

CURRENT PROBLEMS OF THE U.S. AUTOMOBILE  
INDUSTRY AND POLICIES TO ADDRESS THEM

Staff Working Paper

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PREFACE

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At the request of the Speaker of the House of Representatives, the Congressional Budget Office has prepared this assessment of the current problems of the United States automobile industry and its prospects in the years ahead. This assessment includes a preliminary analysis of various proposed steps that the government might take to help alleviate some of the problems surrounding the U.S. auto industry. In keeping with CBO's mandate to provide objective analysis, the report contains no recommendations.

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## SUMMARY

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The U.S. automobile industry has recently experienced some of the lowest sales and employment levels in years. While high gasoline prices, high interest rates, credit controls, and recession have cut into sales of new cars generally, U.S. companies have been particularly hard hit by a shift toward smaller cars. Foreign manufacturers have been able to capture a record share of the U. S. market, because the domestic companies have relatively few small cars with which to compete against many imported models offering better fuel economy and a more favorable image of quality.

### Loss of Sales

Auto sales fell sharply in April, May, and June 1980. Sales appear to have been dampened by the jump in gasoline prices that occurred between 1978 and 1979, along with the rise in interest rates and the enactment of credit controls. The economic recession has also been a factor.

### Loss of Domestic Share

During the early months of 1980, the share of new cars sold by foreign manufacturers grew to record heights--reaching more than 29 percent of new car sales in May 1980, compared to the 15 to 20 percent of sales held by imports between 1970 and 1978. The chief reason for this surge in imports was a shift in car-buying patterns toward smaller cars, both domestic and imported. The shift stemmed from the increases in gasoline prices and the widespread concern about gasoline availability that arose in 1979. During 1978, less than half of the new cars sold were classified as compact or smaller; in recent months such cars have gained about 65 percent of sales.

Although domestic companies have lost a substantial share of the total car market, they have not experienced a significant loss of share in the small-car segment of the market. In the first four months of 1980, about 59 percent of the small cars sold in the United States were of domestic manufacture, not far below the average of 63 percent in 1970-1979. Indeed, the market performance of domestic small cars has been surprisingly strong, given the relatively few models available.

## Unemployment

Unemployment in the auto industry is currently near record highs, and will probably break records as plants close later this summer for model changeovers. At present, 250,000 auto workers are on indefinite layoffs and 30,000 on temporary layoffs. An estimated 350,000 additional workers in related supplier industries are out of work because of the slump in auto production, and about 100,000 more jobs have been eliminated in auto dealerships.

Not only do these high levels of unemployment mean hardship for the persons and communities most severely hit: they also have enormous implications for the federal budget. For example, 700,000 jobless workers cost the budget \$1.5 billion a month, mostly in tax revenues foregone.

## Outlook for the Future

Sales. Once auto sales recover from their present depressed level, they will probably grow at a slower rate than in the past. The governing factors are not only high fuel prices but slower growth in population than in the past.

Market Share. In the next several years the domestic companies will probably increase their share of small car sales and thus their share of total sales, as various new, fuel-efficient models come into production. General Motors has reported strong sales for its new X-body cars. Chrysler's K-body cars and Ford's Fiesta/Escort will be on the market later this year, roughly doubling domestic capacity for redesigned, fuel-efficient cars. Imported cars are at present more fuel-efficient than their domestic competitors, and they are perceived to be of higher quality as well. U.S. manufacturers appear capable of neutralizing both of these advantages in the near future.

Unemployment. Employment in the automobile industry will probably not return to the level of 1979, largely for technological reasons. The gains in productivity scored in the 1970s will likely continue as the auto manufacturers build more highly automated plants, and as they produce more small cars. Moreover, imports of automotive components will no doubt continue to grow. While these labor-saving trends may be partly offset by the switch to fuel-saving technologies and more stringent safety and environmental standards, which increase the complexity, and hence the labor content, of new cars, they are probably insufficient to boost employment in the major auto companies back to the 1979 level within the next five years. Furthermore, some of the jobs associated with new, specialized

automotive features will be in industries and regions of the country other than those traditionally involved in auto production.

Capital Needs. The introduction of redesigned fuel-efficient cars in the next several years will require substantial investment. The ability of U.S. auto companies to finance new plants and retool old ones out of their own resources is probably the most important unanswered question about the future of the industry.

Balance of Payments. In 1979, the United States imported about \$9 billion more in automobiles and parts than it exported. Even though the import share of the U.S. auto market is expected to drop from its current high level, a major improvement in the automotive balance of payments is unlikely. Improvements in fuel economy could, however, ultimately save enormous amounts of fuel--possibly equivalent to more than 1 million barrels of oil per day by the 1990s. Such savings imply over \$12 billion per year in reduced petroleum imports at today's oil prices. In short, the financial health of the automobile industry has important implications for the balance of payments and for energy policy as well.

### Policy Options

A wide range of government actions have been proposed to improve the current situation of the auto industry. The proposals tend to fall into two groups: short-run actions and long-run actions. Most of the short-run options attempt to restore auto industry employment by stimulating sales, while most of the long-run options attempt to increase the working capital of the auto companies so that they can invest in improved products and processes. These aims conflict to some extent, inasmuch as the long-run structure toward which the industry appears headed would be highly automated and dependent upon substantial importation of components--two characteristics that imply reduced domestic labor requirements. Conversely, boosting sales of current models tends to extend current production processes and products at a time when the auto industry faces a period of crucial changes.

Both groups of options are explored here. Their consequences cannot be estimated precisely, but the paper offers preliminary estimates that serve to highlight some of the issues raised by the proposals.

Short-Run Options. Actions that would stimulate sales immediately could reduce unemployment in the auto industry and help the auto companies generate investment funds that they crucially need if they are to remain competitive in coming years. Because of high inventories, however, not all of the stimulus in sales would result in increased production.

The government could stimulate sales through various forms of subsidy. For instance, it could make rebates to persons buying new cars, or offer tax credits (bounties) to persons trading in old cars for new domestic models. Both rebates and bounties would tend to reduce the average price that buyers pay for new domestic cars, thereby stimulating demand. Both, however, would benefit chiefly those persons who were going to buy new cars in the near future anyway. For example, a rebate of \$1,300 per car would generate about 0.8 million entirely "new" sales, would shift about 1.7 million additional sales forward from the coming year or two, and would subsidize an additional 5.8 million car purchasers who would have bought a car anyway.

Rebates and bounties both appear to have substantial costs--from \$13,000 to \$20,000 for each entirely "new" sale. These costs would be offset in part by decreases in federal aid to unemployed workers and by increases in federal taxes. New-car buyers, who are relatively affluent on average, would benefit at the expense of taxpayers in general.

Sales of domestic cars could also be stimulated through import quotas. Quotas would likely lead to increased prices, since prices of imported cars would rise as they became scarcer and prices of domestic cars would rise in response--probably to the point where sales of domestic cars would show only a small increase. There would be little effect on jobs, although the industry's net profit per unit could be greatly increased. If price restraints were coupled with import quotas, this would tend to boost domestic auto sales and employment, but would provide less financial help to the industry.

Quotas on imports conflict with the tradition of free international trade, appear to violate current commitments under the General Agreement on Tariffs and Trade, and could lead to retaliation by other countries against our non-automotive exports. They would also adversely affect consumers through increased prices for new cars.

Long-Run Options: General. Changes in tax rules, such as the so-called 10-5-3 proposals for depreciation, could help the auto industry, along with other industries, generate funds needed for investment in new plant and products. By placing the capital formation difficulties of the auto industry alongside those of other industries, the Congress would have a more comprehensive basis for developing a national industrial policy.

The 10-5-3 proposal would have conflicting impacts on the auto industry. Special tools, which the industry now depreciates over three years, would be less favorably treated, being depreciated over five years rather than three. The depreciation period for buildings and larger machinery and equipment would be shortened, however. In sum, the 10-5-3 proposals would probably help the auto industry less than most other industries. Furthermore, changes in depreciation schedules alone would not necessarily help companies that have experienced losses or only small profits.

Long-Run Options: Auto-Industry-Specific. A variety of special treatments have been proposed to help the auto industry recapitalize in order to remain competitive. They include refundable tax credits, relaxation of safety and environmental standards, the requirement of a minimum level of domestic content for cars sold in the United States, tax changes, loan guarantees, and aid to unemployed auto workers.

Refundable tax credits could channel substantial sums to the auto companies. They would be similar to grants for all practical purposes, and would represent a significant, far-reaching shift in tax policy.

Relaxation of safety and environmental standards could help reduce capital requirements. While it would not necessarily improve the competitive position of the domestic industry relative to imports, it could help the industry through the critical period of capital reinvestment ahead.

Minimum domestic content requirements could induce foreign manufacturers to locate in the United States, but also lead to retaliatory moves against U.S. non-automotive exports.

Among the many tax changes that have been discussed, changes in the Asset Depreciation Ranges would enable more rapid depreciation, thereby generating investment capital. As with any scheme based upon income tax deductions, its effectiveness would depend on the profitability of the company; companies under the greatest financial pressure (Chrysler, Ford, and American Motors) might receive little help.

