidly disappeared, probably forever.

Thus, it is very difficult to point a finger at one segment of the population and place the blame on that group. All three of the parties (the industry, the Government, and the consumer) must bear some responsibility for the current plight of the auto industry. All three need to get on with the business of correcting the problem.

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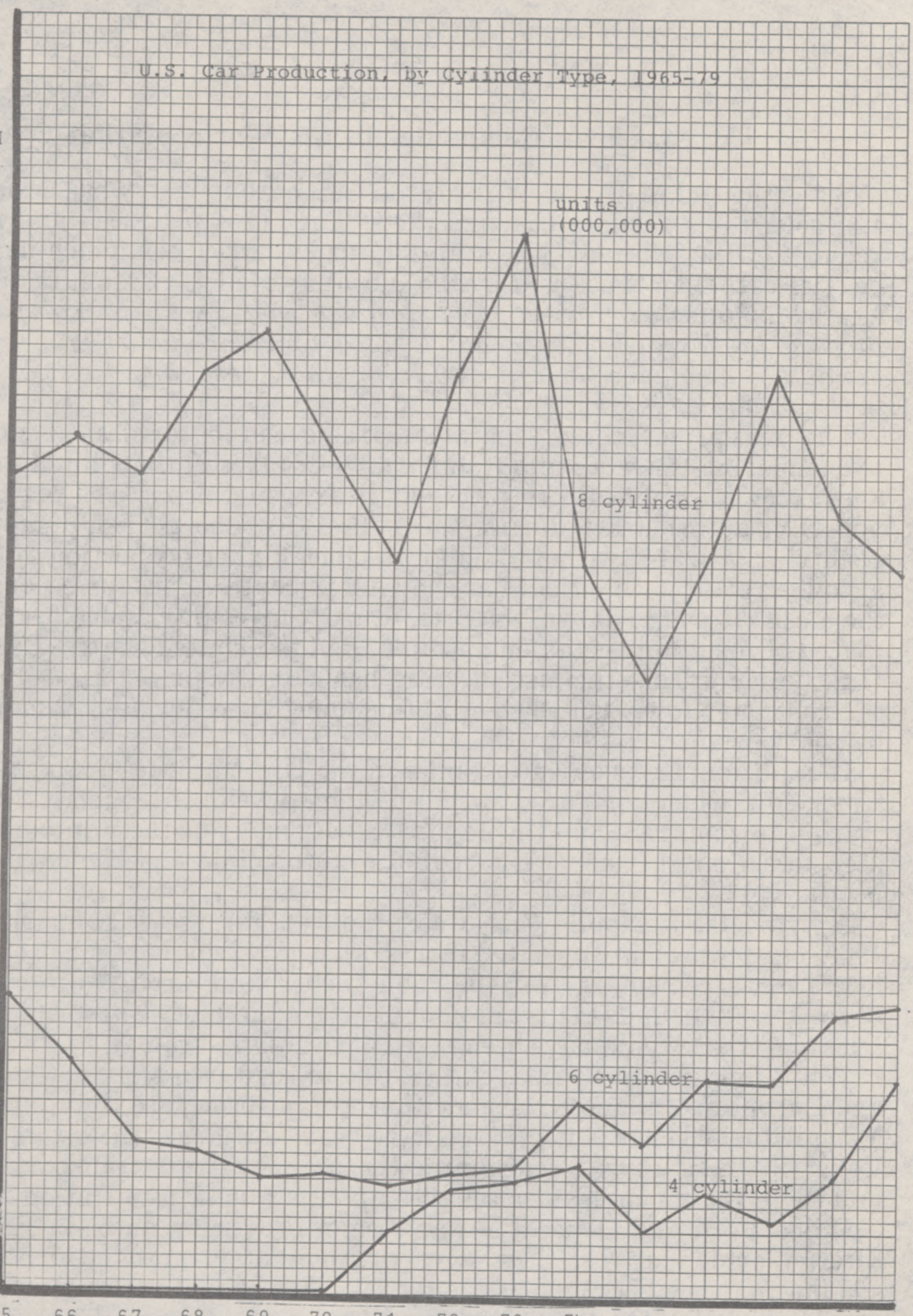
[3] Wards Automotive Yearbook, 1979, p. 106.

U.S. Car Production, by Cylinder Type, 1965-79




Source: Wards Automotive Yearbook, p. 106, 1979

## IX. American Companies in the World Market

Since the end of World War II, the U.S. auto industry has designed and sold autos for two basic markets. The autos produced and marketed for the United States and Canada have been much larger, heavier cars than those sold by the subsidiaries of U.S. manufacturers located in other countries. *It is startling that American companies produce highly fuel-efficient autos noted for their quality in Europe, yet do not now have the capacity to produce those same types of cars in the American market.*

The reason for these separate markets can be explained simply by comparing the price of gasoline and user taxes in the United States and Canada as opposed to prices and taxes in Europe, the principal non-U.S. auto market during the 1945–1970 time period. European countries have always had to import a much higher proportion of their gasoline requirements than has the United States. Perhaps because of the desire to hold down imports, European countries have always placed a much higher tax on gasoline than the United States. Because U.S. policy during the last 40 years has kept the price of gasoline to the consumer low, fuel-efficient automobiles have not been demanded by the consumer.

In addition, taxes on automobiles in the United States are also relatively low when compared to most other developed countries. Most European countries, and the Japanese, base many of their automobile-user taxes on the size/weight of the automobile (as shown in appendix H):

A typical automobile that was produced for the U.S. market in 1965 had a wheelbase over 120 inches, a large V8 engine that probably had a displacement of over 400 cubic inches, and a total auto weight of over 4,000 pounds. This automobile, if sold in most European countries or Japan, would have been taxed at the highest rate.

With high gasoline prices and taxes and road-usage taxes, the average European/Japanese consumer has always been forced to purchase a small fuel-efficient auto. There have been few large "interstate freeways" in these areas to encourage the use of private transportation, and there is a much heavier reliance upon public transportation.

When Ford and General Motors began producing autos in Europe after World War II, they were predominately autos which were smaller than the U.S. models. As the U.S. domestic models grew in size and horsepower, the U.S. companies' European autos remained fairly small. True, there has always been the large Mercedes and Rolls-Royces and some luxury car imports from America, but the average European consumer could afford neither the fuel nor the taxes on these autos.

While the Japanese were initially very protective of their motor vehicle industry, allowing neither foreign investment nor imports of

any great number, their market is very similar to Europe. High gasoline taxes and road-use taxes have kept the size of the Japanese auto relatively small. Although there are few very small autos sold in Japan now (three-wheelers and autos with engines smaller than 360 cubic centimenters), the average auto sold in Japan is much smaller than in the United States.

A comparison of the most popular 1979 U.S.-produced model with the most popular model sold in Japan and West Germany is shown on the following table:

SPECIFICATIONS FOR POPULAR 1979 MODEL SOLD IN UNITED STATES, WEST GERMANY, AND JAPAN [1]

| | Weight, pounds | Length, inches | Width, inches | Most popular engine, cubic inches | Most popular transmission, automatic | EPA,[2] mileage |
|---|---|---|---|---|---|---|
| Oldsmobile Cutlass [3] | 3,183 | 200 | 71.3 | 260 | Automatic | 19 |
| Volkswagen Rabbit [4] | 1,837 | 155 | 63.4 | 89 | 4-speed | 25 |
| Toyota Corolla [5] | 2,200 | 168 | 63.6 | 97 | 5-speed | 24 |

[1] Specifications may vary by small amount in home country for Volkswagen and Toyota; however, date for United States model used for comparative purposes.
[2] EPA mileage for United States model.
[3] Oldsmobile Cutlass Supreme 2-door sedan.
[4] Gasoline Rabbit, 3-door hatchback (diesel: 41 mpg).
[5] Sport coupe.

Source: Wards Automotive Yearbook (1979), "Wards Automotive Reports."

The Europeans and Japanese are already producing the small, fuel-efficient auto that the U.S. consumer is now demanding, while the U.S. manufacturers have to completely retool most of their production facilities in order to meet current U.S. consumer demand. This change requires a leadtime of 3 to 4 years; the European and Japanese auto industries are already producing this auto. In fact, very little of their production capacity is devoted to large cars, and some of them, especially in Europe, have excess capacity already.

Because of the preceding factors (high taxes on large cars, high retail price of gasoline, and few freeways) the typical U.S.-built auto was not competitive with most European and Japanese autos. However, since the average U.S. car of the mid-1980's (and even a few of today's models such as the GM X-bodies) will be approximately the same size and design as the European and Japanese cars, the U.S. cars will be able to challenge foreign cars head to head. This factor coupled with the lower value of the dollar vis-a-vis many currencies, will create a demand for U.S. cars in the world market. One forecast estimates that Europe will import 200,000 U.S.-built cars by 1983, up from only 30,000 in 1979.[1]

The term "world car" has been used to describe the type of car that is small, economical, suited for all types of climates and conditions, and that can be assembled with components produced at various points around the world.[2] A few of the major world automobile companies are already producing a model which could be described a

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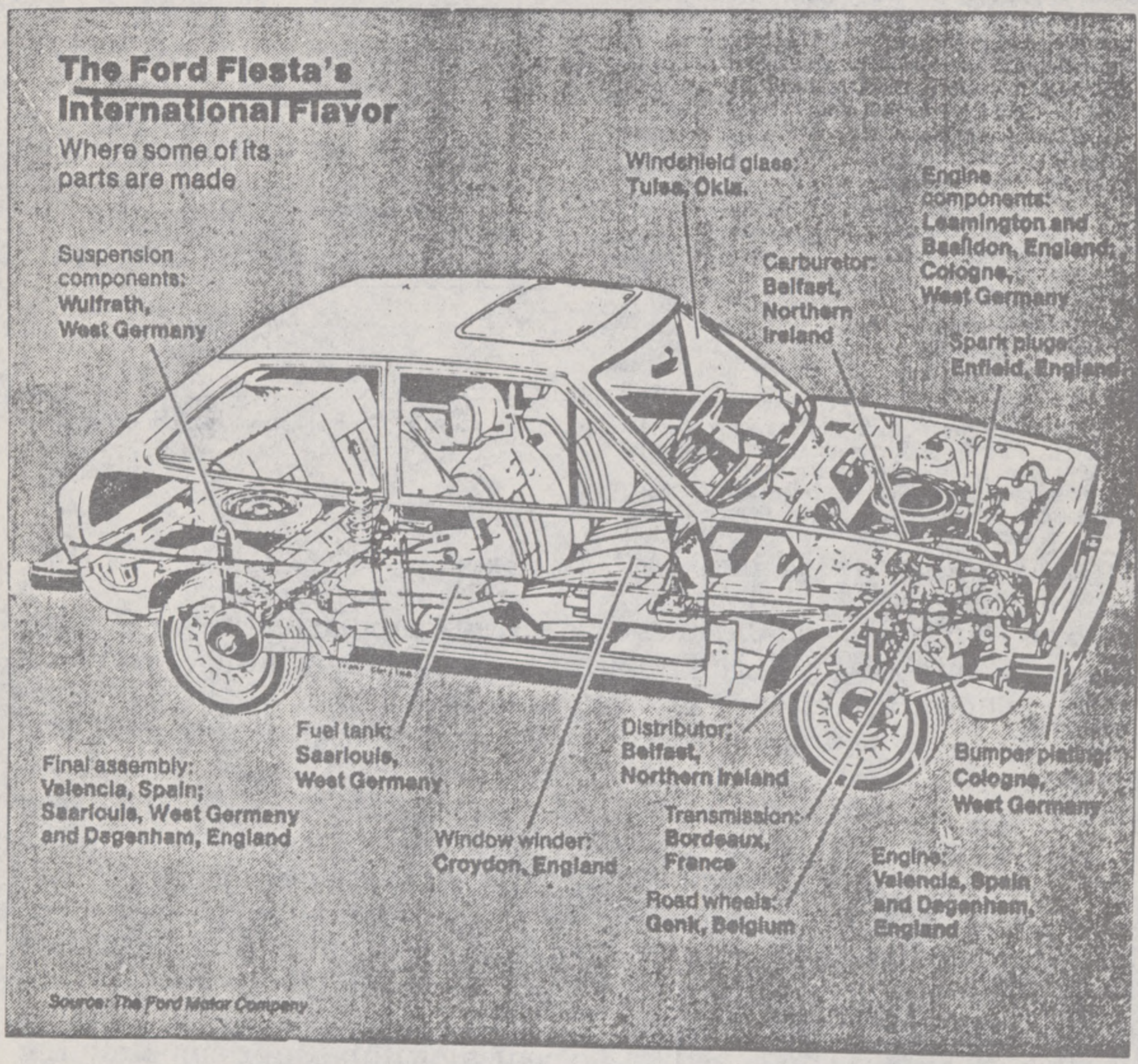
[1] "The Future of the Automobile," by C. Kenneth Orski, Alan Altshuler, and Daniel Pero. Transatlantic Perspectives, March 1980. Note: This is based on the questionable assumption that there will be excess small car capacity in 1983 and that political barriers are not erected.
[2] "The Future of the Automobile," by C. Kenneth Orski, Alan Altshuler, and Daniel Perio, Transatlantic Perspectives, March 1980.

world car—Ford Fiesta, General Motors "T-body," Volkswagen Rabbit/Golf, Honda Civic, and Fiat Strada.

The Ford Fiesta, for example, is currently assembled in Spain, West Germany, and the United Kingdom. The sources of the parts are truly international.




The world car will mean a reduction in the number of automobile manufacturers worldwide. The large companies will survive, but the smaller companies will either merge with other companies in order to compete, or go out of the carmaking business. According to Gerald Meyers, chairman and chief executive of American Motors, "By the year 2000, there may only be a dozen producers worldwide, compared with the 30 independent car makers existing today."[3] The AMC-Renault tie-up is probably the type of merger that will sweep the auto industry in the 1980's.