Loan guarantees could channel funds to companies most in need. Such direct governmental involvement in private companies raises difficult questions associated with deciding which industries and companies are most crucial to the nation's economic base.

Auto workers who have permanently lost their jobs could be retrained or relocated. While this would alleviate some of the personal hardships of unemployment, it would not be of direct assistance to the auto industry itself. Nor would it directly assist economic readjustment in those communities and states most seriously affected by loss of auto-related jobs.

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## CHAPTER I. INTRODUCTION

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The automobile industry in the United States is experiencing one of its worst slumps in history. Total sales of new cars in the last three months have fallen about 30 percent below those of the corresponding period in 1979, and the share of the new car market captured by domestic companies has plunged to record lows. Nearly one-third of the nation's auto workers are unemployed, and almost half a million jobs in auto-related industries have been lost.

The difficulties of the industry stem from a wide range of sources. Economic factors, including recession, high interest rates, high gasoline prices, and credit controls, have dampened auto sales generally. Sales have been further eroded by an overall shift toward smaller cars, the segment of the market where imports have been strongest; in particular, imports are generally more fuel-efficient and widely perceived to be of higher quality. The result of these developments is that employment in the auto industry will soon drop below the low point reached during the recession of 1974-75, while the auto companies will have difficulty in generating the financing that they need for modern plants and new, fuel-efficient product lines.

This paper first examines the causes of current problems in the auto industry and then briefly explores the outlook for the future, with particular attention to implications for unemployment, the federal budget, the balance of payments, and energy consumption. It then explores various proposals that have been made to relieve current unemployment within the industry, to channel investment capital into the industry, or to help improve automotive fuel efficiency.

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CHAPTER II. CURRENT CONDITION OF THE U.S. AUTO INDUSTRY

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LOSS IN VEHICLE SALES

New car sales in the U.S. have declined considerably over the last year and a half, dropping from a seasonally adjusted annual rate of 11.3 million units in 1978 to 10.7 million units in 1979 and 7.4 million units in June 1980. (Table 1.) Simultaneous with this decline in auto sales, light truck sales fell by 13.5 percent during 1979 and by 29 percent during the

TABLE 1. RETAIL SALES OF NEW PASSENGER CARS IN THE UNITED STATES, 1970 TO MAY 1980: IN MILLIONS OF UNITS a/

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Year	Rate of Sales
1970	8.428
1971	10.202
1972	11.008
1973	11.439
1974	8.876
1975	8.640
1976	10.113
1977	11.184
1978	11.312
1979	10.669
1980	
1st Quarter	10.748
April	8.258
May	7.385
June	7.363

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SOURCE: Unpublished data from U.S. Department of Commerce, Bureau of Economic Analysis

a/ Seasonally adjusted annual rates.

first six months of 1980. This decline comes after a decade of rapid growth wherein light truck sales increased by more than 100 percent over an eight-year period (from 1.5 million units in 1970 to 3.7 million units in 1978). The decline in light truck sales has particular significance for the domestic industry since domestic companies have generally accounted for approximately 90 percent of light truck sales in the United States.

The decline in vehicle sales experienced over the last year and a half appears to result from a combination of several factors including the economic recession, high fuel prices, consumer credit controls, and high interest rates. Each of these causes is examined below.

### Recession

Retail auto sales, like most durable consumer goods, are particularly sensitive to fluctuations in the overall health of the economy. Throughout the last decade, sales of new cars, as well as light trucks, generally rose and fell along with the gross national product (Figure 1). In particular, when the gross national product fell by two to three percent from 1973 to 1975, auto sales simultaneously declined by more than 24 percent, while light truck sales fell by 19 percent. In each year between 1970 and 1978, gross national product and vehicle sales rose and fell together.

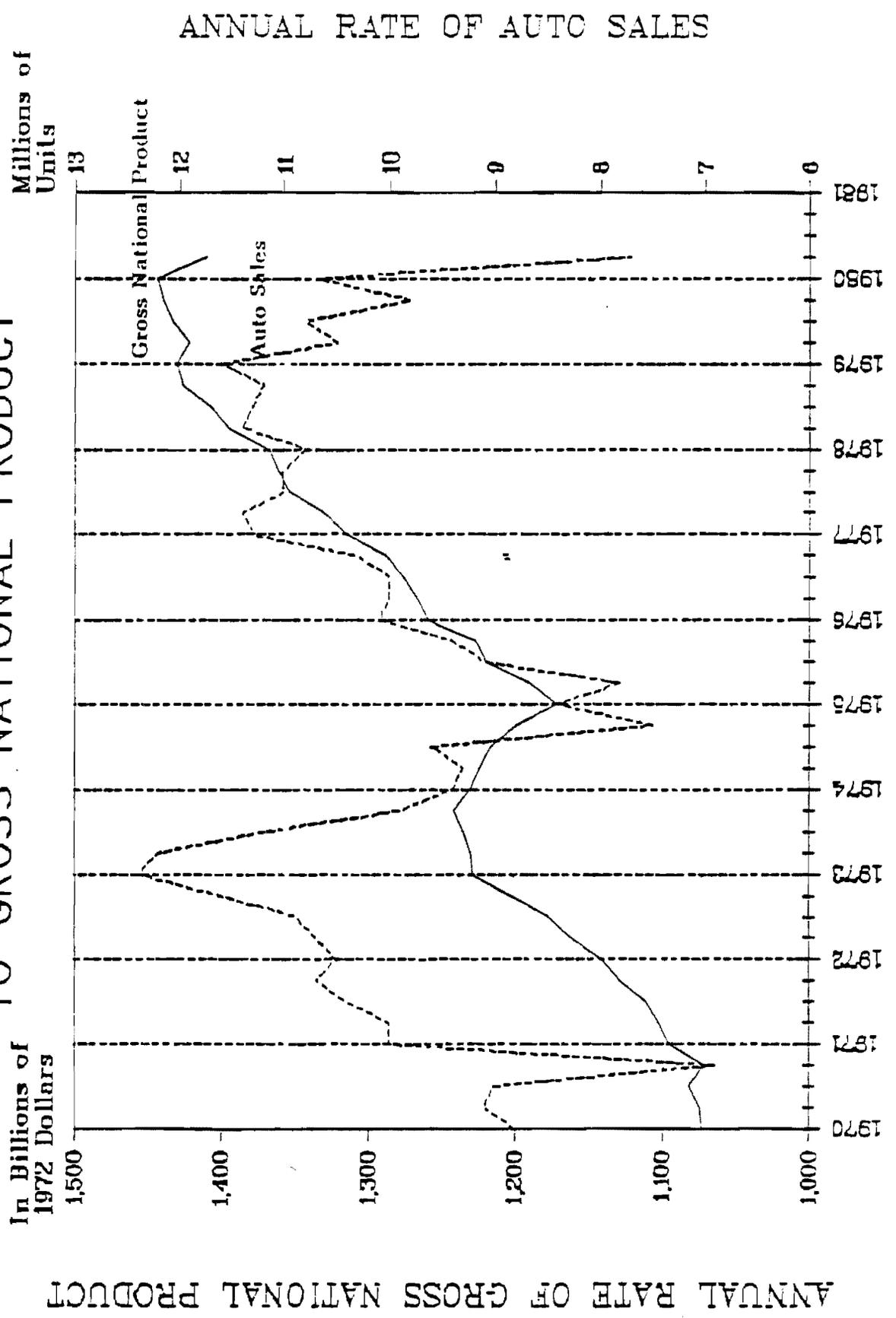
In 1979, however, vehicle sales fell sharply as gross national product continued to rise, albeit at a slower rate than in 1978. Although the decline in sales may be partially attributable to a general slowdown in economic activity (reflected by the lower annual growth rate in GNP), it is also related to several other factors, specifically increased fuel prices and high interest rates.

### Increased Fuel Prices

The two large and sudden increases in gasoline prices experienced over the last 10 years have had significant impacts on the rate of new-car sales. Figure 2 shows that the increases in gasoline prices that occurred during 1973 and 1974 (concurrent with the 1973 Arab oil embargo) and during 1979-1980 were both accompanied and followed by significant declines in vehicle sales. Shortages of gasoline undoubtedly magnified this effect on sales. However, as gasoline prices began to stabilize (and, for a time, decline in constant dollars), auto sales climbed from a low of 8.6 million units in 1975 to 11.3 million units in 1978, simultaneous with a 1.5 million increase in light truck sales.