At the same time, the international flow of parts is expected to increase dramatically:

Detroit spends an estimated $50 billion a year for parts. No one knows how much of that goes for imports. But almost everyone agrees that the proportion

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[3] "Coming This Fall: Detroit's 'World Cars' ", Jeffery Sheler, U.S. News & World Report, Apr. 7, 1980.

is rising. "In the last few years we've been encouraged to look world-wide and then make a decision" (on what to buy), says Thomas J. Sheehan, a GM purchasing and material control manager.

A recent survey of auto executives by Arthur Andersen & Co. and the University of Michigan indicates that Detroit will import 10% of its parts by 1985 and 15% by the end of the decade.[4]

Increasingly, the nature of world trade in autos and parts is likely to resemble the following example from the May 27, 1980 issue of Nihon Keizai (Japan Economic Journal). In this case, a U.S. auto company operation in a foreign country obtains parts and technology from a third country:

A subsidiary of Honda Motor Co. will supply Ford Motor Co. of Australia Ltd. with a large quantity of aluminum cylinder heads on a long-term basis.

The Australian offshoot of the U.S. No. 2 automaker will use the Honda-made engine parts for its new intermediate car "Falcon" to start sales in June.

It is said that installation of the aluminum cylinder heads will enable the new Falcon model to improve its fuel economy by about 10 per cent as compared with the conventional cast iron parts.

Honda Foundry Co., a Honda unit based in Kawagoe City, Saitama Prefecture, already has begun to ship its aluminum cylinder heads to Ford Australia.

Honda Foundry reached a technological tie-up with Ford Australia in late 1977 to develop aluminum cylinder heads to equip medium size cars.

The primary reason for a world car, according to Executive Vice President Howard Kehrl of GM, is economy of scale. General Motors, which has a relatively small percentage of the overseas market, plans to spend $10–$20 billion during the next 5–7 years on further developing its overseas market and its world car.[5]

The movement by the auto companies to worldwide operations and a simplified style of auto (the world car) is, however, at conflict with the desires of many nations to have their own auto assembly industries. Autos have been the premier industries of so many developed nations, that it is only natural for developing nations to view auto production as an essential step on the ladder of industrialization. As a result many Third World nations have announced rather grandiose plans for the assembly and export of autos. Even the Soviet Union is seeking to gain hard currency by marketing autos. Others have demanded that autos be assembled in their country by the world's big automakers and that some portion of the content of those autos be produced locally. The Department of Commerce Survey lists some of the many local content laws imposed by less developed (and some not so undeveloped) countries (appendix I).

The latest round of oil price hikes have undoubtedly shocked many of the developed nations out of their plans for auto plant expansion. For example, prior to the 1979 price hikes, the Republic of Korea had proposed a plan to increase its Hyundai (Pony) auto production from about 300,000 a year to 2 million a year—with half of those to go for the export market. Apparently, the drain on Korean resources created by the post-Iranian oil crisis has caused Korea to rethink the wisdom of putting a million new cars on the road a year—as well as the wisdom of counting on the developing world export market to absorb a million autos a year.[6]

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[4] "Car Makers Denounce Auto Imports—But Use a Lot of Foreign Parts," Leonard Apear, Wall Street Journal, May 14, 1980, p. I.

[5] "Car Makers Forging New Alliances," Reginald Stuart, New York Times International Survey, Feb. 3, 1980.

[6] Subcommittee member discussions with ROK officials, Seoul, Korea, Apr. 1, 1980.

Despite the oil price hikes, there are plans for major capacity expansions in a number of countries—and these plans often seem to count on the export market to absorb a good deal of the new capacity. For example, Japan Times recently carried a report that Nissan Motor Co. has applied to the Taiwan Economics Ministry to form a joint venture to manufacture automobiles there. The plant would produce about 200,000 autos over a 10-year period, with about half destined for export.

It is totally understandable that the developing nations want a piece of the auto action. Nations with 17 percent of the world's population own 88 percent of the world's autos. The other 83 percent of the world's population understandably would like to see auto use expand in their countries.[7]

Yet expanded third world auto production means expanded oil demands, particularly in the nations least able to pay for such petroleum imports.

It obviously makes no sense for the developed nations of the world to be seeking ways to reduce the use of autos, while others on the globe are seeking ways to increase their availability. Yet to lock the developing nations into the current imbalance in auto ownership will not be acceptable.

Increases in auto plant capacity in various areas of the world may make sense—but planning on increases for the export market may not make sense, either economically or politically. *The auto is such an important part of the world's economic health—and on the demands for increasingly scarce resources—that it would seem advisable that an international forum on the auto, technological developments, and their relation to energy supplies, should be considered.*

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[7] "Running on Empty," op. cit., 1979, p. 4.

## X. Future of Automobiles: 1980–1990

Although the U.S. auto industry is currently experiencing a sharp drop in sales and income, an increasing share of the total market lost to imports, huge capital investments necessary to design and build the fuel-efficient autos the U.S. consumer seems to demand, and an almost saturated domestic market, it is expected that the auto industry will slowly rebound.

Auto financial analyst Dave Healy of Drexel Burnham recently stated that most of the current problems are due to the beginning of the long-awaited recession and record high interest rates.[1] Healy predicts that GM stock value will increase by 50 percent and Ford stock value will double by 1982, but he is unsure of Chrysler.

David Eisenberg of Sanford C. Bernstein agrees with the Healy predictions: He cites a "sustained surge in replacement demand, spearheaded by new model introductions that are far superior to their predecessors—both technologically and functionally."[2]

As the three major U.S. companies gradually replace their large fuel-inefficient models with newly designed, quality FWD models, sales will begin to increase. The current impact market penetration (27 percent) may gradually drop to previous levels.[3]

By 1986 the U.S. auto industry will have completely redesigned its entire new car fleet. These models will be directly competitive with Japanese and European cars for the first time since World War II. Since most U.S. auto production facilities will be less than 5 years old by 1986, they will be more highly automated and efficient than those of today, making the new U.S. models not only competitive in engineering and design, but in price as well.

Although the U.S. market is basically a replacement market rather than a growing market, the rapid obsolescense of the large inefficient sedan caused by the swift increase in fuel costs will force the owners of these cars to replace them at a much faster rate than during the last 10 years. The speed of this replacement rate is based primarily upon the price of gasoline—U.S. consumers have shown that they are unwilling to change their driving habits very much, but are willing to purchase cars that get better gas mileage.[4]

However, the automobile will never regain the place it once held in the United States. First, as energy prices rise, it can be expected that mass transit availability and attractiveness will increase. It is probable that the number of autos per person will decline somewhat (not counting the possibility of small urban cars). The years of large

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[1] "Ignore Industry's Troubles—Buy Ford, GM Stock, Analyst Says" by Don Dorfman, Washington Post, May 11, 1980.

[2] Ibid.

[3] See "Market share of imports seen falling to 10 percent by 1990," Automotive News, Feb. 11, 1980.

[4] "The Future of the Automobile," by C. Kenneth Orski Alan Altshuler, and Daniel Roos, Transatlantic Perspectives (German Marshall Fund publication) March 1980.

auto sales may be over forever, once the conversion to new FWD, quality vehicles is completed. Second, as the domestic fleet is redesigned and downsized, there will be fewer models available because the traditional size classes (subcompact, compact, intermediate, standard, and luxury) will no longer apply. By 1985, the standard and intermediate classes, as we know them today, will disappear. There is a possibility of a new class—the so-called urban car, a two passenger "runabout," smaller than today's subcompact. This urban car will, however, garner only a small segment of the total market. For longer trips, weekend jaunts, and vacations, families would use a more traditional, larger auto or rental car.

As the price of both gasoline and new automobiles increases, both at a more rapid rate than the increase in real wages, the American consumer will place less emphasis on the automobile as a status symbol, and more emphasis on the automobile as merely a convenient way to get from one place to another. Since there will be fewer models and sizes to choose from, and since most models will be very similar in design,[5] automanufacturers will not be able to create the demand that they have in the past. It will be very difficult to convince the consumer that he should buy a new model when his current model looks just like the new one, or like most of the competition's models.

*These long-range changes in the demand for autos (and the way autos are made and the new materials used in them) may have fundamental and severe impacts on autoworkers, supporting industries, and their communities. The possible impacts have not been evaluated and must be a subject of concern and attention by the Federal Government if future crises are to be moderated.*

Technologically, the auto of the late 1980's will not be radically different from today's models. It will be lighter, powered by a smaller gasoline or diesel engine which will make it less powerful than today's models, equipped with a 4-cylinder engine, standard transmission and a front-wheel-drive, and carry 4–5 passengers.[6] This car will probably not be able to pull a large recreational trailer or accelerate from zero to 60 in 8.5 seconds, but it will be able to meet most of the owners's needs and to get 50–60 miles per gallon on the highway.

Beyond 1985, it is even more difficult to predict the nature of the auto. It is possible that new technologies will be available and feasible. Breakthroughs in batteries and electric auto technology appear to be the most likely. Diesel holds potential for major increases in mileage efficiency—but it may also bring with it the dangers of carcinogens. Research on hydrogen powered vehicles continues, but seems unlikely to result in any practical changes in the next decade. Still, the application of existing technologies, plus the movement to significantly smaller autos, can result in a phenomenal change in the efficiency of the new auto fleet of the 1990's.

As one researcher has reported:

> * * * it is possible to project future fleet mpg values in the range of 70 to 100+ mpg. Whether these are actually achieved will depend to a great degree on

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[5] The designs of the Volkswagen Rabbit, Fiat Strada, Chrysler Omni/Horizon, Ford Fiesta, and Honda Accord are all basically the same.

[6] "The Future of the Automobile in an Oil-Short World," by Lester Brown, Christopher Flavin, and Colin Norman, The Futurist, December 1979.

what kind of future vehicle fleet is desired. Such a fleet may be necessary in order to preserve personal mobility." [7]

The Congressional Budget Office, on the other hand, provides a much more conservative, and conventional outlook for the future:

> The 1995 fuel economy standard contained in the legislation introduced by Senator Jackson and Senator Magnuson appears to be technologically achieveable during the next 15 years. Increased use of fuel-saving technologies that are currently in production or that are slated for production within the next five years could increase the average fuel economy of new autos to about 35 miles per gallon by 1995. Additional fuel economy increases of about 2 miles per gallon are also likely to occur as buyers shift toward smaller, more fuel-efficient autos in response to continued increases in gasoline prices. This means that, even without further innovations that may occur during the post-1985 period, an average fuel economy of about 37 miles per gallon appears technologically feasible for new cars in 1995. Given that further innovations are likely during the next decade, an average fuel economy of 40 miles per gallon is probably technologically within reach by 1995.
>
> But such improvements may not be economically achieveable by the industry. The additional capital required to produce such vehicles could prove prohibitive, although various forms of capital relief from the government in the form of tax credits, accelerated depreciation, loan guarantees, or direct grants could help overcome capital constraints. The type, amount, and conditions of such aid raise complex questions that would need careful consideration.[8]

Clearly, the future holds some exciting and very expensive challenges to America's No. 1 industry. The uncertainty of this future is made even more precarious by the dependence of the United States on petroleum imports and on the slowness of our society in finding energy alternatives. *The industry and its importance to the economy—and its cost to the economy in the use of energy—warrant the establishment of a permanent committee, composed of government, industry, labor, and consumers, to help meet future shocks.* The lives of the American people are so dependent on the health of the auto industry, the use of autos and the impact of autos on energy use, that we must give more attention to pending developments in the industry and on ways to prevent or moderate future crises.

The establishment of the White House Regulatory Council's auto subcommittee, the joint industry-Government research being conducted at the Massachusetts Institute of Technology, the ongoing Department of Transportation studies on the future of the auto, the White House meeting of industry and labor representatives of May 14, may all be parts of an evolving industrial policy or "vision" which can help our auto-dependent society meet the coming challenges. Still, the above studies and meetings have been ad hoc and need to be unified through a more coordinated, permanent guidance. The crisis of the past few months can serve to bring the industry and its workers closer together; in cooperation with the Government this can help our society better guide the revolutionary changes underway in this most fundamental industry.

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[7] Testimony of Charles L. Gray, Jr., Chairman of the Transportation Task Force of the Solar Energy Research Institute Solar/Conservation Study, before the Senate Committee on Energy and Natural Resources, Apr. 30, 1980, Dr. Gray concluded:

"It is recommended that Corporate Average Fuel Economy Targets which apply to all passenger cars and light-duty trucks be set at 50 m.p.g. in 1990 and 80 m.p.g. in 1995. The targets should be supported with the economic motivation of a fuel inefficiency tax of $100 (with 1980 dollars) per vehicle produced by a manufacturer who is under the target CAFE, per m.p.g. that the manufacturer is under the target CAFE . . . It is further recommended that the U.S. Government set up a guaranteed loan trust fund for the domestic automobile industry during this period of major change."

[8] Testimony of Dr. Alice Rivlin, Director, CBO, before the Senate Energy and Natural Resources Committee, Apr. 30, 1980.

## APPENDIX A—Explanation of Downsizing

The term "downsize" was first used by General Motors to describe its 1977 models of standard size cars introduced in the fall of 1976. What GM meant was that the car had been reduced in size, both in dimensions and weight. This term caught on in the automotive field and has been used since 1977 to describe a car that is smaller than its predecessor.

General Motors could just have easily called the new model smaller, but smaller had the connotation of getting less. In 1977, the average consumer did not perceive a smaller car as being better. (Witness the Ford and Chrysler decision not to downsize their models but instead to fight the EPCA fuel economy standards on the grounds that the American public would never buy those small cars.)