FIGURE 1

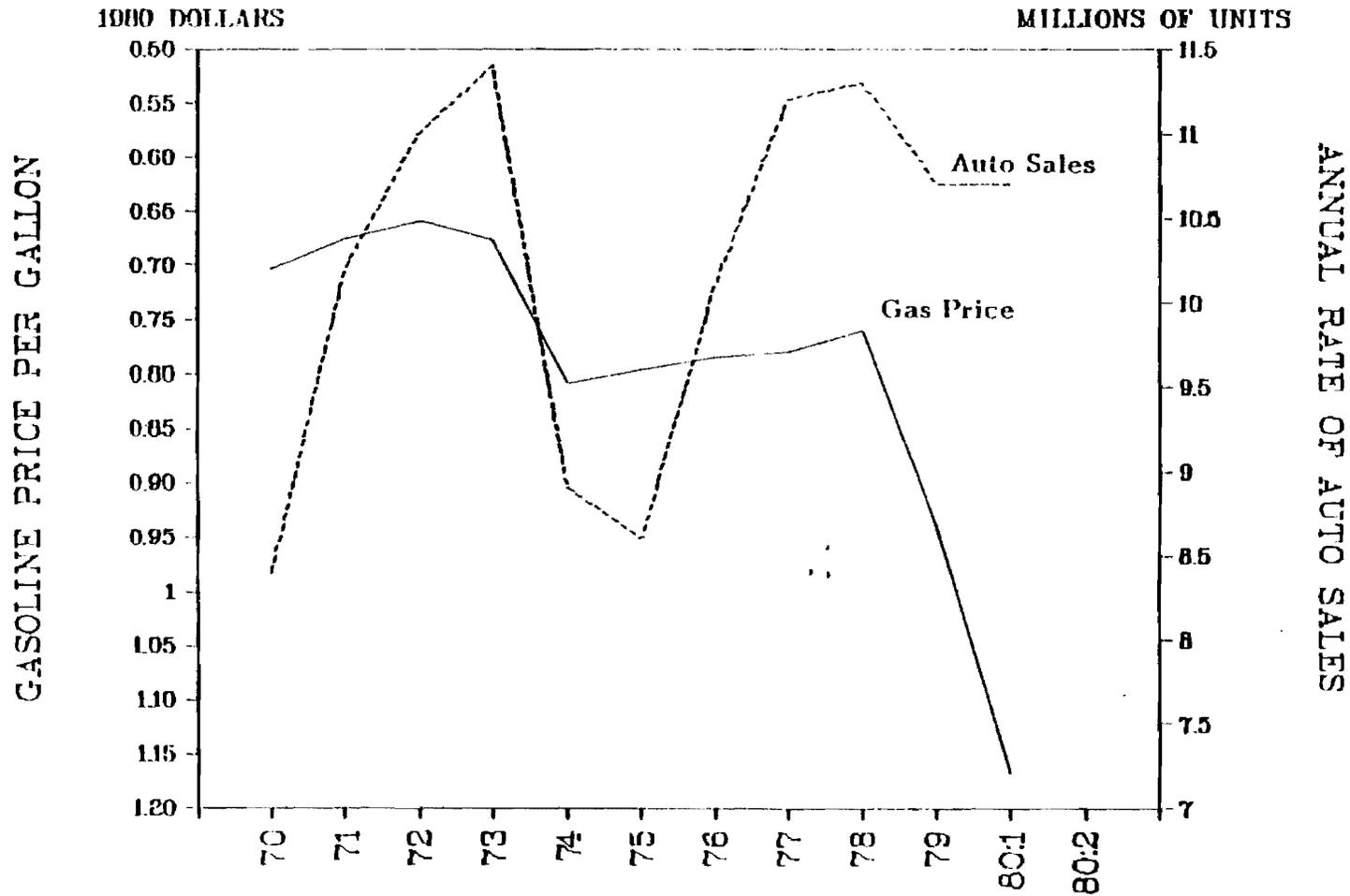
RELATIONSHIP OF AUTO SALES TO GROSS NATIONAL PRODUCT



SOURCE: Based on data from United States Department of Commerce, Bureau of Economic Analysis.

FIGURE 2

RELATIONSHIP BETWEEN AUTO SALES AND GASOLINE PRICE



SOURCE: Based on data from United States Department of Commerce, Bureau of Economic Analysis.

### High Interest Rates

High interest rates have further inhibited auto sales during recent months, (Table 2). Although increases in interest rates tend to have a relatively small effect on monthly auto payments, they nonetheless may

TABLE 2. AVERAGE FINANCE RATES FOR AUTO LOANS, 1972-1980

Year	Average Finance Rate <u>a/</u>
1972	10.05
1973	10.21
1974	10.97
1975	11.36
1976	11.07
1977	10.92
1978	11.02
1979	12.02
1980	
1st Quarter	13.28
2nd Quarter	15.70

SOURCE: Federal Reserve Board.

a/ Most common finance rates on direct consumer installment loans for new auto purchases (36 month loan period). Reflects averages at reporting commercial banks.

cause some potential car buyers to defer their purchases. (For example, a \$6,000 auto loan extended over four years at 12 percent interest would require monthly payments of \$158. The same loan at 15 percent would require monthly payments of \$167--only 6 percent higher despite a one-fourth increase in interest rates.) The increase in interest rates that occurred during the past year is estimated to have caused sales of new cars to fall by about 8 percent.

A recent consumer survey conducted by the University of Michigan Survey Research Center found that, of those consumers who indicated that current buying conditions for autos were bad, 29 percent attributed the cause to high interest rates on credit, up from 6 percent a year earlier (Tables 3 and 4). In the future, however, as interest rates decline, it is likely that consumer credit demand (and auto sales) will increase concurrently.

TABLE 3. BUYING CONDITIONS FOR CARS: IN PERCENTS a/

	May 1979	June 1979	July 1979	Aug. 1979	Sept. 1979	Oct. 1979	Nov. 1979	Dec. 1979	Jan. 1980	Feb. 1980	Mar. 1980	Apr. 1980	May 1980
Good Time to Buy	39	37	32	38	44	45	38	44	39	47	45	35	29
Uncertain, Depends	13	13	16	14	12	9	10	9	11	8	10	10	10
Bad Time to Buy	<u>48</u>	<u>50</u>	<u>52</u>	<u>48</u>	<u>44</u>	<u>46</u>	<u>52</u>	<u>47</u>	<u>50</u>	<u>45</u>	<u>45</u>	<u>55</u>	<u>61</u>
Total	100	100	100	100	100	100	100	100	100	100	100	100	100

SOURCE: University of Michigan, Survey Research Center.

a/ The question was: "Speaking now of the automobile market,--Do you think the next 12 months or so will be a good or a bad time to buy a car?"

TABLE 4. SELECTED REASONS FOR OPINIONS ABOUT BUYING CONDITIONS FOR CARS: IN PERCENTS <sup>a/</sup>

	May 1979	June 1979	July 1979	Aug. 1979	Sept. 1979	Oct. 1979	Nov. 1979	Dec. 1979	Jan. 1980	Feb. 1980	Mar. 1980	Apr. 1980	May 1980
<b>Good Time to Buy:</b>													
Prices are low; good buys available	6	7	13	16	18	13	13	15	12	17	14	13	21
Prices going higher; won't come down	22	21	17	14	21	23	16	21	22	19	22	10	8
New fuel efficient models	14	12	13	11	9	8	8	10	8	14	13	12	6
<b>Bad Time to Buy:</b>													
Prices are high; may fall later	26	25	28	27	25	27	30	27	31	22	25	32	30
Credit; high interest rates	6	3	4	7	6	8	18	16	13	14	17	24	29
Energy; Fuel shortage	22	26	24	18	14	13	10	12	19	13	16	16	15

SOURCE: University of Michigan, Survey Research Center.

<sup>a/</sup> Responses to the query "Why do you say so?" following the question notes in the previous table.

## Credit Controls

In addition, the stringent controls on consumer credit that were instituted during the first quarter of 1980 also appeared to dampen auto sales. On March 14, 1980, the President announced steps to restrain unsecured consumer credit. This led to Federal Reserve Board directives requiring banks to limit unsecured consumer loan commitments to a maximum growth rate of 6 to 9 percent annually. Many banks reduced the amount of available auto financing as a result. These credit controls are currently being phased out in response to an Executive Order issued by the President on July 3, 1980.

Consumer credit controls appear to have restricted auto sales during the first and second quarters of 1980, despite the fact that these controls were not directly applicable to auto credit. Approximately 70 percent of new car buyers rely on some sort of credit financing. New consumer credit extended for auto purchases has declined sharply over the last year, dropping by more than \$2.0 billion from April 1979 to April 1980. To a large extent, this reduction in consumer credit simply reflects reduced auto sales, which have fallen by roughly the same proportion. A recent survey of auto dealers, however, found that the refusal rate on auto credit applications was running at approximately 46 percent during the first three weeks in May, far higher than the normal refusal rate of 10 to 15 percent. <sup>1/</sup> In addition, the Motor Vehicle Manufacturers' Association stated that, in some states with low usury ceilings, manufacturers' subsidiary finance companies were the only source of consumer credit for auto loans. Statistics from the Federal Reserve Board show that the proportion of auto financing provided by commercial banks dropped sharply relative to the proportion provided by finance companies during the first four months of 1980. In fact, finance companies extended almost half a billion dollars more in automobile credit during April 1980 than in April 1979, while total auto credit decreased by more than two billion. (Table 5.) This shift also implies higher costs to consumers, since finance companies generally charge higher rates than commercial banks. Thus, while the reduction in consumer credit largely reflects decreased consumer demand, consumer credit controls on commercial banks have made financing less widely available and more expensive, thereby further dampening new-car sales. Consumer credit has become more available as the existing credit controls are phased out.