However, the auto industry can only "downsize" any given model so much, then it must completely redesign that car. A manufacturer cannot radically change the drive train (engine-transmission-driving wheels) without redesigning the entire car. A majority of the world auto industry members believe that 4-cylinder, front-wheel-drive automobiles are the only answer to meeting the fuel-efficiency requirements that will be demanded of the future auto. This trend is already apparent when many of the newly designed cars are compared to the older models. The Volkswagen Rabbit, the Honda Accord, the Fiat Strada, the Chrysler Omni/Horizon, and the GM X-body are all very similar. They all have a "boxy" appearance, front-wheel-drive, usually a hatchback, 4-cylinder engine (except the X-body which is offered with an optional 6-cylinder engine) and weigh less than 2,500 pounds.

With a drastic reduction in weight and equipped with a small 4-cylinder engine, and a 4- or 5-speed transmission, these newly designed cars are very fuel efficient when compared to the models they replaced. For example, the 1979 Buick Skylark averaged 19 m.p.g.; while the model that replaced it midway through the model year averaged 24 m.p.g., (when equipped with a standard 4-cylinder engine and a 4-speed transmission).



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# APPENDIX B

## SAFETY STANDARDS

Standard 101—control location, identification and illumination.
Standard 102—transmission shift lever sequence, starter interlock, and transmission braking effect.
Standard 103—windshield defrosting and defogging systems.
Standard 104—windshield wiping and washing systems.
Standard 105-75—hydraulic brake systems.
Standard 106—hydraulic brake hoses.
Standard 107—reflecting surfaces.
Standard 108—lamps, reflective devices and associated equipment.
Standard 109—new pneumatic tire for passenger cars.
Standard 110—tire selection and rims for passenger cars.
Standard 111—rearview mirrors.
Standard 112—headlamp concealment devices.
Standard 113—hood latch systems.
Standard 114—theft protection.
Standard 115—vehicle identification number.
Standard 116—hydraulic brake fluids.
Standard 117—retreaded pneumatic tires for passenger cars.
Standard 118—power operated windows.
Standard 119—new pneumatic tires for other than passenger cars.
Standard 120—tire selection and rims for vehicles other than passenger cars.
Standard 121—airbrake systems for trucks, buses, and trailers.
—Standard 121 is in litigation.
Standard 122—motorcycle brake systems.
Standard 123—motorcycle controls and displays.
Standard 124—accelerator control systems.
Standard 125—warning devices.
Standard 126—truck-camper loading.
Standard 130—airbrake systems for trucks, buses, and trailers. Courts voided the anti-lock provisions of this standard, previously known as Standard 121.
Standard 201—occupant protection in interior impact.
Standard 202—head restraints.
Standard 203—impact protection for driver from steering control system.
Standard 204—steering control rearward displacement.
Standard 205—glazing materials.
Standard 206—door locks and door retention compartments.
Standard 207—seating systems.
Standard 208—Occupant crash protection. This standard requires that by 1982 full size passenger cars must be fitted with either an air cushion system or a passive belt system. By the 1983 model year intermediate size passenger cars must be fitted with either of the restraints and by the 1983 model year all new passenger cars must be fitted with passive restraint systems. The U. S. District Court of Appeals recently upheld the standard but an appeal to the Supreme Court is expected to be made.
Standard 209—seat-belt assemblies.
Standard 210—seat-belt assembly anchorages.
Standard 211—wheel nuts, wheel discs and hub caps.
Standard 212—windshield mounting.
Standard 213—child seating systems.
Standard 214—side door strength.
Standard 215—exterior protection. (Manufacturers have the option of meeting safety standard 215 or the new property damage standard issued under Title I of the 1972 Motor Vehicle Information and Cost Savings Act, until September 1, 1978. The "no-damage" standard to become effective September 1, 1979 allows only limited damage to the bumper face bar).
Standard 216—roof crash resistance.
Standard 217—bus window retention and release.
Standard 218—motorcycle helmets.
Standard 219—windshield zone intrusion.
Standard 220—school bus rollover protection.
Standard 221—school bus body joint strength.
Standard 222—school bus passenger seating.

Standard 301—fuel system integrity.
Standard 302—flammability of interior materials.

The NHTSA five-year plan sets priorities for safety: Side impact protection; extending passenger car standards to cover light trucks, van, and multipurpose passenger vehicles; reducing pedestrian fatalities; upgrading brakes on all vehicles. Although the plan will be updated periodically, the present program calls for consolidating all occupant protection standards, with testing at various speeds, and a new test dummy. Plans also call for extending passive protection to all vehicles under 10,000 GVWR except motorcycles.

NHTSA also has under active consideration: Elimination of exterior protrusions; truck underride; tire traction and low pressure warning for tires; direct field of view and upgrading of rearview mirrors; rear lighting and signalling; brake inspectability, and dynamic testing for active seatbelts.

NHTSA has adopted a change to its side-impact protection standard that will allow manufacturers to leave the front seats in the car when testing for crush resistance. It rejected a petition from Fiat to establish a rust standard.

Standards 201, 203 and 205 have been extended to light trucks and vans and there is talk of extending the passive restraint standard (208) also.

## EMISSION STANDARDS

The new emission standards for passenger cars, as established by August, 1977, amendments to the Clean Air law, are as follows:

| Model Year | Hydro-carbons | Carbon Monoxide | Nitrogen Oxides |
|---|---|---|---|
| 1978-79 | 1.5 | 15 | 2.0 |
| 1980 | 0.41 | 7 | 2.0 |
| 1981 and beyond | 0.41 | 3.4* | 1.0** |

* Can be waived by EPA Administrator to 7.0.
** Can be waived by EPA Administrator to 1.5 for innovative technology.

Several domestic and foreign makers, most notably Chrysler Corp., have received two-year waivers from the 1981 CO standard. Several other makers, including GM with a request for a variable-displacement V-8 for its Cadillacs are awaiting decisions.

General Motors, Mercedes-Benz and Volvo have received two year waivers from the 1.0 NOx standard for their diesels. Peugeot and Volkswagen, both of whom were denied waivers for their diesels, have repetitioned the agency.

The EPA has established particulate emission standards for light duty diesel engines that will require them to emit not more than 0.6 grams per mile by the 1982 model year and no more than 0.2 gpm by the 1985 model year.

The law keeps 0.4 NOx as a research goal. EPA is to report to Congress by July 1, 1980 on the need for a 0.4 NOx standard to protect health and the cost and technology capable of meeting 0.4 NOx.

EPA is authorized to grant California a waiver from federal preemption for a set of standards which "in the aggregate" protect public health and welfare as well as the federal standards.

EPA has proposed voluntary high-altitude emission standards for 1981 models and mandatory ones for 1982 and 1983. The 1982-83 standard would be 0.57 HC/7.8 CO/1.0 NOx. Light trucks would need to meet standards of 2 HC/26 CO/2.3 NOx in 1982 and 1 HC/14 CO and a NOx standard to be set when EPA finalizes its 1983 light truck low-altitude emission standards. In 1984 all vehicles must meet the low-altitude standards regardless of what altitude they are sold or operated at.

EPA is required to set maintenance instruction regulations for owners manuals.

If EPA sets regulations limiting emissions during vehicle refueling, then it must set fill pipe standards.

EPA must examine feasibility and desirability of on-board hydrocarbon control technology, comparing it with vapor recovery systems, and if feasible and desirable set regulations taking into account cost and leadtime.

Emission standards for light-duty trucks (8,500 GVWR) in 1979 and 1980 are 1.7 HC/18 CO/2.3 NOx. The proposed standards for 1981 and later were expected at press time. They would constitute a 90 percent reduction from the base levels.

EPA has proposed 1983 light-duty truck emission standards of 0.8 HC/10 CO/ and an unspecified NOx standard. It is also calling for an idle HC standard of 970 RPM HC and a 0.47 CO standard. The agency is also proposing to change the Selective Enforcement Audit pass fail ratio from 60/40 to 90/10 and change the useful life definition of light duty trucks from 5 years/50,000 miles to either the first engine rebuild or scrap of the engine.

EPA has finalized its 1984 and later model year heavy-duty vehicle emission standards to require that they meet standards of 1.3 grams/BHP-hr HC, 15.5 g/BHP-hr CO, and 10.7 g/BHP-hr NOx under a new transient test procedure. They must also meet an idle CO standard of 0.47 percent. Heavy duty diesel engines need not meet these standards until 1985 but if they so decide they must meet standards of 0.5 g/BHP-hr 15.5 g/BHP-hr CO and 9.0 g/BHP-hr NOx in 1984 using the current 13-mode steady state procedures. Normally aspirated diesel will have to eliminate all crankcase emissions by 1984. Turbocharged models would not. The SEA pass fail rate has been changed from 60/40 to 90/10 and the useful life definition has been changed to the first engine rebuild or retirement. A heavy-duty engine particulate standard is now being drafted and will be applied in the 1985 model year. MVMA, Chrysler, Ford and GM have now sued to prevent the EPA from enforcing these heavy duty emissions regulations.

## FUEL ECONOMY STANDARDS

Passenger cars have the following average fuel economy standards:

1978—18 MPG, 1979—19 MPG, 1980—20 MPG, 1981—22 MPG, 1982—24 MPG, 1983—26 MPG, 1984—27 MPG, 1985—27.5 MPG.

The automakers have petitioned the agency to change the fuel economy standard for 1981 to 1984 from a 2 MPG progression to a 1 MPG progression.

Light trucks and vans have the following average fuel economy standards:

1981—16.7 MPG for two - wheel drive vehicles, 15.0 MPG for four-wheel drive vehicles.

1982—18 MPG for two-wheel drive vehicles, 16 MPG for four-wheel drive vehicles.

The NHTSA is now at work developing fuel economy standards for the 1982-86 model years. The 1982-84 MPG proposal is expected this summer. The 1984-86 MPG proposals not until next year.

Any standard for '86 through '88 models will be proposed in March, 1982, and set in August, 1982.

Proposed standards for '86-'88 models may be proposed March, 1981 with the final rule by August, 1981.

## APPENDIX C—Early Japanese Policies Concerning Developing Auto Industry

Japan: The Government-Business Relationship, February 1972, U.S. Department of Commerce, Bureau of International Commerce.

*Protection.*—The structure of protection measures which followed was comprehensive and imposing. Regarding the exclusion of foreign capital investment, MITI announced in June 1952, the "Basic Policy for the Introduction of Foreign Investment into Japan's Passenger Car Industry". This document supplemented Japan's fundamental policy governing foreign capital, the 1951 Foreign Investment Law, which requires government authorization of all investment by foreign capital. The intention was clearly to exclude foreign investment for production in important sectors in order to permit domestic producers' development. The automobile industry eminently qualified in the Japanese view. The 1952 administrative basic policy expanded with respect to autos: in the event of foreign investment authorization, no repatriation of earnings or capital will be guaranteed from investments in marketing facilities. Guarantee of repatriation for investment in production facilities will obtain only if it "contributes to the development of domestic industry".

MITI's intention in this policy was to further discourage import marketing investments in Japan while leaving the door open for selected joint ventures, to be approved on a case-by-case basis, of foreign producers with superior auto parts technology. Admission of large American and European auto assemblers was out of the question, however.

Protection from imported products was accomplished with three instruments—quota, tariff, and commodity tax. Foreign exchange quotas for automobile imports had been in effect since the war's end in order to conserve Japan's dollar holdings. From the early 1950's, quotas were employed chiefly to protect domestic manufacturers' new passenger car businesses. Annual passenger car quotas, negotiated with producers but finally determined within MITI, rose from $613,000 to a total of $28 million in the 10 years prior to the lifting of quantitative restrictions in 1965. Trucks, buses, and small motorcycles were liberalized in 1961. By 1963, foreign exchange allocation for motor vehicle imports rose to $23 million, and totaled $28 million for 1965.

Most auto parts were freed a year later. Automobile engines however remained under foreign exchange quota through the 1960's. The Japanese deterred onshore assembly of foreign cars rather comprehensively.

Japanese tariff rates on autos have been high and, in addition, geared in their relative structure to domestic producers' interests. Small passenger cars, the critical development area within the industry, retained relatively and absolutely high tariff rates. Trucks, where Japanese producers have been strongest, had the lowest rates generally.

A third instrument of import protection is the commodity tax rate structure. Commodity tax is levied on all passenger vehicles—domestic and foreign—sold in Japan in order to finance road construction. Large cars pay higher percentage rates. While the structure's basic purpose is to influence the size of domestically produced cars, the tax does function to protect domestic manufacturers. The higher rates on large cars penalize American imports. The rate structure is geared to wheel base and piston displacement, hence a Chevrolet Camero pays a higher rate than a Mercedes Benz. Most U.S. models fall into the largest of three size categories. In addition. the imports' tax base is landed value while the domestic tax base is ex-factory price.

*Foreign technology.*—Most manufacturers agreed with MITI on the necessity of importing foreign technology.

In October 1952, MITI issued the "Basic Policy for the Technological Licensing and Assembly Agreements in the Passenger Car Industry". Existing foreign exchange control legislation gave the bureaucracy administrative control over individual technical and licensing agreements of Japanese and foreign firms. MITI's new Basic Policy sought to make technology agreements more attractive

to the licensor by guaranteeing the remittance of royalties from Japan. The document further stipulated that if the license covers complete knock-down assembly of foreign passenger cars in Japan, continued guarantee of remittance requires that 90% of the licensed parts must be produced in Japan within 5 years.

MITI had struck a compromise. Obtaining operational foreign technology required substantial imports of foreign value added in the form of parts and subassemblies. However by making remittance conditional on the transfer of parts manufacture to Japan, MITI served notice that the knockdown import would be permitted only for a limited period of time. Domestic manufacturers were thus given additional incentive to develop manufacturing capability for their licensor's parts. In the process MITI relinquished no loss of import control: quotas and tariffs on parts were retained.