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<sup>1/</sup> This survey was conducted by the National Automobile Dealers' Association.

**TABLE 5. CHANGE IN MAJOR HOLDER OF CONSUMER CREDIT EXTENDED FOR AUTO LOANS, 1980: IN MILLIONS OF DOLLARS**

	<u>April 1980</u> <u>Credit Extended</u>		<u>March 1980</u> <u>Credit Extended</u>		<u>February 1980</u> <u>Credit Extended</u>		<u>January 1980</u> <u>Credit Extended</u>		<u>April 1979</u> <u>Credit Extended</u>		<u>Change From</u> <u>April 1979</u> <u>to April 1980</u> <u>Dollars</u>
	Dollars	Percent by Source	Dollars	Percent by Source	Dollars	Percent by Source	Dollars	Percent by Source	Dollars	Percent by Source	
<b>Automobile Installment Credit Extended</b>	5,725	100	7,240	100	7,659	100	7,780	100	7,999	100	-2,274
<b>Commercial Banks</b>	2,398	42	3,394	47	3,936	51	4,026	52	4,707	59	-2,309
<b>Indirect Paper Direct Loans</b>	1,433 965	--- ---	1,978 1,416	--- ---	2,096 1,840	--- ---	2,154 1,872	--- ---	2,635 2,072	--- ---	--- ---
<b>Credit Unions</b>	962	17	1,306	18	1,338	18	1,348	17	1,415	18	-453
<b>Finance Companies</b>	2,365	41	2,540	35	2,385	31	2,406	31	1,877	23	+488

**SOURCE:** Federal Reserve Statistical Release.

### SHIFT TOWARD SMALL CARS

Over the last 10 years, the market share held by compact autos has increased from 38 percent of total new-car sales in 1970 to over 60 percent in 1980 (Table 6). This market-wide shift to smaller vehicles has been caused, for the most part, by increased fuel prices and doubts about its availability. Substantial shifts in sales patterns by size class occurred following the large increase in gasoline prices in 1973-1974. Further shifts occurred after fuel prices took another substantial jump in 1979.

TABLE 6. SIZE DISTRIBUTION OF NEW AUTO SALES, 1970-1980

	Percent Compact Cars	Percent Mid-Size Cars	Percent Full-Size Cars	Annual Rate <u>a/</u> of Sales (in millions of units)
1970	38	22	40	8.428
1971	39	20	41	10.202
1972	39	22	39	11.008
1973	43	22	35	11.439
1974	48	25	27	8.876
1975	54	24	23	8.640
1976	48	27	25	10.113
1977	47	28	25	11.184
1978	48	28	24	11.312
1979	56	23	21	10.669
1980				
1st Quarter	64	20	16	2.511
April	66	20	14	0.743

SOURCE: Unpublished data from U.S. Department of Commerce, Bureau of Economic Analysis.

a/ Data for 1980 reflect actual unit sales, not rates.

## GROWTH IN IMPORTS

Imported autos have captured a record share of the U.S. market during recent months, climbing from 17.7 percent of new domestic car sales in 1978 to 29.2 percent in June 1980 (Table 7). Although sales of both domestic and imported autos have suffered in recent months, domestic sales have been harder hit. The latter fell by more than 35 percent between May 1979 and May 1980, while import sales fell by only 20 percent.

TABLE 7. SHARE OF U.S. AUTO SALES HELD BY DOMESTIC MANUFACTURERS AND IMPORTS

	Domestic (percent)	Import (percent)	Seasonally Adjusted Annual Rate of Sales (thousands of units)
1970	84.7	15.3	8,428
1971	84.7	15.3	10,202
1972	85.2	14.8	11,008
1973	84.6	15.4	11,439
1974	84.1	15.9	8,876
1975	81.6	18.4	8,640
1976	85.1	14.9	10,113
1977	81.4	18.6	11,184
1978	82.3	17.7	11,312
1979	78.2	21.8	10,669
1980			
1st Quarter	73.8	26.2	10,748
April	72.9	27.1	8,258
May	71.5	28.5	7,385
June	70.8	29.2	7,363

SOURCE: Unpublished data from U.S. Department of Commerce, Bureau of Economic Analysis.

## Availability of Fuel-Efficient Models

The overall swing in car sales toward smaller, more fuel-efficient cars has concentrated sales in a segment of the market where domestic manufacturers have historically competed on a very limited basis. This means that, as customers shop for small cars, they are faced with a vastly

greater number of choices among imports. Among subcompact cars, only 5 out of the 25 most fuel-efficient models are domestically produced (Table 8). Altogether, 25 domestically-produced small car models are offered relative to 68 imports (Table 8). Given this disparity, the domestic

TABLE 8. COMPARISON OF 1980 MODEL OFFERINGS OF DOMESTIC AND FOREIGN MANUFACTURERS, BY SIZE CLASS a/

Size Class	Number of Models <u>b/</u>		Total
	Imports	Domestics	
2-Seaters	10	1	11
Mini-compact	7 <u>c/</u>	2	9
Subcompact	35 <u>d/</u>	15	50
Compact	16 <u>e/</u>	7	23
Mid-size	3	28	31
Large	<u>0</u>	<u>19</u>	<u>19</u>
Total	71 <u>f/</u>	72	143

a/ Excludes small, mid-size, and large station wagons; small and standard pick-up trucks; vans; and special-purpose vehicles.

b/ Based on USEPA's 1980 Gas Mileage Guide, 2d ed., February 1980.

c/ Includes the Plymouth Arrow and Dodge Celeste, both produced in Japan.

d/ Includes four models (the Dodge Colt, Plymouth Champ, Plymouth Sapporo, and Dodge Challenger), produced in Japan. Also includes the Ford Fiesta which is produced in Germany.

e/ Includes seven Mercedes-Benz models and three Rolls-Royce models.

f/ Includes six models that are produced overseas.

manufacturers' showing in the small-car market has been comparatively strong. Domestic manufacturers have, in fact, held their own, retaining approximately 60 percent of the compact car market. (Table 9.) This indicates that the competitive position of the domestic manufacturers within this size class is considerably better than often supposed. In fact, during 1979 and 1980, both the Chevy Chevette and the Ford Mustang outsold the Datsun 210 and Toyota Corolla, despite the superior fuel efficiencies of the Datsun and Toyota models. 2/(Table 10.)

2/ Sales data based on information in Ward's Automotive News. Fuel economy rating based on EPA 1980 Mileage Guide.

TABLE 9. SHARE OF U.S. COMPACT CAR MARKET HELD BY DOMESTIC AND FOREIGN MANUFACTURERS, 1970-1980

	Share of Compact Car Market		Total Compact Cars Sold (In thousands of units)
	Percent Domestic	Percent Imported	
1970	59.5	40.5	3,175.6
1971	60.7	39.3	3,973.9
1972	61.9	38.1	4,278.6
1973	63.8	36.2	4,877.1
1974	67.2	32.8	4,296.0
1975	65.9	34.1	4,641.9
1976	69.1	30.9	4,858.8
1977	60.9	39.1	5,285.6
1978	63.5	36.5	5,474.0
1979	61.4	38.6	6,024.0
1980			
January	56.9	43.1	504.8
February	58.0	42.0	523.8
March	61.5	38.5	584.4
April	58.7	41.3	490.2

SOURCE: Unpublished data from U.S. Department of Commerce, Bureau of Economic Analysis

#### Relative Prices of Domestic vs. Imported Autos

The domestic manufacturers' success in retaining their share of the compact car market is probably attributable in part to the slight price advantage that domestic cars have over imports. In the first half of 1979, actual prices (including discounts) paid for domestic compact cars averaged approximately 15 percent to 20 percent less than prices paid for imports (Table 11). These prices probably overstate the cost differential, however, since the foreign cars include such luxury models as the Mercedes-Benz 240D (\$17,500) and 300D (\$25,000), the BMW 320 (\$10,500) and the Audi 5000 (\$10,000 to \$12,000). By contrast, most domestically-produced luxury cars such as the Cadillac Seville (\$20,000) and the Cadillac Eldorado (\$16,000) are not classified as compact cars, and their prices are thus not reflected in the average price for domestic compact cars. <sup>3/</sup>

<sup>3/</sup> Prices as reported in Consumer Reports, April 1980.