Within 12 months of the policy's issuance, six domestic manufacturers had negotiated agreements for knock-down assembly of foreign cars in Japan under license. Of the six, Nissan was the only one then producing passenger cars. Hino, Mitsubishi, and Isuzu were traditional truck manufacturers entering the car business in 1953 by virtue of foreign license. Applications of these four were approved by MITI. Two others—by Fuji Auto (no relation to Fuji Heavy Industries now producing autos) and Nichiei—were rejected. MITI apparently considered these two firms too financially weak to survive. It is also likely that MITI at that early date foresaw the problems of too many producers and "excessive competition" in a highly capital-intensive industry. In any event, MITI did eliminate two competitors at the technology import stage.

The parties to the agreements were: 1952, Nissan, Austin (U.K.); 1953, Isuzu, Rootes (U.K.); 1953, Hino, Renault (France); and 1953, Mitsubishi, Willys (U.S.A.).

It should be pointed out that the technology imports were initiated by the manufacturers not MITI. The bureaucracy and the producers had previously discussed the desirability of licensing production; in fact, the negotiations with licensors had begun long before the basic policy's appearance. But MITI evidently played no direct role in the agreements themselves other than to approve them.

The role of foreign technology in Japan's auto development should not be overestimated. Toyota and Prince, two of the three major passenger car producers of the period, used domestic know-how exclusively. The four licensees of foreign technology rapidly improved their own, with the result that assembly of European cars in Japan was not long a factor. The Isuzu-Rootes agreement was the longest, running through 1964. It produced less than $1 million in royalties over 12 years.

The absence of U.S. auto producers in post-war Japan until recently stands out. The lack of technology agreements is understandable in terms of either Japan's reluctance to produce under license cars of over-sized U.S. dimensions or the big three's reluctance to trade technology for anything less than equity. It is more curious however, that U.S. producers, despite foreign investment barriers, did not negotiate an equity position of some form in Japan before 1971. It is not only alleged but probable that at least one U.S. producer was informally invited to joint venture with domestic capital in auto production during the 1950's. Japanese producers were weak technologically and competitively. Annual car production in 1955 was a mere 20,000 units. It is reasonable to believe that the Japanese government might have permitted, even welcomed, selected U.S. capital participation under clearly defined constraints regarding share of equity, earnings repatriation, and management prerogative. The basis of Japanese objection to foreign capital is not that it is foreign, but that it is uncontrollable. It would be interesting to ascertain whose entry conditions were the least flexible—the Japanese Government's or the American auto producers'.

*Financial assistance.*—It is characteristic of Japanese industrial development efforts that direct financial assistance from government is relatively small in amount and diverse in form. This is true of the automobile industry.

Under MITI's recommendation, Japan Development Bank extended reconstruction loans to auto producers from 1951 to 1955. The bank's loans financed roughly 9 percent of total investment in passenger car production facilities during the 5-year period. Autos joined iron and steel, electric power generation, and coal mining—three of Japan's four official dsignated critical postwar reconstruction priorities—as the bank's earliest borrowers. This clearly had a favorable

impact on the auto producers' access to the private commercial banking system.

Special accelerated depreciation rates were extended to auto producers, among others, by fiscal legislation prepared by MITI in 1951. Rates of up to 50 percent depreciation in the initial year were permitted on reconstruction machinery in critical industries. In addition, this machinery if imported was exempted from tariff duty. Finally, direct subsidies amounting to roughly $1 million were awarded to the Automobile Technology Association, representing manufacturer, during the 1950's.

Auto reconstruction, in summary, was eased considerably by a number of government-related financial measures at a time when capital resources were limited. Low-cost Japan Development Bank borrowers, tax and tariff exemptions, and subsidies all helped. Korean war procurement, however was perhaps the critical stimulant.

*Produccrs achicve dcsign autonomy.*—The middle and later portions of the 1950's were years of major technical progress for the industry. In 1952–53, four of the industry's six major firms had begun domestic assembly of passenger cars from imported parts of foreign design. The two others had remained technically independent. By 1958, nearly every passenger car assembled in Japan was designed and produced domestically. Japan had achieved nearly complete autonomy in production of parts and passenger car design within 5 years. This progress, it should be noted, was facilitated by the stable number of passenger car producers. Toya, Nissan, Isuzu, Hino and Mitsubishi (with Jeep) remained the only large scale producers.

The implications of this autonomy were important for Japan. The foreign exchange drain and the susceptibility to perverse economic cycles through trade imbalance, as functions of knockdown auto imports, were reduced. Domestic production of auto part advanced the development of the steel, machinery, and rubber industries which during the 1960's would experience, along with autos, unparalleled growth and achieve comparable international competitiveness. Design autonomy opened up the opportunity for automobile export in the next decade, during which time Japan's export would of necessity shift from high labor, low technology goods toward low labor, high technology products. Finally, autonomy vindicated MITI's protection policy and established a significant strategy precedent.

In evaluating MITI's role through the late 1950's, one must say that its contributions were essential. The Ministry identified automobiles as an industry critical to Japan's economic future and defended the industry's position against the opposing strategy of the Bank of Japan and the indifference of the Ministry of Transportaiton and other users' representatives. In its role of postwar economic strategists, MITI came to dominate policy making given the urgency of the resource allocation problem and the docility of the postwar Diet. It was from this strong and central posiiton that MITI actively supported the industry's development.

MITI, however, did not dominate the producers nor monopolize the initiative for deve'opment. Its elaborate policy of protection was of course essential. The Ministry's admission into Japan of unassembled foreign cars in order to build domestic technology was necessary and highly effective. Its financial assistance to producers, on the other hand, was highly useful but not critical. MITI played little or no role in the investment policies or technological development activities of the producers. As the decade closed, MITI's role among auto producers waned. By 1958, the highly-protected industry was profitably producing one-third of a million vehices, including 50,000 passenger cars, and was reaching design autonomy. Some measure of autonomy from MITI was gained in the process.

## APPENDIX D—Results of Recent Negotiations With Japanese Government

### Results of U.S. Trade Representative Askew's Discussions With GOJ

U.S. Trade Representative Reubin Askew and Japanese officials have reached agreement on a package of initiatives the Government of Japan will take unilaterally to help address the problems faced by the U.S. auto industry. The agreement was concluded during four days of discussions in Tokyo.

The package addresses Japanese investment in the United States as well as access to the Japanese market for U.S. exports of automobiles and auto parts: The major elements of the agreement include:

The Government of Japan will continue its policy of encouraging economically viable investment by Japanese auto manufacturers in passenger car, truck and component industries in the United States.

The GOJ and the Japanese auto parts industry will send to the United States in early summer a government-industry mission to explore economically viable investment and licensed production in auto parts production.

The GOJ has agreed to further simplify standards and licensing procedures in 12 areas identified as problems by the United States.

The GOJ will eliminate tariffs on imports of almost all auto parts to be effective in April, 1981.

The GOJ will send to the United States in early summer a government-business team to promote Japanese imports of U.S. auto parts. It is estimated that auto parts imports into Japan will more than triple in 1980 compared to 1978.

Attached is the text of Ambassador Askew's letter to Ambassador Yasukawa, Japanese Government Representative for External Economic Relations, regarding Japanese concessions in the automobile sector, and a statement by the Government of Japan.

### Text of Ambassador's Letter to Ambassador Yasukawa

"On behalf of the United States Government, I welcome the statement, to be made on May 15, 1980, by the Japanese Government of measures to facilitate the importation of automobiles and parts into Japan and to encourage economically viable Japanese investment in automotive production in the United States. These measures are a constructive contribution by your government toward the resolution of our mutual problem in automotive trade.

"I particularly note the statement that the Government of Japan will continue to encourage economically viable investment in the passenger car, truck and components industries in the United States. I also note the changes in automotive standards, elimination of traiffs, in principle, on automobile parts, and automobile parts investment and buying missions which you are dispatching to the United States. The success of these measures will, in the first place, largely depend on how well they are implemented but in the final analysis on the efforts of the private sectors in our countries.

"As you know, the U.S. Administration has stated its basic policy of opposing restrictions, including export restrictions, on automotive trade. The achievements of the objectives announced in your government's statement will contribute to the maintenance of this policy." [End text.]

### Statement by the Government of Japan

Owing to the automobile industry's influence on a wide range of related industries both in Japan and in the United States, it is imperative that the automobile issue be resolved in a way that does not adversely affect the general economic relationship between our two countries. The government of Japan believes that both Japan and the United States share this understanding.

The United States government has stated its basic policy as one of achieving free trade and opposing restrictions on automobile imports. The Japanese Government strongly supports this responsible policy of the United States Government.

On the other hand, recognizing the importance of the automobile issue for Japan-United States economic relations and considering the requests from the United States side as well as the position of the Japanese automobile industry, the Japanese government would like to announce, on this occasion, the steps the Japanese industry concerned has decided to take thus far, and the steps the Japanese government has already taken or will take for facilitating entry into the Japanese market of autos and auto parts.

The Japanese government earnestly hopes that through the steps described in this statement, the present automobile issue will be prevented from becoming an impediment for continuation of close Japanese-American economic relations.

The Japanese government also hopes that further efforts will be made to increase the export competitiveness of United States automobiles and to foster export orientation in the United States automobile industry so that the Japanese import promotion measures can be of maximum benefit.

### 1. INVESTMENT IN THE UNITED STATES

Under the free enterprise system, the final decision on such entrenpreneurial matters as investment is the prerogative of the private sector.

On the other hand, the Japanese government has been encouraging the Japanese auto manufacturers to consider economically viable investment in the United States with a broad view of the long-term economic relations between the two countries. Therefore, the government of Japan particularly welcomes decisions made by those Japanese companies concerned which have made significant contributions toward the continued development of healthy economic relations between Japan and the United States. The Japanese government will continue the policy of encouraging economically viable investment in the United States in [the passenger cars, trucks and the components industries].

The following are the actions of Japanese manufacturers to date:

(1) Honda Motors has decided to build a passenger car assembly plant in the United States, (2) Nissan Motors has decided to build a small truck assembly plant in the United States, (3) Toyota Motors is conducting a full scale survey of possible United States investment, which will be completed by the end of this year, (4) the Japanese government and auto parts industry have decided to dispatch, in early summer, a government/business mission to the United States to explore economically viable investment and licensed production in auto parts production. [(5) discussions between Mitsubishi and Chrysler on possible cooperation between these two companies' in small cars.]

### 2. ACCESS TO THE JAPANESE MARKET

Japan has already taken various steps to open its market to imports of automobiles and auto parts. In order to further improve access to the Japanese market, the Japanese government will take such measures as the improvement of standards and inspection procedures, the dispatch of a government/business mission to the U.S. to explore increased purchase of auto parts, the elimination of tariffs on auto parts and other measures.

The government of Japan expects that the measures outlined below to facilitate auto parts imports into Japan as well as private sector initiatives will result in a substantial increase in auto parts imports above what would otherwise occur.

*A. Standards and inspection procedures*

In the field of automobile standards and related issues, including inspection procedures, Japan has already made significant improvements through a variety of measures, taking into account such arrangements as the standards code, the Ushiba-Strauss joint statement of June 2, 1979, and the December 7, 1979 joint statement on standards. Such measures include (1) sending inspectors abroad, (2) shortened inspection period, (3) allowing a lead time in the compliance with emission controls, (4) increasing of equivalent standards, (5) publishing of an English version of Japanese automobile regulations, (6) accepting of test done on representative vehicles for certification purposes, and (7) continuing review and flexible application of individual safety standards.

The Japanese government has decided today to take additional measures for further simplification of procedures and smoother inspections. Such measures will be taken in the fields of (1) test equipment and procedures, (2) date of manufacture, (3) catalytic converter replacement, (4) heat shielding, (5) digital speedometers, (6) documentation requirement and (7) representative vehicles.

*B. Dispatch of a government/business mission for increased Japanese purchase of auto parts*

It has been decided that a government/business mission will be dispatched in early summer to the United States for the promotion of imports of automobile parts. It is estimated that the imports of auto parts into Japan will be more than tripled in 1980, compared to 1978. The government of Japan will spare no effects in facilitating the mission's objective of significant further increases of Japanese imports of auto makers from the United States.

*C. Elimination of tariffs on auto parts*

The Japanese government has already taken various tariff measures including the unilateral elimination of tariffs on automobiles implemented in 1978, and substantial tariff concessions and accelerated staging of tariff reductions on auto parts in the Tokyo Round of the Multilateral Trade Negotiations.

In addition, the Japanese government, in order to further facilitate its imports of auto parts, intends to take the necessary domestic measures to revise the relevant law for the JFY 1981 and to eliminate, in principle, tariffs on auto parts.

### 3. OTHER MEASURES

(1) A minimum volume of export sales of each model is required to achieve economies of scale. While this is principally a private sector responsibility, the Japanese government will encourage private initiatives to the end.

(2) The recent Japanese FTC guidelines offer the opportunity for the American companies to take advantage of distribution mechanisms in Japan.

(3) The Japanese government will facilitate economically rational licensed production in the United States between Japanese and United States firms and the use of United States produced parts in Japanese cars.

## APPENDIX E

MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY,
JAPANESE GOVERNMENT,
*April 21, 1980.*

Representative CHARLES A. VANIK,
*The Capitol, Washington, D.C.*
*United States of America*

DEAR REPRESENTATIVE VANIK: Following your proposal which was made to Vice-Minister Amaya and Minister Sasaki while you were in Japan, we, MITI, have been encouraging Japanese autoparts manufacturers to invest into the United States. Of course, as you are fully aware, final decisions of this kind are made by individual private companies and the government of Japan has no right to dictate to them. However, we firmly believe that we can add some important factors to be considered in their decisions. To stimulate private companies' consideration of this issue, our ministry has decided to organize and send a Autopart Investment and Buying Mission to the United States as soon as possible.

Enclosed, please find a copy of the Japanese newspaper, Nikkei Shinbun, which last week reported on the Japanese autoparts industry and it's actions concerning investment in the United States.

The statements in this publication, though some are based on speculation, reveal correctly the prevailing mood in the autoparts industry.

I hope this information will assist you in fully understanding our positive efforts in this matter.

Wishing for your continued health and success, I remain,

Very truly yours,

MASAHISA NAITOH,
*Director, The Americas-Oceania Division,*
*International Trade Policy Bureau MITI.*

[The following is a complete translation of the Nikkei newspaper's article]

THE JAPANESE AUTOPARTS INDUSTRY IS NOW TAKING POSITIVE STEPS TOWARD INVESTMENT IN THE UNITED STATES OF AMERICA

The United States-Japan Automobile issue has entered a new phase because of Nissan Motor Co's decision to invest into small-size truck manufacturing in the U.S. and Toyota Motor Co's decision to ask for a survey of Investment options in America.

Accordingly many Japanese autoparts manufacturers are considering investments into the United States and this mood of investment is becoming increasingly prevalent throughout the industry.

Nippon Hatsujo Co., one of the largest autoparts manufactures, has recently set up a special project team for a thorough survey of the U.S. market. Japan Radiator Co. and Kinugawa Rubber Industry Co., have also decided to build manufacturing bases in Mexico as side support for Nissan in its efforts to penetrate the U.S. market. Taking into consideration that Congressman Vanik recently requested autoparts manufactures to invest in the U.S., this matter is gradually becoming a hot management issue for major autoparts manufacturers.

The Ministry of International Trade and Industry has encouraged the Japan Auto Parts Industries Association (JAPIA) to discuss the possibilities of meeting the suggestions and proposals of Mr. Vanik's recent request. The industry, mainly JAPIA, is supportive of discussions that will lead to send a combined government and private mission to the U.S. and it is assuming positive position concerning investment in America.

The U.S. market is very attractive for private companies and they, therefore, have been sincerely seeking an opportunity to expand there.

Japan Oil Seal Manufacturing Co. is one of the major oil related parts manufacturers and they have been expanding their exports through contracts with General Motors. This coming May, Japan Oil Seal Manufacturing Co. will be completing their local plant and are further planning a second plant. Aside from this, Japan Special Ceramic Co. and Japan Cable System have already invested into the United States.

Following the above mentioned companies, Nippon Hatsujo, a spring manufacturer, is initiating investigations into the possibility of investment in the U.S. and will make a decision at the end of this year. This company is also considering a plan for the local manufacturing of other products, such as metal sheeting for automobiles, etc., in the U.S., in addition, Stanley Electric Corp., a manufacturer of automotive lamps, and Sankyo Electric Equipment Corp., producing auto air conditioners.

Nippon Radiator Corporation and Kinugawa Rubber Manufacturing Industry, subsidiaries of Nissan Co. (which has decided to invest in U.S. manufacturing of small sized trucks), are establishing plants in Mexico to support Mexico Nissan. These investments will improve the ratio of localization and supply a greater total number of jobs to the local population. At the same time this investment is aimed at the U.S. market, taking into account the export promotion policies of the Mexico Nissan and its affiliated companies with facilities in Mexico, will become a major supply base. Along these lines, Japan Radiator Corporation sent a researcher to look into possible partners for a joint venture and Kinugawa Rubber Industry is employing the Vice-President of Mexico Nissan to examine future investment possibilities.

## APPENDIX F—Letters to Subcommittee on Trade Regarding Quality Problems

### Letter No. 1

As a middle-aged person who has been exposed to automobiles all his life, I think that both industry and labor should take a good look at their product! Many of my friends who would never in their lives have bought a foreign car are changing their minds rapidly because of their experiences with their new American-made cars that are constantly breaking down, leaving them stranded on the highways or at their destinations away from home, where they cannot get the cars to run.

Repeated trips to the dealer only result in further frustrations: "Nothing is really wrong—it must be something you did" is a common remark the first time. Then the car's carburetor has to be rebuilt, and one of my fellow workers has had her 1980 Z back to the dealer at least five times, and it has yet to be fixed. She has been denied the use of the car for at least two weeks.

My own '77 Y has had to have its radiator "recored" at a cost of nearly $200.00 because the bottom of it decayed and developed so many "pin" holes it couldn't be repaired in just that section.

In case after case, people tell me how satisfied they are with the foreign X, X, X, and X. They either don't break down in the first place, or one or two quick trips to the dealer is enough to correct the problem, and it stays corrected!

Completely new thinking is what is required now, with an emphasis on quality, craftsmanship, and workmanship. Pride in the company product is a must, and workers must feel a part of it.

### Letter No. 2

I am writing to you about foreign cars. They are good, they are wonderful. America needs them. Let's face it, we have a gas shortage, not a car shortage. The foreign cars get far better mileage . . . they are better designed, better engineered, better built.

I recently bought, instead of a imported X, which I had considered, a domestic Y, I am now sorry I bought it. First, it is a tin can, sloppily put together, I discovered many things wrong with it after I got it. The sticker claims it gets an overall rating of 17 mpg with 23 on the highway. I drive it mostly on the highway . . . I have never gotten better than 14 mpg. Previously, I have owned 4 foreign cars over the years. They were gas savers . . . and built like solid tanks . . . you could not find anything wrong with them.

### Letter No. 3

I have owned 35 American made autos—all new except two. Last fall when my wife wanted to purchase a small car, I insisted that she try out our cars first. The first one had a seat more like a wooden bench—it rode awful. At another place the salesman tried to get the door open far enough so my wife could get in but where the door and fender came together the door only opened about 12 inches. At the next stop the door opened far enough but just as my wife was getting in a piece of moulding fell off and hit my wife on the head. She turned to me and said, "Enough is enough." Needless to say, we purchase the cheapest Japanese car we could get, an X. It is the best made car we ever owned. It is just beautiful the way it is put together—things fit.

The American labor force is responsible for our poorly made cars. I suggest that we bring over Japanese inspectors to help straighten out our serious problem.

### Letter No. 4

I wrote to my Congressman last week about the difficulties I am having getting delivery of foreign X for my rental fleet as a result of UAW lobbying in Japan.

I have tried all of the U.S. small cars at one time or another in my fleet and have documented that the cost of ownership of the U.S. subcompacts is at least 25 percent higher than the Japanse imports even though the initial purchase price of the U.S. car is usually slightly lower. Additionally, the reliability, performance, customer acceptance and overall quality of the Japanese import far exceeds that of the U.S. version.

LETTER No. 5

Unfortunately for the American automobile industry, more and more consumers are becoming convinced that foreign cars are built better, and more fuel efficient. I for one have been convinced, after the premature engine failure of my Y after less than 21,000 miles. Not only is the American automotive industry producing an inferior product, but they are not standing behind their product. But then, who could blame them.

The problems facing the American automotive industry cannot be solved by import quotas. Foreign competition is one of the few things that is preventing the industry from producing an even more inferior product. It is not the giant American automobile industry that needs protecting from foreign competition, but the consumer who needs protection from defective American cars. Stronger government regulations and enforcement, to protect consumers, might force Detroit to build the quality products they are surely capable of producing. In this way consumer confidence can be restored and import quotas will not be needed to reverse the trend in foreign car sales. I for one, will not buy another American car until I can be assured, in writing, of their quality; quotas or no quotas.

LETTER No. 6

As a former co-owner with my husband of a X 6 cylinder Station Wagon and an X 4-door, I feel the need to write to you about the hearings to limit imports.

Once before we were made to feel guilty and un-American because we had these imports, so we traded for American-made cars. Now I drive an American-made Y 6 cylinder station wagon. Did you know the front seat windows are the only ones that roll down? Our children are grown so it is usually only my husband and me in the car. To get flow-through ventilation in our foreign-made cars, we pulled a lever under the front dash or on it. To get flow through air to this Y, we have to open the front seat doors, get out, open the back seat doors, push out the little vent windows, close the back seat doors, open the front seat doors and get back in the car! Think about that——

The other choice is to turn on the air conditioner and use more gas to operate it.

These "non-mobile" windows apparently do not violate the Department of Transportation's Safety Standards. I'm glad I did not have this kind of car when I was a Cub Scout Den Mother. Just think about this station wagon with 8 little boys and only the front windows roll down!

I'm a member of a birding group. We can't roll the back windows down to get a better look; we can only get out and wipe them clean again, and again. So nobody wants to car pool with me. Think about this, please. What good is an American made car if it doesn't fill one's needs?

I want a comfortable car as well without having to buy the top of the line to get seats that adjust. I had everything I needed as standard equipment on my X including a trip meter. In this Y on one trip the front wheel almost came off (defective bearings), the speedometer stopped working on another trip, and on a third trip, the speedometer needle fell off while we were driving over in south Texas. I no longer have any confidence in the car. What can I trade for? I'd like a foreign X car, but that would not solve our problem with American car manufacturers.

LETTER No. 7

I am a sales representative who, for the past 25 years, has averaged 50,000 miles per year. I have become so disgusted with the poor quality and performance and service of "Detroit"-made cars, I have started to switch over to Japanese X. We have 2, and we (family of 8) intend to buy more X's come hell or high water.

Our American-made cars:

1. Y: Sloppy manufacturing by "over-paid", "over-benefitted", "lazy" union workers who don't seem to give a damn about quality and the consumer. I'll never buy another Y product!; Complete run-around by the dealer, district office and headquarters regarding proper warranty service. This alone cost me hundreds of dollars, wasted gasoline an dtime, and I finally gave up with Y products in total disgust.

2. Z: How do you expect the American public to trust a manufacturer who installs the wrong engine, and who produces cars with faulty transmissions, among other things?

3. A: After owning 3A products in the last 10 years, I say that A deserves its fate. I've had much trouble with their ignition system; sloppy dealer work (almost amateurish); and dealer run-around on warranty service (not to mention switch and bait tactics by one dealer on a "demonstrator.") Regardless of A claims recently, I'll never trust A advertising etc. They have dug their own grave.

4. B: Excellent product and service. We have 2 B's now, and had 3 more in the past 15 years. They are the only decent American manufacturer left, and please help them to stay in business.

5. Mr. Fraser * * * If he would get the auto workers to do their jobs properly, he could solve about 80 percent of the auto industry's problems. Has anyone ever said "Don't buy a Japanese or German auto made on Monday because the workers come in too hung over to work right?" The foreign workers take pride in their product!

I refuse to buy products that have defects in workmanship when the defects aren't taken care of by the manufacturer. Y is the reason that I switched to imported X tires. Three blow-outs of Y's and two replacement Y's blew out. My complaints to Y netted me a letter telling me how to inflate my tires properly. Never will I trust my life, or the lives of my family, to inferior-made Y tires. I've never had a blow-out on a X tire.

I also refuse to buy a new car that is equipped with Y tires.

I work on straight commission, and as an American consumer, I will spend my hard-earned money for the best product, best value, and best warranty protection that I can get. Unfortunately, very few American-made automobile products are in this category.

LETTER No. 8

I am a Mechanical Engineer closely associated with auto company X for over 45 years. In fact, they financed my entire engineering undergraduate work at a University in the 30's. This relationship and my keen interest in automobile design over the years has led me to become increasingly disgusted with the lack of good design practices desperately needed in the generation of U.S. cars. Practically nothing has been done to integrate into the basic design of the engine all the auxiliary functions and capabilities that have been added thru the experient of separate mounting brackets, belt and pulley drives, wires, cables and hoses. The result is an unbelievable tightly packed mess under the hood that demands hours of any mechanic's time to unscramble and dismount before he can get to the area that needs attention. Would you believe five hours to change the spark plugs in car Y?

Compare this amateurish Detroit product with Japan's Z, for instance, where the engine proper and its auxiliaries are uncluttered and readily serviceable without uniquely designed tools.

You should be interested that authorities in the automotive design field rate Japan No. 1 in quality of engineering design; Germany is No. 2; and the U.S. trails as a poor No. 3. [sic]. This is why there is such a demand for Japanese and German cars and Congress should not interfere with consumer demand or the means to fill it. One would hope that Detroit would eventually wake up to why it's not getting as much of the market as it would like. Good quality always commands the market, so Detroit's Rube Goldberg output should be allowed to slump. Perhaps they'll start to do some grass roots engineering for a change.

## APPENDIX G

[From the Washington Post, June 1, 1980]

### AUTOMOTIVE PRIMER: A TALE OF TWO CITIES

(By Peter Behr)

MAHWAH, N.J.—The two auto assembly plants look the same, sprawled 15 miles apart on opposite sides of the Hudson River.

General Motors and Ford. Tarrytown, N.Y., and Mahwah, N.J.

This month, however, Ford will shut down the Mahwah plant, the company's largest, while GM's Tarrytown plant still runs full tilt.

The story of Mahwah and Tarrrytown appears to be more than the head-to-head competition between two cars, Ford's Fairmont and Chevrolet's Citation, although that is the primary reason why Tarrytown won and Mahwah lost. The Citation, with its advanced front-wheel drive engine and improved gasoline mileage, is selling fast. The more conventional Fairmonts and Mercury Zephyrs made at Mahwah are not.

That was not the only reason that Tarrytown has been successful and Mahwah has not, however.

Ford officials say that Mahwah had a history of problems with quality, absenteeism, production costs and labor-management tension. Despite improvements in recent years, Mahwah still ranked near the bottom, Ford claims.

The Tarrytown plant, on the other hand, is one of GM's success stories: the site of six-year-old experiment by GM and the United Auto Workers Union to "humanize" the assembly line. The company and the union now trade ideas for solving plant and labor problems, and in the process, morale and workmanship have steadily risen, according to union and company officials.

Ford officials put the "problem" tag on their own plant in April, when they announced the decision to close the plant.

"Mahwah had a less favorable quality history than another plant which we had considered, and the cost was high," said Harold A. Poling, executive vice president for Ford's North American operations.

John A. Manoogian, Ford's director of product quality assurance, put it even more strongly in an interview: "There was some evidence of improvement, but if you have to choose, you select the plant that's historically given you a little more heartburn." Mahwah rated "consistently poorer than other Ford plants," he said.