**TABLE 10. MARKET SHARES OF SELECTED COMPACT MODELS MANUFACTURED BY NISSAN, TOYOTA, GENERAL MOTORS, AND FORD, 1979-1980 a/**

	1979	Unit Sales (in thousands)				Percent of All Compact Sales				1980 EPA Est. Fuel Economy MPG	
		Jan. 1980	Feb. 1980	March 1980	April 1980	Jan. 1980	Feb. 1980	March 1980	April 1980		
Datsun 210	216.8	17.4	16.9	20.4	19.9	3.6	3.4	3.2	3.5	4.1	30.1
Toyota Corolla	257.1	26.5	27.0	24.6	19.4	4.2	5.2	5.2	4.2	4.0	27.0
Chevy Chevette	375.7	34.3	37.2	44.4	33.2	6.2	6.8	7.1	7.6	6.8	25.5
Ford Mustang	<u>304.1</u>	<u>20.1</u>	<u>20.7</u>	<u>25.0</u>	<u>20.8</u>	<u>5.0</u>	<u>4.0</u>	<u>4.0</u>	<u>4.3</u>	<u>4.2</u>	20.1
Total - All Compact Cars	6,086.2	505.0	523.5	584.7	489.9	100	100	100	100	100	

a/ Best selling compact model for each manufacturer as reported in Ward's Automotive News.

TABLE 11. RELATIVE PRICE (LIST PRICE MINUS DISCOUNT) OF DOMESTIC COMPACTS AND IMPORTS, JANUARY 1979 THROUGH JUNE 1979: IN CURRENT DOLLARS

	Average Cost of Domestic Compacts	Average Cost of Imports	Ratio of Cost of Domestic Compacts to Imports
January	5,290	6,687	.79
February	5,258	6,442	.82
March	5,215	6,317	.83
April	5,240	6,362	.82
May	5,294	6,323	.84
June	5,390	6,395	.84

SOURCE: Unpublished data from U.S. Department of Commerce, Bureau of Economic Analysis.

It is therefore useful to compare the sales-weighted list prices of the five best-selling domestic small car models and the five best-selling imports. These models appear to be roughly comparable. The sales-weighted list price for the five top-selling domestic models is, in fact, approximately 10 percent less than that for similar import models (Table 12). Given that the domestic models generally have poorer fuel economy than the imports, some of this initial price differential may be offset by the lower lifetime fuel costs of the imports. The lifetime costs of four comparable foreign and domestic models do appear to be approximately equal, the domestics having no clear cost advantage over the imports (Table 13). (However, fluctuations in currency values and in gasoline prices are likely to result in variations in the future cost differentials between domestic and imported vehicles.)

### The Quality Issue

Many buyers favor imported cars because they think imports are of higher quality. For example, Consumer Reports rated 85 new domestic and imported models in 1980 on the basis of price, fuel mileage, repair incidence, comfort, and performance. Most of the top-rated small cars were imports. Only one model out of 11 U.S. small cars received top rating. Consumer Reports also rated domestic and imported vehicles on the basis of

TABLE 12. COMPARISON OF LIST PRICES FOR SELECTED DOMESTIC AND FOREIGN MODELS

Model	Unit Sales <u>a/</u> January - June 1980	List <u>b/</u> Price (in dollars)
<b>Domestic</b>		
Chevette	202,128	4,138
Citation	201,263	5,206
Malibu	135,437	5,886
Mustang	128,103	5,743
Fairmont	164,237	<u>5,005</u>
Sales-Weighted Average		5,100
<b>Import</b>		
Toyota Corolla	140,552	5,598
Datsun 210	103,099	4,899
Toyota Celica	79,924	6,659
Honda Accord	92,305	6,799
Honda Civic	68,407	<u>4,949</u>
Sales-Weighted Average		5,762

a/ As reported in Ward's Automotive Reports, July 14, 1980.

b/ As reported in Consumer Reports, April 1980.

a reader survey. While 88 percent of the imports were rated as "better than average" or "much better than average," only 11 percent of domestic models were ranked as "better than average." This perception is supported by Ford Motor Company market research, which indicates that American car buyers perceive Japanese cars to be of higher quality and better design than domestically-produced autos. 4/ Indeed, engineering judgment appears to confirm this widespread consumer perception. In a recent survey conducted by Ward's Auto World, domestic automotive engineers consistently ranked Japanese cars above U.S. cars in terms of quality (47 percent of the engineers characterized Japanese cars as the best-quality cars as opposed to 27 percent who characterized domestic cars as the best quality.)

4/ Fortune, June 16, 1980, "Ford Needs Better Ideas--Fast," by Edward Meadow, p. 82.

TABLE 13. LIFETIME COSTS OF COMPARABLE DOMESTIC AND IMPORTED MODELS

Model	Initial Vehicle Cost (in dollars)	EPA Fuel <sup>b/</sup> Economy Rating (mpg)	Discounted <sup>c/</sup> Lifetime Fuel Costs (in dollars)	Estimated <sup>d/</sup> 10-Year Scheduled Maintenance Costs (in dollars)	Total Lifetime Vehicle Costs (in dollars)
Datsun 210 (2 door hatchback)	4,605	31	2,844	1,424	8,873
Toyota Corolla (2 door hatchback)	5,262	26	3,392	1,391	10,045
Chevy Chevette (2 door hatchback)	4,163	26	3,392	1,221	8,776
Dodge Omni (2 door hatchback)	5,065	23	3,834	980	9,879

<sup>a/</sup> Based on list price as reported in *Consumer Reports*, April 1980. Includes discount of 6.2 percent on domestic compacts and 6.0 percent on imports, consistent with average discount data supplied by the U.S. Department of Commerce (Bureau of Economic Analysis) for first six months of 1979.

<sup>b/</sup> Based on U.S. EPA, *1980 Gas Mileage Guide: Second Edition*.

<sup>c/</sup> Assumes 100,000 mile vehicle life, \$1.50 per gallon gas price, and discount rate of 15 percent.

<sup>d/</sup> Based on the Subcommittee on Trade of the House Committee on Ways and Means, "Auto Situation: 1980."

## UNEMPLOYMENT

Declining sales and production have left increasing numbers of automobile workers unemployed, as well as workers in closely related industries. During periods of slow production, the automobile industry requires less from its supplier industries. These industries in turn, may reduce their production and employment, requiring less from their suppliers. Finally, these unemployed workers, with their reduced income, spend less on personal goods and services. Through the impact on supplier industry employment and supporting trade, then, the automobile industry slowdown has a generally dampening effect on the economy and employment.

Unemployment in the automobile industry is extremely severe. During the first week in July, about 246,000 (31 percent) of the major automobile manufacturers' hourly workers were on indefinite layoff status (Table 14). Another 30,000 workers were temporarily laid off because of short-term plant shutdowns, and close to 100,000 employees of dealerships were either laid off or working reduced hours. In the last year and a half, the number of production workers in the automobile industry has plunged to a level as low as that experienced during the 1974-1975 recession (Figure 3). This may be worsened in the near future by temporary layoffs resulting from model-year changeovers.

### Impact on Other Industries

The impact on employment in the supplier industries has also been large. The automobile industry is the largest single user of American steel, accounting for about 25 percent of its consumption. Automobiles also require more than half of the country's production of malleable iron, one-third of its zinc, 17 percent of its aluminum, and almost 60 percent of its synthetic rubber. <sup>5/</sup> Table 15 shows that for every 100 automobile workers, 105 workers are required in supplier industries. For example, the output of 100 automobile workers directly requires the output of about nine workers in iron and steel foundries, and five making machine shop products. Such supporting production requires, in turn, the output of workers in other industries. These less direct requirements are responsible for about one more job for each automobile worker, bringing the total to about 2 auto-