Although Ford has not documented comparisons publicly, it did give several congressmen a look at the ratings at a mid-April meeting April after the announcement. Rep. Benjamin Gilman (D-N.Y.) said Mahwah was seventh out of eight plants in a comparison of manufacturing costs in recent years. It was equally low on direct labor costs and the expense of repairs the company had to pay for under warranty programs.

At Ford, trying to combat Japanese imports whose buyers praise their workmanship, quality has become the No. 1 priority, Manoogian said.

A swarm of protests followed Ford's criticism of the Mahwah plant.

"We're not there to jeopardize our own jobs," said auto worker Jim Berke, who now faces unemployment in June, along with 5,000 other Mahwah workers.

"This is a rough business," said Gerry Felker, a production line supervisor. "It takes years to get accustomed to what you have to do. But 95 percent of our work force is sincere about their jobs."

"Sure you have problems," said Richard Dragotta, chairman of Mahwah's United Auto Workers local. "It's the most boring, monotonous job there is."

But he and other plant employes said that Mahwah's problems were in the past and in recent years, quality has been good.

Joseph Reilly, former president of the Mahwah local said an influx of minority group workers in the late 1960's created tensions within the plant.

"You've got a real melting pot here," said Reilly. "It took a long time to get all those relations worked out. But the last few years have been pretty good."

The company and the union clashed in 1976, when the local led a nationwide strike against Ford.

"They were trying to run the place like a military installation," said Dragotta, the local chairman. Following a change in management, the atmosphere improved, he and other Mahwah employees say. "We haven't had an arbitrator in there in six years," Dragotta said, and the number of disputes over work grievances now is about nil.

But Mahwah, it appears, could not escape its history.

Ironically, Tarrytown's reputation was even worse nine years ago.

"It was known as having one of the poorest labor relations and production records in GM," according to Robert H. Guest, a Dartmouth University professor whose study of the plant was published in the Harvard Business Review. "Workers were mad at everyone. They disliked the job itself."

Tarrytown, however, was in from the start on the GM–UAW experiment in teamwork that began in 1973, when the company and the national union agreed to seek ways of improving the quality of work life at the plant.

That led to a series of voluntary training and problem-solving meetings in 1974 for plant employes. Although the program took several years to develop fully, its roots were planted. The company and the union had begun to listen to one another and put themselves in one another's places.

The direct benefits from closer cooperation have come steadily—fewer window leaks and breakages, improved welding operations and better morale. Union records show that absenteeism dropped from 7½ percent of the work force when the program began to between 2 and 3 percent in December 1978. By then, the number of union-company grievance cases had dropped to 32 from an average of 2,000 in the early 1970s.

GM officials say over and over again, however, that such measurements of increased productivity were not—and are not—the goal of the "quality of work life" program now in place throughout GM.

"At GM, quality of work life is both a goal and a process," said D. L. "Dutch" Landen, who directs the program for the company.

The direct goal is not improving profitability or productivity, he said. Instead, the program aims at improving customer satisfaction and employe morale and effectiveness, he added.

At newer GM plants like one in Brookhaven, Miss., the entire philosophy and organization of the assembly line has been altered, and along with it, the traditional lines of authority.

"It is a very egalitarian approach," said Landen. "There is no dining room for executives, no reserved parking places nearest the front door for the management. It's first come, first served." The point, he says, is that many of the things companies have done to distinguish between groups of employes are no longer appropriate.

"The job is still putting nuts on bolts. The basic elements remain the same. But the role of the person in the organization becomes a fundamentally different one," he said.

GM clearly had a better idea, Mahwah workers say.

But Ford's Mahwah plant was headed in that direction, too. About five months ago, Ford management and the local UAW established a committee of electricians, machinists and other skilled workers to talk through plant maintenance and repair problems handled by the skilled trades.

It was not a honeymoon, said local union official Arthur Kolb, "but we were becoming partners with the company" on maintenance problems.

Both sides found that was an improvement on working by the book, said electrician Henry Herman: "They were getting cooperation."

"It was on the way to being a success," said Kolb.

But not in time.

## APPENDIX H

### TAXES AND FEES LEVIED UPON AUTOMOBILES FOR BELGIUM, ITALY, WEST GERMANY, JAPAN, AND FRANCE

*Belgium*

Value-added tax (TVA) : 25 percent for cars.

Annual road tax: Passenger cars (includes buses with seats for up to 9 passengers including driver), based on fiscal horsepower as follows:

| Fiscal horsepower | Tax per year | |
|---|---|---|
| | Belgian francs | United States dollars |
| 4 and under | 792 | 21.94 |
| 5 | 990 | 27.42 |
| 6 | 1,430 | 39.61 |
| 7 | 1,870 | 51.80 |
| 8 | 2,310 | 63.90 |
| 9 | 2,750 | 76.18 |
| 10 | 3,190 | 88.36 |
| 11 | 4,136 | 114.57 |
| 12 | 5,082 | 140.77 |
| 13 | 6,028 | 166.98 |
| 14 | 6,974 | 193.18 |
| 15 | 7,920 | 219.38 |
| 16 | 10,362 | 287.03 |
| 17 | 12,804 | 354.67 |
| 18 | 15,246 | 422.31 |
| 19 | 17,688 | 489.96 |
| 20 | 20,130 | 557.60 |
| Over 20 | [1] 18,130 | [2] 506.91 |

[1] Plus 1,000 for every fiscal horsepower over 20, plus 10 percent.
[2] Plus 27.70 for every fiscal horsepower over 20, plus 10 percent.

Formula for computing fiscal horsepower: Fiscal horsepower equals 4 times the cylinder capacity in liters plus a constant from the following table:

| Cylinder capacity (liters) : | *Constant* |
|---|---|
| Up to 0.9 | 1.5 |
| 1.0 to 1.2 | 1.75 |
| 1.3 to 1.5 | 2.0 |
| 1.6 to 1.7 | 2.25 |
| 1.8 to 1.9 | 2.50 |
| 2 to 2.1 | 2.75 |
| 2.2 to 2.3 | 3.0 |
| 2.4 to 2.6 | 3.25 |
| 2.7 to 3.3 | 3.50 |
| 3.4 to 3.9 | 3.75 |
| 4 to 4.9 | 4.0 |
| 5 to 5.9 | 4.50 |
| 6 and more | 5.0 |

*France*

Value added tax (TVA) : Cars (up to 9 seats)—33⅓ percent c.i.f. duty paid value (DPV).

Customs stamp duty : 2 percent of the import duty.

Annual vignette tax : Levied on cars and based on age and/or fiscal horsepower (C.V.)



63-000 O - 80 - 7

| Fiscal horsepower [1] | Tax per year [2] Private cars (under 5 yr old) | Company cars (under 10 yr old) |
|---|---|---|
| 0 to 4 | $20 | $404 |
| 5 to 7 | 30 | 404 |
| 8 to 11 | 81 | 585 |
| 12 to 16 | 141 | 585 |
| 17 and over | [3] 202 | 585 |
| 17 and over | [4] 363 | 585 |

[1] Annual auto certification tax averages $400 on large cars versus $50 on smaller cars.
[2] Highway tolls are progressive based on engine capacity or wheelbase.
[3] Under 2 yr old.
[4] 2 to 5 yr old.

Fiscal horsepower is determined by multiplying the cylinder capacity in liters by 5.73. The French Government is studying other criteria upon which to base the tax which would have more relations to effective fuel consumption figures. These studies are still in the technical phase.

*West Germany*

Value-added tax (TVA) : 11 percent on DPV.

Annual road tax: 14.40 marks (U.S. $6.09) per 100 cc. of cylinder capacity on passenger automobiles.

*Italy*

Value added tax (TVA) : Passenger cars—with engine capacity up to 2 liters, 14 percent, and with engine capacity exceeding 2 liters, 35 percent.

Taxes generally are not applied to used cars.

Uplift: Import duties are levied on c.i.f. ad valorem plus 3 percent uplift.

Stamp tax: 0.2 percent of duties and fees including road tax.

Annual use tax:

| Engine capacity (liters) : | *Annual tax* |
|---|---|
| 1 | 12.50 |
| 2 | 74.50 |
| 3 | 151.30 |
| 4 | 263.30 |

Above figures do not constitute a complete tax schedule.

1. Highway tolls are progressive based on engine capacity or wheelbase.
2. Annual auto certification tax averages $400 on large cars vs. $50 on smaller cars.

*Japan*

Commodity tax: The tax is assessed on factory sales price for domestic and on the duty-paid value for imports and is paid by the domestic manufacturer or by the importer.

Cars with a wheelbase: Up to 270 cm. or with an engine capacity up to 2000 cc., 15 percent, and exceeding 270 cm. or with an engine capacity exceeding 2000 cc., 20 percent.

Automobile tonnage tax: (1) Passenger cars for private use: $45.37 for every one-half metric ton (1,102 lbs.) or fraction thereof of curb weight. Paid every other year, and (2) passenger cars for business use: $10.08 for every one-half metric ton or fraction thereof of curb weight. Paid every year.

Auto acquisition tax: 5 percent levied on actual purchase price.

Automobile tax: The tax is paid annually by the vehicle owner to the prefecture in which the usual parking place of the vehicle is located.

| | Private use | Business use |
|---|---|---|
| Small passenger cars [1] with engine capacity of: | | |
| 360 to 1,000 cc | $84.60 | $25.20 |
| 1,000 to 1,500 cc | 99.00 | 28.80 |
| 1,500 to 2,000 cc | 113.40 | 32.40 |
| Large passenger cars [2] with wheelbase of: | | |
| 3.048 m (120 in) or less | 252.00 | 93.60 |
| Over 3.048 m | 421.20 | 187.20 |

[1] Small passenger car: Length—4.7 m (185 in) or less; width—1.7 m (67 in) or less; height—2 m (79 in) or less; engine capacity—2,000 cc or less.
[2] Large passenger car: Specifications exceeding those of a small passenger car.

Note: Data is for all taxes and fees in effect as of January 1977, U.S. dollar amounts reflect currency exchange rate at this time.

Source: Unpublished data compiled from various sources by the U.S. International Trade Commission.

# APPENDIX I—Survey of Automotive Trade Restrictions Maintained by Selected Nations

Compiled by the Office of International Sectoral Policy, U.S. Department of Commerce from information supplied by U.S. Embassies, Commerce country analysts, and industry sources. The accuracy of the information received has not been verified.

Summary of Foreign Automobile Trade Restrictions 1/

| Country | Local Content Requirements | Import Restrictions 2/ | Export Requirements | Operations | |
|---|---|---|---|---|---|
| | | | | Japanese | United States |
| Algeria | No | Yes | No | | |
| Argentina | Yes | Yes | Yes | Yes | Yes |
| Australia | Yes | Yes | No | Yes | Yes |
| Austria | No | Yes | No | | Yes |
| Belgium | No | Yes | No | | Yes |
| Bolivia | Yes | Yes | No | | |
| Brazil | Yes | Yes | Yes | Yes | Yes |
| Chile | Yes | Yes | Yes | | Yes |
| Colombia | Yes | Yes | Yes | | Yes |
| Denmark | No | No | No | | |
| Ecquador | No | Yes | No | | Yes |
| Egypt | Yes | Yes | No | | |
| France | No | Yes | No | | |
| Germany | No | No | No | | Yes |
| Ghana | No | Yes | No | | Yes |
| Greece | Yes | Yes | No | Yes | |
| India | Yes | Yes | No | | |
| Indonesia | Yes | Yes | No | Yes | Yes |
| Israel | No | Yes | No | | Yes |
| Italy | No | Yes | No | | |
| Japan | No | No | No | | Yes |
| Kenya | No | Yes | Yes | Yes | Yes |
| Kuwait | No | No | No | | |
| Malaysia | Yes | Yes | NA | | |
| Mexico | Yes | Yes | Yes | Yes | Yes |
| Morocco | Yes | Yes | No | | Yes |
| Netherlands | No | No | No | | |
| New Zealand | No | Yes | No | Yes | Yes |
| Nigeria | Yes | Yes | No | | |
| Norway | No | Yes | No | | |
| Pakistan | Yes | Yes | Yes | | Yes |
| Peru | Yes | Yes | No | Yes | Yes |
| Philippines | Yes | Yes | Yes | Yes | Yes |
| Protugal | Yes | Yes | No | Yes | Yes |
| Saudi Arabia | No | No | No | | |
| Singapore | No | Yes | No | Yes | Yes |
| South Africa | Yes | Yes | No | Yes | Yes |
| South Korea | Yes | Yes | Yes | | |
| Spain | Yes | Yes | No | | |
| Sweden | No | No | No | | |
| Switzerland | No | No | No | | |
| Taiwan | Yes | Yes | No | | |
| Tanzania | No | Yes | No | | |
| Thailand | Yes | Yes | No | Yes | Yes |
| Turkey | Yes | Yes | Yes | | Yes |
| United Kingdom | No | Yes | No | | Yes |
| Uruguay | Yes | Yes | Yes | | Yes |
| Venezuela | Yes | Yes | Yes | Yes | Yes |
| Yugoslavia | Yes | Yes | No | | |

1/ The measures cited in this chart are for new cars. Trade restrictions on used cars are not reflected.

2/ Import restrictions apply to non-tariff measures maintained by a country which deal solely with imports. Tax measures which apply to both imports and domestically produced products are not included.

Industrialized Countries Surveyed

Australia: A local content requirement of 85 percent is in effect. However, under the Export Facilitation Scheme, due to commence on March 1, 1982, Australian car manufacturers would be allowed to credit exports against local content requirements. These credits will increase from 5 percent in 1982 to 6.25 percent in 1983 and 7.5 percent in 1984 and can be used to import components duty free. The effect would be to reduce the local content requirement to 75 percent by 1984. Australia maintains a quota limiting imports of assembled vehicles to 20 percent of the existing market. There are import tariffs of 35-57.2 percent depending on stage of assembly. No export incentives exist. General Motors, Ford, Chrysler, Toyota and Nissan produce vehicles in Australia.

Austria: No local content regulations or export requirements are in effect in Austria. The automobile import duty is 20 percent. The value added tax (VAT) on automobiles is 30 percent. Steyr-Daimler-Puch (S-D-P) produces mopeds, trucks, busses and tractors. General Motors will shortly begin production of automobile engines and transmissions. S-D-P and BMW will soon produce diesel automobile engines.

Belgium: No local content regulations or export requirements are maintained by Belgium. There are reportedly quantitative restrictions on imports from Japan, Taiwan, South Korea, Indochina, and Eastern European countries. The import tariff on automobiles is the EC's 10.9 percent common external tariff. A 25 percent value added tax is levied on all automobiles sold in Belgium. Ford, GM, British Leyland, Peugeot-Citroen, and Volvo assemble cars and trucks, while Renault and Volkswagen assemble only automobiles in Belgium.

Canada: U.S.-Canadian auto trade is conducted under the terms of the Automotive Parts Trade Agreement (APTA). This trade is duty free. Canada has a 14.2 percent import duty on imports of non-U.S. cars and trucks and has safety and emission requirements similar to the United States. There are no local content requirements or quantitative restrictions. Chrysler, GM. Ford, AMC and Volvo have manufacturing facilities in Canada.

Denmark: There are no restrictions on automobile imports except the 10.9 percent EC common external tariff. A 20.25 percent VAT is levied.

France: There are no local content regulations or export requirements. Imports of Japanese automobiles have never risen to over 3 percent of the market and the French government has announced that it does not want them to exceed this level. The EC's 10.9 percent automobile tariff applies. There is a 33.3 percent VAT. General Motors and Ford produce components in France.

Germany: There are no local content, export requirements, or quantitative limitations. Germany applies the EC's 10.9 percent common external tariff on automobiles and has a 13 percent VAT. Germany maintains rigid safety and emmissions standards. In addition, there is a graduated motor vehicle tax based on horsepower. General Motors and Ford have manufacturing/assembly plants.

Italy: No local content regulations or export requirements exist. Italy applies the EC's 10.9 percent common external tariff on automobiles. Italy has formal quantitative restrictions on vehicle imports from certain Far Eastern (1980 allotment from Japan is 2,200 cars) and Eastern European countries. In addition, Italy's strict safety standards make certification of imported automobiles difficult to obtain. The automobile import duty is 10.9 percent. A VAT varying from 18-35 percent depending on engine size is applicable to all automobile sales.

Japan: Japan maintains no local content requirements or quantitative restrictions or import duties on automobiles. There is a 15 or 20 percent commodity tax levied on automobiles depending on engine size and on overall auto dimensions, and an annual automobile tax which also increases by engine size. The mechanical safety and environmental modifications required to comply with Japanese stringent vehicle regulations have discouraged imports. Additional disadvantages to American automobiles include the higher dealer margins and a complicated multi-layered distribution system.

Netherlands: The Dutch vehicle manufacturing industry is relatively small. DAF a Dutch firm, manufactures commercial and military vehicles. Volvo produces passenger cars and there are a number of smaller Dutch bus and trailer manufacturers. The tariff on automobiles is 10.9 percent for imports of automobiles from the U.S. into the EEC. There is an 18 percent value-added tax. Additionally, manufacturers or importers of passenger cars have to pay a special consumption tax of 16 or 17 percent. Imports are not subject to any special import licenses or quantitative restrictions.

New Zealand: There are no specific regulations dictating the amount of local content in automobiles assembled in this country. However, an import licensing system mandates the use of local components. Tariffs for completely built up autos (CBU) are: 55 percent for general tariff; 20 percent for Australia and the U.K.; and 33.3 percent to 55 percent for Canada depending on the level of commonwealth country content. Import tariffs for completely knocked down (CKD) units are: 45 percent general tariff rate; preferential rates of 6.25 percent for Australia and the U.K., and 13.75 percent to 45 percent for Canada depending on the level of Commonwealth country content. Certain Australian CKD autos are duty free and certain CBU autos are subject to a 10 percent duty under terms of the New Zealand Australian Free Trade Associaion. Licenses are required to import CKD cars but are, in effect, obtained automatically by assemblers. Licenses for CBU units are strictly controlled and currently maintained at a level of approximately 4 to 5 percent of the total annual sales of 65,000 to 70,000 units. Ford, General Motors, Chrysler, Toyota, British Leyland, Honda, Mazda, Skoda, Subaru, Datsun, Mitsubishi, and Talbot (Peugeot) have local assembly plants.

Norway: There are no local content regulations or vehicle import restrictions. Automobile import tariffs are 7.6 percent with an additional vehicle tax varying from 68-153 percent of the vehicle value. There is no automobile production in Norway.

Spain: Local content requirement for vehicles assembled in Spain is 55 percent. There are no import quotas. The import tariff for non-EC/EFTA source vehicles is 68 percent with a compensatory import tax of 13 percent. Luxury tax varies between 17.6-35 percent depending on horsepower of vehicle. Fiat, Renault, Citroen, Peugeot, Ford, General Motors have assembly operations in Spain.

Sweden: There are no local content regulations. There is a 9 percent CIF import tariff on passenger cars and a 20.63 percent VAT on the duty paid value. There are apparently nonrestrictive import licenses, as well as stringent safety and emission standards. Swedish producers receive a rebate of all duties paid on imported components incorporated in a car which is exported. Only Saab and Volvo manufacture in Sweden.

Switzerland: Tariffs on passenger vehicles imported into Switzerland from the U.S. range from Swiss Francs 79.62 to 134.50 per 100 kilograms gross. Swiss impose duties on weight rather than on value. Substantially lower tariffs have been accorded to EC and EFTA suppliers. In addition, a turnover tax of 8.4 percent ad valorem is levied. No quantitative import restrictions are maintained; however, at time of registration of an imported vehicle in Switzerland, the U.S. made product must conform with the Swiss Regulations on Construction and Equipment of Motor Vehicles, amendments to which became effective on January 1, 1980. The objectives of the amendments are to reduce gradually noise level limits by October 1, 1982 and 1986, respectively. Swiss-made trucks and jeeps are manufactured and assembled at Arbon in the Canton of Thurgau.

United Kingdom: There are no local content regulations or export requirements. The import tariff on automobiles is the EC's common external tariff of 10.9 percent. It has been publicly reported that imports from Japan are voluntarily limited by the Japanese manufacturers to approximately 10 percent of the market. British Leyland, Ford, GM, and Peugeot-Citroen manufacture in the U.K. In addition there are numerous small, specialty firms. Current plans are for British Leyland to manufacture Honda designed automobiles in the near future.

## Developing Countries Surveyed

### The Andean Pact's Automotive Program

In 1977 the five Andean Pact members (Bolivia, Colombia, Ecuador, Peru, Venezuela) signed an agreement calling for the production of vehicles based on local componentry, with local content eventually reaching 70 percent. According to the Pact's schedule, the program will be in effect by the end of 1983. However, due to disagreements by Pact members as to who would produce certain types of vehicles and, even more importantly, key components such as engines, progress in implementing the program has been slow.

A Common External Tariff is to give protection against non-pact vehicles, 115 percent in the case of passenger cars similar to those to be produced in the Andean region and 155 percent for cars other than those produced there.

The following companies have signed agreements to participate in the program: General Motors, Volkswagen, and Fiat; other companies that are considering participating are: Ford, Renault, Mack Trucks, Nissan, Pegaso, and Volvo. In addition to these general provisions, member countries have the following specific rules:

Bolivia: There are no vehicle manufacturing or assembly operations in Bolivia.

Colombia: A 33 percent local content regulation is maintained on firms which assemble automobiles from imported components. Imported automobiles are assessed a 150 percent duty, a 35 percent sales tax, a 5 percent export promotion fee, a 1.5 percent export diversification fund tax, and a 1 percent consular invoice fee. There are no quantitative restrictions, but import licenses are used to restrict imports. Renault produces passenger cars. GM produces automobiles, trucks and van chassis. Fiat produces cars, trucks and buses.

Ecuador: There are presently no local content restrictions or export requirements in Ecuador. Import duties on automobiles range from 100 percent to 190 percent depending on price; on trucks and vans duties are 80 percent or 100 percent depending on type and capacity; and on four wheel drive vehicles they are 60 percent or 70 percent depending on price. In addition, an import surcharge of 30 percent on the c.i.f. value is applied to all motor vehicle imports except trucks. On all items, importation requirements call for a 1 percent service charge and a 50 percent prior deposit, both on the c.i.f. value. Importers are required to prepay 80 percent of the import duties before the import license is received. This license is issued by the Ministry of Industries, Commerce and Integration. In addition to the overall quota, each automotive dealer or distributor is assigned an individual quota. This is computed on the basis of past imports, and therefore, it varies for each distributor/dealer. Newly established dealers are assigned a quota of $40,000 per each six months.

Ecuador has begun to implement its ANCOM (Andean Common Market) assigned rights to manufacture: (1) light passenger cars and engines of 1050-1500 cc. motor size, and (2) light trucks and transmissions of 3.0-4.6 metric tons capacity. The Ecuadorean Government and Volkswagen signed a contract in December 1978 for the production of a passenger car. General Motors is carrying out feasibility studies for the production of light trucks.

Peru: Local content regulations require 10-35 percent local content depending on vehicle type. Although built up vehicle imports have been prohibited to date, reports are that import licenses will be obtainable in 1980. Import tariffs are 60 percent on trucks and 155 percent on automobiles. There is a 14.4 percent manufacturers tax. Exports are encouraged by rebating the import duties paid on imported components in the exported vehicle. Chrysler, Volkswagen, and Nissan assemble cars and trucks. Toyota assembles cars and Volvo assembles trucks.

Venezuela: Local content regulations call for annual increases from 48 percent currently to 90 percent in 1985. Imports are restricted to vehicle types produced locally. The tariff on imports is 120 percent on Venezuelan Government reference price. Export requirements are based on a percent of the value of national automobile production and in some instances they are quantitative requirements written into the assembler's contract. In addition to three local firms, Renault and Volkswagen assemble cars; Fiat, GM, and Ford assemble cars and trucks; Mack and International assemble trucks; and AMC and Toyota assemble jeeps.

According to press reports, the Venezuelan Economic Cabinet approved a new automobile import policy on April 24, 1980. Now prohibited is the importation of 8-cylinder models (except by the government). All other models not produced in the country could be imported without license upon payment of ad valorem duty of 120 percent and a specific duty of 100 Bolivars per kilo. Models similar to those produced in Venezuela would pay an ad valorem duty of 120 percent only. Vans and 9-11 passenger vehicles would pay 135 percent ad valorem and 100 Bolivars per kilogram specific duties. Effective date of this new measure will presumably depend on publication of corresponding decree in the official gazette with new list of reference prices for 1980. Last year this took place on June 1st.

Other Developing Countries

Algeria: There are no automobile manufacturing assembly operations in Algeria. Unspecified quantitative restrictions on automobiles are in effect. Import duties on automobiles range from 40-50 percent.

Argentina: Local content regulations exist for all vehicles as follows: passenger - 93 percent in 1980, reduced to 88 percent in 1982; commercial - from 93-90 percent in 1980, reduced to 75-88 percent in 1982. Import tariffs on vehicles are 95 percent on cars (declining to 55 percent in 1982) and 65 percent on trucks (declining to 45 percent in 1982). Minimum import prices are $4 per cubic centimeter engine displacement plus 15 percent freight on cars. Export requirements apply only to intercompany parts shipments. Under this requirement exports must be 3 times the import level. Ford, Volkswagen, Fiat-Peugeot, Mercedes-Benz, and Saab have manufacturing facilities in Argentina.

Brazil: Local content regulations are in effect but are now individually negotiated with each firm with factors such as the individual firms balance of payments being taken into account.

Export incentives in the form of reduced import tariffs on parts are granted (under GATT these are being phased out). Imports of automobiles are currently embargoed. Normally, import tariffs on passenger cars are from 185 percent to 205 percent. In addition there is a system of minimum import values based on the car's weight. Passenger cars are produced in Brazil by Ford, GM, Volkswagen, Toyota, Pima and Fiat. Trucks are manufactured by Ford, Chrysler, GM, Mercedes, Fiat, Saab, Volvo, and Toyota.

Chile: Local content regulations requiring 30 percent of assembled cost for automobile manufacturers are in force. Exports are not required unless local content is less than 30 percent. In this case the local assemblers must export sufficient products to reach 30 percent of local production costs. Import tariffs on automobiles range from 10-80 percent depending on engine displacement. The 80 percent tariff will be reduced each year to reach a final rate of 10 percent in 1986. There is a 100 percent consumption tax if an automobile's CIF value plus duty, plus a 20 percent VAT exceeds $12,000. This consumption tax only applies to the amount over $12,000. There are no quantitative restrictions. GM assembles automobiles and trucks. Citroen, Fiat and Peugeot-Renault assemble automobiles.

Egypt: Local content regulations vary by contract with each assembler. Fiat has a joint venture for automobiles with 30 percent to 40 percent local content required and AMC jeeps are assembled with a 15-20 percent local content. There are no export requirements. Import duties vary from 85 percent to 200 percent depending on engine size and number of cylinders. Individuals are allowed to import only one car every two years and the importation of right hand drive cars is forbidden. Payment of import duties must be made in hard currency.

Ghana: There are no local content regulations or export requirements in Ghana. A purchase tax which varies from 5 percent to 100 percent based on the car's value encourages local production. Commercial vehicles assembled in Ghana do not pay this tax. Under the vehicle standardization policy in effect since October 3, 1979, only vehicles - passenger cars, pick-ups, cross country vehicles, and buses - manufactured by approved manufacturers may be imported. The list includes Peugeot, Datsun, Volkswagen, Renault, Mazda, and Mack Truck. Cars for diplomats and Ghanaian officials are exempt from this requirement. Renault and Toyo Kogyo assemble cars. Nissan, Toyota, and Vauxhall assemble cars and buses. British Leyland, Ford, and Mercedes-Benz assemble buses and trucks. Chrysler, Deutz, Hino, M.A.N., and Mack assemble trucks. Neoplan assembles buses. Import tariffs range from 15 to 35 percent.