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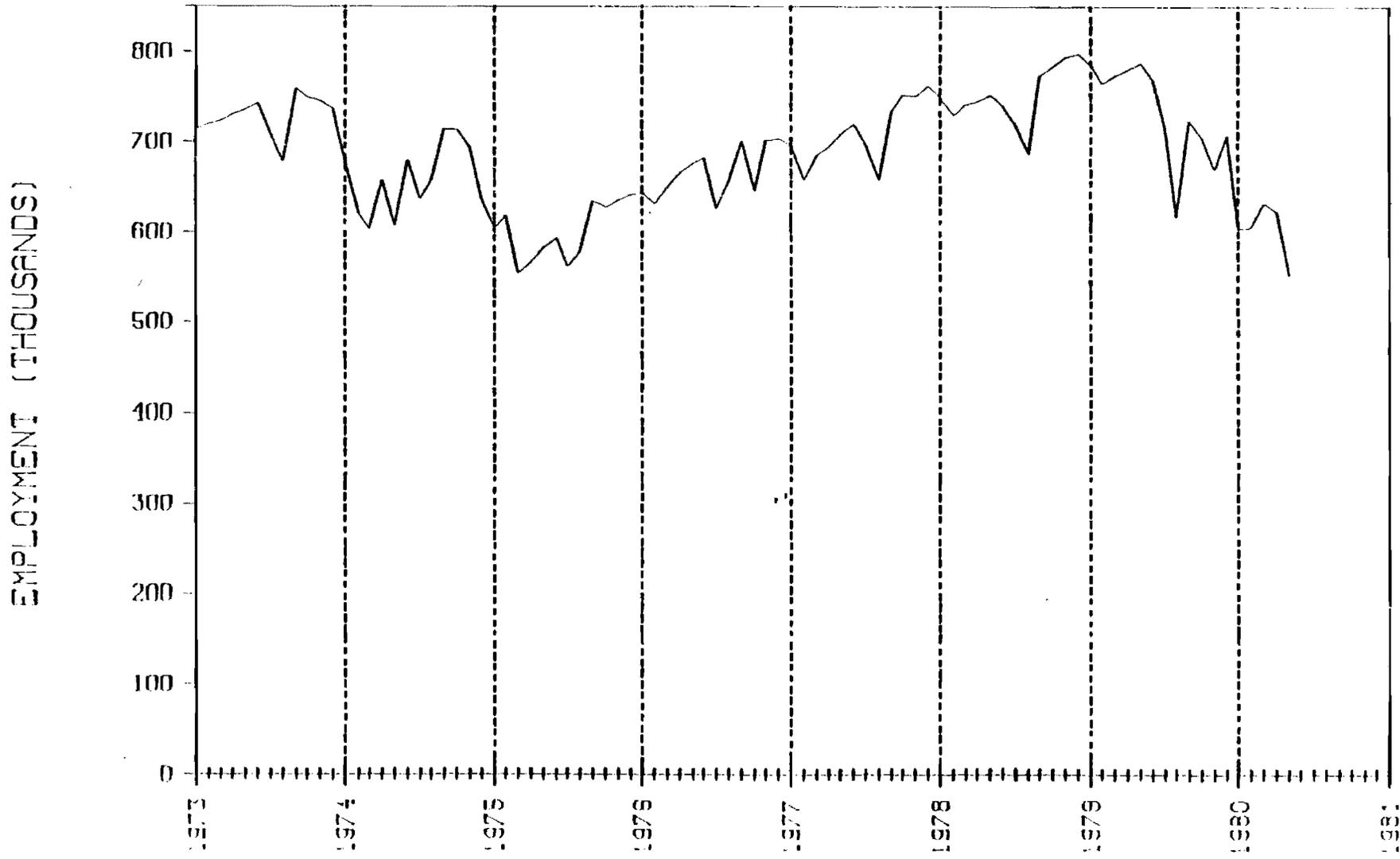
<sup>5/</sup> Statement of Abraham Katz, Assistant Secretary for International Economic Policy, Department of Commerce, before the Subcommittee on Trade of the Committee on Ways and Means, House of Representatives, March 18, 1980.

TABLE 14. UNEMPLOYMENT BY CORPORATION, JULY 1, 1980

Corporation	Total Hourly Workforce	Indefinitely Laid Off	Percent of Workforce
General Motors	471,000	140,000	30
Ford	190,000	64,500	34
Chrysler	101,000	39,100	39
American Motors	<u>16,000</u>	<u>2,750</u>	<u>17</u>
Total	778,000	246,350	32

SOURCE: Ward's Automotive Reports, July 7, 1980. The figures do not include workers employed by independent parts suppliers.

FIGURE 3  
PRODUCTION WORKER EMPLOYMENT  
(SIC 3711, 3713, 3714—MOTOR VEHICLES, BODIES, PARTS AND ACCESSORIES)



associated workers outside the auto industry for each worker within the industry. In addition, the wages spent by these workers help to support other jobs in the economy.

While these figures show the levels of employment associated with automobile production, short-term declines in automobile production and employment do not necessarily cause an immediate and proportional decline in related-industry employment. For example, retooling in the automobile industry requires the increased production of metal-working machines, tools, and dies. In addition, employers in industries facing decreased demand may use the occasion to build inventories rather than reduce employment. Thus, some jobs in supplier industries are not related to current automobile production, and might not be eliminated. To the extent that the unemployed workers have reduced income, they spend less, and place additional downward pressure on employment. These less direct employment impacts of the automobile industry slowdown cannot, however, be distinguished from job losses resulting from the recession.

With some firms adjusting inventories or supporting the automobile industry's retooling efforts, about 350,000 of the supplier industry workers are estimated to be currently laid off. When these are added to the 250,000 automobile industry production workers and 100,000 dealer employees, a total of about 700,000 people are unemployed because of the automobile production slowdown.

### Regional Impacts

Motor vehicle and equipment plants are concentrated in the East North Central region of the United States. Five states--Wisconsin, Illinois, Indiana, Michigan, and Ohio--had more than 65 percent of the automobile industry's employment in 1977. The current unemployment in the automobile industry is particularly severe in these states. In addition, other communities throughout the country have developed around relatively isolated automobile plants, and depend on these plants for economic stability.

### Benefits to Unemployed Workers

Unemployed workers can receive benefits from a combination of federal, state, and private programs. The federal government provides funds for state unemployment benefits, and pays readjustment assistance to some unemployed workers under the Trade Act of 1974. In addition, many

workers are entitled to Supplemental Unemployment Benefits (SUB) from funds provided by the individual auto companies.

Unemployment Benefits. Unemployment benefits vary by state. Within each state, they depend on a worker's earnings, and in some states, on family size. A typical hourly worker in the automobile industry who earns \$360 a week receives between \$85 and \$125 per week in unemployment benefits for 26 weeks, with the possibility of extension.

Trade Adjustment Assistance. Workers who have been laid off or had their working hours reduced because of foreign competition can receive assistance under the Trade Act of 1974--including weekly allowances for up to a year, employment services, and job search and relocation allowances. Trade Adjustment Assistance (TAA) applications are generally filed for groups of workers, and must show that the job loss was caused by competition from imports. So far, in fiscal year 1980, about 300,000 employees of major automobile manufacturers have qualified for TAA, while workers laid off from similar jobs by independent suppliers have not. These qualified workers represent more than three-quarters of TAA certifications in all industries this year. They can receive a weekly allowance of up to 70 percent of their average weekly gross wage, up to the national average manufacturing wage. This maximum is now set at \$269 per week, and includes unemployment benefits. Thus, a worker who receives \$110 weekly in unemployment benefits could also receive \$142 weekly under TAA, for a total weekly payment of \$252 (equivalent to 70 percent of \$360 in normal weekly earnings).

Supplemental Unemployment Benefits. SUB funds are provided to union members by management under labor agreements. The contribution of each auto company to its fund depends on the level at which the fund stands and the level of employment. Eligibility depends on seniority and other criteria determined by the union. SUB payments are based on a worker's net, rather than gross, pay. A qualified member of the United Automobile Workers Union may receive 95 percent of his previous take-home pay, including unemployment benefits and TAA, less \$12.50 for unincurred commuting expenses. For example, when employed, a worker earning \$360 per week may take home \$280 weekly after taxes. His maximum weekly benefits allowed by the SUB formula when laid off--including unemployment insurance, TAA, and SUB payments--would be \$253.50, or 95 percent of \$280 less \$12.50. If this worker collected \$110 in unemployment insurance benefits weekly, and \$142 in TAA, he could receive only \$1.50 from the SUB fund. If he did not qualify for TAA, he could receive up to \$143.50 from the SUB fund in addition to \$110 in unemployment insurance.

SUB payments are limited by the amount of SUB funds that have been built up through company contributions. They were intended to offset the impacts of slight economic downturns and isolated plant shutdowns, rather than the effects of long-term general unemployment. Recently, as fund levels have fallen, some payments to laid-off workers have been eliminated or reduced. This problem has been alleviated, however, by the recently approved supplemental appropriation for the TAA program. Further, since TAA payments are awarded retroactively, workers will be reimbursing the private SUB funds with the federal money. In the next few months, therefore, most automobile workers will be relying mainly on the government for unemployment benefits, and SUB funds will play a minor role.

### Impact of Unemployment on the Federal Budget

High levels of unemployment are a drain on the federal budget. A 1 percent increase in general unemployment (about 1,000,000 workers) reduces tax revenues by about \$20 billion annually and increases spending for unemployment-related programs by \$5 to \$7 billion. The loss of 700,000 jobs--250,000 motor vehicle production workers, 100,000 dealer employees, and about 350,000 supplier employees--caused by the automobile production slowdown costs the federal government about \$350 million per week in lost revenues and additional direct outlays. While outlays will diminish as unemployment and trade adjustment assistance benefits are exhausted, the tax loss will continue.

The outcome of the present slump in the auto industry will be determined by a wide range of economic, technological, and market factors. This chapter begins by examining some of the key factors bearing on the future of the U.S. auto industry, namely:

- o Likely growth in U.S. and international sales;
- o New product lines;
- o Outlook for sales of domestic cars relative to imports;
- o Shifts in automotive production processes;
- o Likely developments in fuel efficiency; and
- o Capital requirements of U.S. auto companies.

The second part of the chapter examines how future developments within the auto industry will affect three areas of national concern:

- o Employment;
- o Oil consumption; and
- o The balance of payments.