Greece: The value added component requirement imposed on local motor vehicle assembly is a minimum of 25 percent without mandatory upward escalation. Tariffs on imports from non-EEC countries range from 10 to 20.7 percent. In November 1979, a voluntary system designed to restrain imports was adopted providing for a reduction of 20 percent in car imports. Bus imports require an import license. The issuance of licenses is, at times, delayed or withheld. A pre-import cash deposit of 56 percent for buses and 28 percent for passenger automobiles is also required. The deposits are retained by the government for two months.

India: Local content regulations exist only for the domestic Indian automobile producers. There is no investment by foreign automobile manufacturers. Exports are encouraged by cash subsidies and import replenishment licenses. Import tariffs on other vehicles vary from 100-140 percent depending on type and axle weight. Import licenses are generally not issued for passenger cars and those for commercial vehicles are issued on a limited basis.

Indonesia: Progressively stringent local content regulations are being instituted in the motor vehicle industry although lags in component manufacture are slowing implementation. While the Government hoped to achieve full local manufacture of components for the most popular types of passenger and light commercial vehicles by 1984, it has extended this deadline until an unspecified date for components not yet manufactured in Indonesia or not manufactured in sufficient quantity. Presently all passenger vehicles, and all commercial vehicles imported into Java and Sumatra, are to be imported completely knocked-down. Import tariffs on built-up passenger vehicles range from 30 percent plus a 10 percent sales tax on jeeps to 200 percent plus a 20 percent sales tax on passenger cars. There are no export requirements or quantitative restrictions. Local assembly plants produce the following makes of passenger cars: Suzuki, Datsun, Hino, Landrover, Holden, Isuzu, Volkswagen, Mercedes, Mitsubishi, Renault, Peugeot, Alfa Romeo, BMW, Dodge, Fiat, Tata, Steyr, Citroen, Berliet, Moskvitch, Subaru, Volvo, Ford, Toyota, Honda, Chevrolet, Bedford, Morina, Daihatsu, and Mercedes-Deutz.

Israel: There are no local content or export requirements maintained by Israel. Import duties are from 40 percent plus 2.50 shekels per kilogram for automobiles with engines 1,800 cc and less and 52 percent plus 1.25 shekels per kilogram for cars with engines 1,801 cc and larger. In addition, there is a purchase tax based on engine size which ranges from 85 percent to 150 percent plus a 5-7 percent import price uplift. These are assessed on a cascade basis. There are quantitative requirements attached to import licenses which are only granted to approved importers. Three Israeli firms assemble Ford cars: Ford, Dodge, Reo and Mack Trucks and AMC Jeeps. One local firm produces its own brand of trucks and passenger cars.

Kenya: No local content regulations exist but components manufactured locally may not be imported. Commercial and certain other vehicles are permitted to be imported only completely knocked-down. There are no export requirements. An import license accompanied by a 100 percent refundable prior import deposit is required. Import duties (CIF) on assembled passenger cars (other than public service-type vehicles) range from 40 percent for cars with an engine capacity not exceeding 1,200 cc, 75 percent for cars with a 1,751-2,000 cc engine capacity, to 150 percent with an engine capacity exceeding 2,250 cc. The duty on non-public service passenger cars, unassembled, for assembly into complete vehicles by an authorized assembler is 25 percent. Importers have been directed to seek 90-180 days credit overseas. The four authorized assemblers are Leyland Kenya Limited, General Motors Limited, Associated Vehicle Assemblers Limited and Fiat Kenya Limited. GM assembles Isuzu and Bedford trucks, British Leyland assembles trucks, Landrovers, Volkswagen microbuses and Mitsubishi light buses. Associated Vehicles assembles Datsun cars and buses, Peugeot trucks, Toyota trucks, Ford trucks, and Volvo trucks.

Import protection is accorded to local producers of the following automotive components: sealers, adhesives, batteries, tires, tubes, paints, flat glass, canvas, soft trim, upholstery, insulation, radiators, exhaust systems, leaf springs, spare wheel carriers, seat frames, wiring harnesses and brake linings.

Kuwait: There are no general restrictions on vehicle imports. A 4 percent ad valorem import tariff is in effect.

Malaysia: Under the ASEAN Automotive Federation (AAF) scheme for complementary ASEAN production, Malaysia will produce timing chains for cars; and spokes, nipples, and roller chains for motorcycles. Trade preferences by other ASEAN members would be granted these parts. Probably no further accreditation of additional capacity for the same product would be allowed until the ASEAN Committee on Industry, Minerals, and Energy determined that the market had expanded sufficiently to warrant further accreditation of similar projects.

Mexico: Local content regulations requiring 70 percent for passenger cars and 80 percent for trucks exist with a planned 5 percentage point increase of both in 1981. Imports of components are required to be offset by exports. Vehicle import duties range from 35 to 100 percent ad valorem. Vehicle imports are not allowed with the exception of a special customs zone near the U.S. border. Exceptions are usually only made if there is a shortfall in domestic supply. Chrysler, Volkswagen, Ford, GM and Nissan manufacture/assemble cars and trucks. American Motors produces cars and jeeps. Renault produces cars.

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Morocco: Local content regulations requiring 40-50 percent levels are in effect. All vehicle imports are restricted. All assembly operations are in part or totally Moroccan-owned. Through this system, Fiat, Opel, Simca, and Renault automobiles are assembled in Morocco. Berliet, Volvo, Bedford, Ford, DAF, Landrover, and Jeep utility, and industrial vehicles are assembled.

Nigeria: A 30 percent local content regulation is imposed after three years of assembly. Vehicle imports are restricted by import licenses and passenger vehicles with engines over 2,500 cc are prohibited. Passenger vehicles with smaller engines face duties of 50 to 250 percent. Volkswagen manufactures/assembles cars and minibuses. Peugeot manufactures/assembles cars. British Leyland manufactures/assembles trucks and Landrovers. Steyr manufactures/assembles trucks. Mercedes and Fiat will shortly begin to manufacture trucks and Nissan will start manufacturing automobiles.

Pakistan: There are no local content regulations as such but current use of locally produced components is encouraged by regulation and is reported to range from 26-60 percent of value depending on vehicle type. Projected use of local products is reported to be about 80 percent by 1985. Exports and imports are controlled. Commercial vehicle imports are prohibited. Imports of built up passenger vehicles are dutiable (75-350 percent ad valorem) depending on engine size. A state-owned corporation has a monopoly over the automobile industry. It has assembly arrangements with AMC (jeeps), Chrysler (trucks), GM (Isuzu trucks) Vauxhall (trucks and buses), Ford (minibuses), Suzuki (vans and pickups), Nissan (trucks), Toyo Kogyo (buses), Sumitomo (trucks), and Hino (trucks). This monolopy (PACO) controls the import of both completely knocked down and completely built up vehicles. Completely built up imports are limited to those being brought in by returning expatriate Pakistanis (6 months or more continuous stay overseas).

Philippines: The current local content regulations requirement is 62.5 percent. The import tariff rate varies from 30-72 percent for completely knocked down vehicles to 100 percent for assembled vehicles. There are three local automobile companies. One assembles Mitsubishi products and one assembles Volkswagens. The other assembles its own vehicles (the Tamaraw utility vehicle, a mini crusier military vehicle and various trucks). Ford has a body stamping plant and automobile assembly facilities. GM assembles cars and trucks, and manufactures transmissions.

Portugal: Local content regulations for vehicles assembled in Portugal are 22 percent in 1980 declining to zero in 1985. Current import quotas for completely knocked down and completely built up vehicles are scheduled to end in January 1985. Import duties for non-EC/EFTA source vehicles is approximately 4.5 U.S. cents per kilogram. Import quotas are scheduled to be phased out by 1985. GM, Ford, Renault, Citroen, Alfa Romeo, British Leyland, Peugeot, Talbot, Audi, BMW, Mercedes, Volkswagen, Toyota, Nissan, Mazda, Subaru, Honda, and Daihatsu have assembly operations in Portugal.

Saudi Arabia: There are no local content regulations or import restrictions. The import tariff is 3 percent of CIF value. Mercedes assembles trucks. A Saudi firm assembles buses using American-made chassis. The Saudi Arabian Government provides a subsidy to the National Company for Car Manufacturing, located in Jidda, in the form of an interest-free loan.

Singapore: There are no local content regulations or quantitive restrictions on vehicle imports. Import tariffs are 45 percent. There is a 150 percent additional registration fee, a $1,000 base registration fee for private and rental cars ($5,000 on company cars), and scaled road taxes. Mercedes, Ford, British Leyland and Volvo produce cars. Nissan produces vans.

South Africa: Passenger cars must contain 66 percent by weight local content. Starting in 1980, the local content regulations have been extended to light goods vehicles (approximately up to 2,800 pounds). The 1980 and 1981 requirements for these are 50 percent by weight. By 1982 these too must meet the requirement of 66 percent. Import licenses are required, but are granted to meet the full and reasonable requirements of components and subassemblies for passenger and light goods vehicles covered by a currently valid manufacturing program approved by the Minister of Economics. There are no export requirements. Fully manufactured cars may be imported without a license, but the duty is 100 percent. Excise tax for cars with less than 66 percent local content is 95 percent. For those with 66 percent local content, the excise duty per Rand value is a maximum of 13 Rand cents. There are excise duty decreases for percentages of local content achieved beyond the minimum 66 percent.

Nissan, Fiat, Ford, GM, British Leyland, Mercedes, Volkswagen, Sigma, and UCDD produce automobiles and trucks. Alfa Romeo, BMW, and Peugeot produce autos. Toyota South Africa produces its own brand of autos and trucks and assembles Renault autos and trucks.

South Korea: There are four auto manufacturing companies in Korea - Kia, Hyundai, Saehan, and Shin Jin. The first three companies also manufacture buses, and two - Hyundai and Saehan - manufacture trucks.

The tariff rate for automobiles is 80 percent.

Automobiles and auto components are on the "Restricted List", meaning prior approval of the Auto Trade Association is required before an import license can be issued. With regard to 100 percent foreign-made cars, the Association will issue import licenses depending on the "supply and demand situation" in Korea; however, such licenses are rarely approved.

Local content requirements are set by the Korean government for domestic manufacture and assembly of all cars, trucks, and buses. Those for cars, effective January 1, 1980, are as follows:

| Maker | Type of vehicle | Local content requirement (Percent) |
|---|---|---|
| Kia | Brisa | 94 |
| - | Brisa II | 92 |
| - | Fiat 132 | 62 |
| - | Peugeot 604 | 20 |
| Hyundai | Pony | 93 |
| - | Cortina Mark IV | 62 |
| - | Granada | 21 |
| Saehan | Gemini | 88 |
| (Cars) | Rekord | 65 |
| Shin Jin | Jeep (J-5) | 73 |
| - | Diesel Jeep | 91 |

There are no specific export requirements per se for Korean auto manufacturers, although there are export targets and some moral pressure to meet those targets. According to the Korean auto industry association, however, there is one stipulation imposed on Hyundai and Kia: in order to obtain permission to import one knocked down Ford Granada or Peugeot 604 for local assembly and sale, the companies must export five domestically manufactured passenger cars.

Taiwan: Current local content requirement for vehicles is as follows: automobiles (including sedans, wagons and jeeps of 3.5 tons and below): 70 percent with proviso that manufacturer must produce one of the following components: (1) engine, (2) piston, connecting rod, and piston pin, (3) crankshaft, (4) axle transmission, (5) spring, (6) cylinder valve. Light motor vehicles (including truck, pick-up, and station wagon of 3.5 tons and below): 70 percent with proviso similar to sedans. Import duties on automobiles are from 65 percent to 75 percent depending on type.

Tanzania: No local content regulations exist. Imports are limited almost entirely to the government. Import tariffs vary from 40-100 percent depending on engine size. Except for trucks, the only automobile assembly operation is by British Leyland.

Thailand: Local content regulations requiring 35 percent local sourcing by August 1980 increasing annually to 50 percent in 1983 are in effect. Imports of built up passenger cars are prohibited. Duties of 150 percent are levied together with a 40 percent business tax on imported automobiles. Toyota, Nissan, Isuzu, and Ford produce cars, trucks and buses. Hino produces trucks and buses. Fiat, British Leyland and Volvo produce cars and buses. Mitsubishi, Mazda, Daihatsu, Subaru, GM, Volkswagen, Peugeot, Renault, BMW, Alfa Romeo, Citroen, Lancia, and Audi produce cars.

Turkey: Local content regulations are contained in the "Assembly Industry Regulation" enforced by the Turkish Ministry of Industry and Technology. Locally produced items are not permitted to be imported. Therefore, importation of automobiles is not permitted except under special circumstances. Import tariffs are 175 percent. Automobiles are produced under license from Ford (the Reliant Motor Company of U.K.), Fiat and Renault.

Uruguay: Local content regulations are in effect requiring local content of 25-32 percent of vehicle weight. Imports of automobiles are prohibited. Export regulations require the export of 40-105 percent (depending on vehicle type) of the import value of the completely knocked down kits the assembler imports. Peugeot-Citroen, Renault, Volkswagen, BMW, Ford, GM, and Fiat assembly automobiles in Uruguay.

Yugoslavia: Local content regulations require 50 percent local content to avoid imposition of higher sales taxes. Imports from other countries are only permitted by authorized dealers. Import tax on vehicles is 17 percent ad valorem and the duty is 25 percent. Authorized dealers are required to export goods totaling 30 percent of the value of each imported automobile. Quotas are maintained on imports from the USSR, East Germany, and Czechoslovakia and may be paid for in local currency. Other imports must be paid for in hard currency. Fiats, Ladas, Volkswagens, Audis, and Citroens are manufactured locally.