### TRENDS IN THE U.S. AUTO INDUSTRY

#### Projected Growth in Sales

During the 1980s, the domestic car market will probably grow more slowly than it did in the past decade. Growth in the 1970s averaged 2.7 percent a year, while projections by major econometric forecasting firms and industry sources for the 1980s range between 2 percent and 4 percent (see Table 16). Growth of around 2 percent in the future appears more likely, since the bulk of new car sales will come from three sources, each of

TABLE 16. PROJECTIONS OF U.S. AUTO SALES: AVERAGE ANNUAL GROWTH RATE, IN PERCENT

Source	1981-1985	1981-1990	1985-1990
Data Resources <u>a/</u>	5.3	2.3	-0.5
Chase Econometrics <u>b/</u>	5.0	2.1	-0.2
Merrill Lynch Inc. <u>c/</u>	4.3	NA	NA
Wharton EFA <u>d/</u>	5.8	4.3	3.1
Dept. of Energy <u>e/</u>	1.9	2.1	2.1
Chrysler <u>f/</u>	2.8	NA	NA
Ford <u>g/</u>	NA	2.0	NA
General Motors <u>h/</u>	NA	2-2.5	NA
Arvid Jouppi <u>i/</u>	4.5	3.5	2.6
Manufacturers' Marketing Panel <u>j/</u>	NA	NA	1.6
Suppliers' Marketing Panel <u>k/</u>	NA	NA	2.6

a/ U.S. Long-Term Review, Data Resources Incorporated (Summer 1980), pp. 1.40-41.

b/ "Long-Term Macroeconomic Forecasts," U.S. Macroeconomic Forecasts and Analysis, Chase Econometrics Associates (June 30, 1980), p. 47.

c/ Michael Luckey, Senior Automobile Analyst, Merrill Lynch Economics (July 1980).

d/ "Wharton EFA Motor Vehicle Demand Model June 1980 Forecast," Wharton Econometric Forecasting Associates (June 1980), p. 30.

e/ Dale Greene, Department of Transportation.

f/ "Report on Review of Chrysler Corporation's April 23, 1980 Operating Plan," Office of Chrysler Finance, U.S. Treasury Department, May 9, 1980, in "Findings of the Chrysler Corporation Loan Guarantee Board," House Committee on Banking, Finance and Urban Affairs (May 12, 1980), p. 320.

g/ Philip Caldwell, Chairman, Ford Motor Company, in "Metalworking in the 1980s," Iron Age (June 2, 1980) vol. 223, no. 21, p. 37.

h/ Thomas Murphy, Chairman, General Motors Corporation, in "Metalworking in the 1980s," Iron Age (June 2, 1980), vol. 223, no. 21, p. 37.

i/ Arvid Jouppi, Senior Vice President, John Muir Company, "Tokyo Travel Notes." From speech "An Economic Overview of Durable Goods and Automotive Sectors in the United States During the 1980s," co-sponsored by U.S. Chamber of Commerce in Japan and U.S. Embassy, Tokyo (July 1980).

j/ From estimates by Manufacturers' Marketing Staff Panel in U.S. Automotive Industry Trends for the 1980s, Arthur Anderson & Co. (1980), p. 10.

k/ From estimates by Suppliers' Marketing Staff Panel in U.S. Automotive Industry Trends for the 1980s, Arthur Anderson & Co. (1980), p. 10.

which is likely to contribute only modestly to increased demand. First, replacement demand, which has accounted for the majority of auto sales in the 1970s, will remain relatively static. Second, growth in population will be relatively small for persons of driving age, particularly in contrast to the tremendous growth that occurred over the past 15 years as the "baby boom" entered the market. Finally, further increases in real income are unlikely to contribute as much to auto sales as they have in the past. Gains in disposable income have a progressively diminishing effect on automobile sales, since more and more families have their car needs fulfilled and spend additional income on other goods and services (see Figure 4).

The international market is likely to grow much faster, since there are far fewer cars per person elsewhere in the world. Average worldwide growth has been projected by auto suppliers at 4 percent annually, with the fastest growing markets being in Latin America (6 percent), Africa and the Middle East (5 percent), and Eastern Europe (4 percent). These estimates are based in part upon historic trends, and may not allow for the effects of recent and future OPEC price increases, which could dampen demand in developing countries that lack oil reserves.

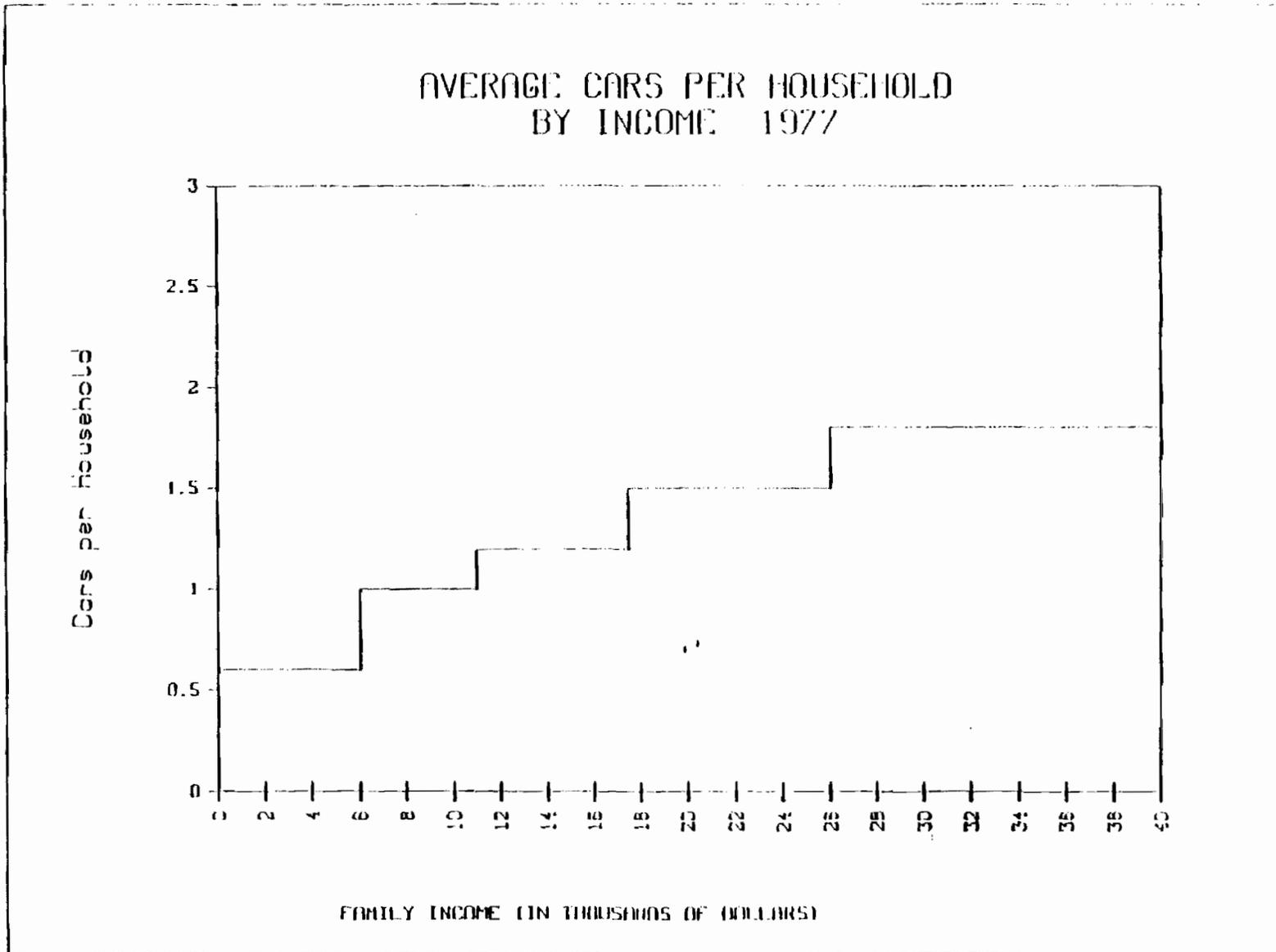
#### New Product Lines

The speed with which U.S. companies turn to producing more fuel-efficient vehicles will be critical to their future health. All of the companies are engaged in massive redesigning efforts, and by 1984 the industry plans to have the capacity to produce over 10 million newly designed cars (see Table 17).

General Motors has been quick off the mark. Both the Chevette and the "X" cars have sold well. GM's current plans include the introduction of front-wheel-drive "J" cars in the spring of 1981, the launching of a new mid-sized car line (the so-called "A" cars) in the fall of 1981, and a new series of front-wheel-drive full-sized and luxury cars in the 1983 model line. The mid-sized and large cars will get significantly better gasoline mileage than their predecessors, largely because of increased use of diesel engines which are about 25 percent more efficient than gasoline engines.

The Ford Motor Company will be introducing its Escort/Lynx models simultaneously in Europe and in the United States in the fall of 1980. It plans to follow this with a larger version to replace its Fairmont/Zephyr line in the fall of 1982. Ford's technological strategy rests on the development of a stratified charge gasoline engine, the PROCO (programmed combustion) engine. While currently less developed than the diesel engine, this tech-

FIGURE 4



SOURCE: Derived from data presented in Vehicle Ownership and Purchases Among American Families, Institute for Social Research, Survey Research Center (Michigan 1979).

TABLE 15. DIRECT SUPPLIER INDUSTRY LABOR REQUIREMENTS  
(JOBS PER 100 JOBS IN STANDARD INDUSTRIAL CLASSIFICATION 371--MOTOR VEHICLES AND MOTOR VEHICLE EQUIPMENT)

SIC	Industry	Jobs
239	Miscellaneous Fabricated Textile Products	3.8
2851	Paints and Allied Products	0.6
3011	Tires and Inner Tubes	1.8
3021, 3031, 3069	Miscellaneous Rubber Products	1.6
3079	Plastic Products	1.1
3211, 322, 3231	Glass	2.3
331	Blast Furnaces and Basic Steel Products	6.0
332, 3391, 3399	Iron and Steel Foundries and Forgings	8.7
3331, 3351, 3357, 3362	Primary Copper and Copper Products	0.5
3334, 28195, 3052, 3361	Primary Aluminum and Aluminum Products	1.1
345	Screw Machine Products	2.0
3461	Metal Stamping	9.6
342	Cutlery, Hand Tools and General Hardware	3.7
347, 348, 349	Other Fabricated Metal Products	2.5
351	Engines, Turbines, Generators	1.4
354	Metal Working Machines	2.4
356	General Industrial Machinery	1.7
359	Machine Shop Products	4.7
358	Service Industry Machines	2.9
362	Electrical Industrial Apparatus	1.3
369	Miscellaneous Electrical Products	4.0
372	Aircraft	0.5
3811, 382	Scientific and Controlling Instruments	1.1
40, 474	Railroad Transportation	2.6
42, 473	Truck Transportation	4.0
45	Air Transportation	0.5
	Wholesale and Retail Trade	10.2
	Finance, Insurance, Real Estate	2.2
	Services	10.8
	Other	9.4
Total		105.0

SOURCE: Department of Labor, Bureau of Labor Statistics.

TABLE 17. ESTIMATED U.S. NEWLY-DESIGNED FUEL-EFFICIENT CAPACITY, 1980 TO 1985 (In Thousands)

Year	Manufacturer Car Line	Cumulative Capacity
1980		
General Motors		
	Chevette	400
	X-body	<u>800</u>
	Total	1,200
Chrysler		
	Omni/Horizon	300
	Volkswagen Rabbit	<u>250</u>
	Total, 1980	1,750
1981		
General Motors		
	Chevette	400
	X-body	860
	J-body	<u>450</u>
	Total	1,710
Ford		
	Escort/Lynx	485
Chrysler		
	Omni/Horizon	300
	K-body	<u>525</u>
	Total	825
Volkswagen		
	Rabbit	<u>250</u>
	Total, 1981	3,270
1982		
General Motors		
	Chevette	400
	X-body	860
	J-body	500
	A-body	<u>400</u>
	Total	2,160
Ford		
	Escort/Lynx	600
Chrysler		
	Omni/Horizon	300
	K-body	<u>700</u>
	Total	1,000
Volkswagen		
	Rabbit	<u>250</u>
	Total, 1982	4,010
1983		
General Motors		
	Chevette	400
	X-body	860
	J-body	500
	Intermediate/standard	<u>2,500</u>
	Total	4,260
Ford		
	Escort/Lynx	600
	Compact/intermediate	<u>700</u>
	Total	30
		1,300

(Continued)

TABLE 17. (Continued)

Year Manufacturer Car Line	Cumulative Capacity
1983 (Continued)	
Chrysler	
Omni/Horizon	300
K-body	<u>300</u>
Total	1,200
Volkswagen	
Rabbit	<u>450</u>
Total, 1983	7,210
1984	
General Motors	
Chevette	400
X-body	860
J-body	900
Intermediate/standard	<u>3,000</u>
Total	5,160
Ford	
Escort/Lynx	700
Compact/intermediate	1,300
Standard	<u>1,300</u>
Total	3,300
Chrysler	
Omni/Horizon	300
K-body	<u>900</u>
Total	1,200
Volkswagen	
Rabbit	<u>450</u>
Total, 1984	10,110
1985	
General Motors	
Chevette	400
X-body	860
J-body	900
Intermediate/standard	<u>4,000</u>
Total	6,160
Ford	
Escort/Lynx	700
Compact/intermediate	1,300
Standard	<u>1,300</u>
Total	3,300
Chrysler	
Omni/Horizon	300
K-body	<u>900</u>
Total	1,200
Volkswagen	
Rabbit	<u>450</u>
Total, 1985	11,110

SOURCE: Subcommittee on Trade of the Committee on Ways and Means, The U.S. House of Representatives, Auto Situation: 1980, June 6, 1980.

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

nology offers a chance to avoid some of the drawbacks--such as high emissions and noise--of the diesel.

Chrysler's future depends on its much-publicized "K" cars, to be introduced this fall. American Motors, as part of its joint enterprise with Renault, should produce a new domestic small car by 1982 or 1983.

In response to consumer concern, the domestic auto companies have initiated programs to improve the quality of their cars. These range from short-term increases in the number of quality control inspectors and tests (Chrysler is reported to be planning to build one-third more test "K" cars than usual) to new automated equipment designed to test each car as it rolls off the production line. There does not appear to be any technological or organizational impediment to improving the quality of U.S. auto production. Moreover, U.S. companies capture approximately 17 percent of sales in the foreign market, demonstrating that they can effectively compete in a market that is presumably highly quality-conscious.

The rapid shift to new product lines will impose a substantial cost. GM, Ford, Chrysler, and AMC are expected to make capital expenditures of \$65 to \$67 billion between now and 1984, nearly three times what they spent between 1975 and 1979. (These estimates include worldwide operations; figures on U.S. investment are not readily available.)

#### Sales of Domestic Cars Relative to Imports

The share of imports in the U.S. auto market has increased dramatically over the past ten years, from 15 percent in 1970 to 27 percent in the first five months of 1980 (Table 18). Most of the gains occurred after 1976, particularly in the last two years. Sales of domestic small cars have also increased, from 23 percent of total sales in 1970 to 38 percent this year. After outperforming the imports in the first half of the decade, however, sales of domestic small cars in recent years have not grown as rapidly as import sales.

The future share of imports in U.S. auto sales will be heavily influenced by growth in the small-car share of the U.S. market and by the competitiveness of domestic small cars. Assuming that gasoline prices increase at 2 percent a year above the rate of inflation, small cars could raise their share of the market to 66 percent by the middle 1980s. <sup>1/</sup>

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<sup>1/</sup> Congressional Budget Office, "Projected Composition of Sales of New Cars," Technical Note, March 17, 1980.

TABLE 18. U.S. AUTOMOBILE MARKET SHARES BY SIZE CLASS AND IMPORTS: IN PERCENT

Year	Small Cars		Mid-size Cars	Full-size Cars
	Imports	Domestic		
1970	15.1	23.1	21.8	40.0
1971	15.3	23.6	19.9	41.2
1972	14.8	24.1	21.7	39.4
1973	15.4	27.2	22.5	34.9
1974	15.9	32.4	24.6	27.1
1975	18.2	35.3	23.5	23.0
1976	14.8	33.2	27.0	25.0
1977	18.4	28.8	27.7	25.1
1978	17.7	30.8	27.9	23.6
1979	21.9	34.8	23.3	20.0
1980 (through May)	26.9	38.0	19.8	15.3

Among small cars, imports currently account for 41 percent of U.S. sales, a historic high. The imported share will likely decline as a greater variety of new fuel-efficient domestic small cars are put on the market. Starting with the 1981 model year, domestic capacity for redesigned (mostly front-wheel-drive) small cars will increase by 1.5 million cars per year with a further increase to 3.4 million cars in the 1984 model year (this is above the existing capacity of 1.75 million cars). <sup>2/</sup>

Newly designed domestic small cars (X-body cars or Omni/Horizon, for example) appear to be selling quite well, so that a good response may be expected to other new cars. The key question is whether new domestic cars can take sales away from imported cars. If the new domestic cars attract only customers who would otherwise have bought domestic cars, the share of imports will grow slightly. It would be more realistic, however, to assume that the appearance of a wide range of new domestic designs will attract some buyers away from imports. Even if only one out of four persons buying newly introduced domestic cars is drawn away from imports, the share of imports in the U.S. market could drop below 25 percent next year and below 20 percent by 1984 or 1985. It is unlikely, however, to drop to the level of the early or middle 1970s (15 percent), since the market appears to have shifted permanently toward small cars, the segment of the market where import competition is greatest.

#### Shifts in Automotive Production Processes

Two main trends may be expected in the industry's production processes--increasing productivity and internationalization.

Automobile industry productivity has increased rapidly over the past 23 years (Figure 5). The historical average annual increase of 3.5 percent per year may rise in the future as manufacturers turn to more automated processes. These will include not only robots but, more importantly, continued improvement in conventional techniques and the increased use of micro-processors. Increased productivity will also be enhanced by the rapid changeover in plant and equipment currently taking place. American plants may well be newer, more advanced, and more productive than the typical foreign plant by 1985.

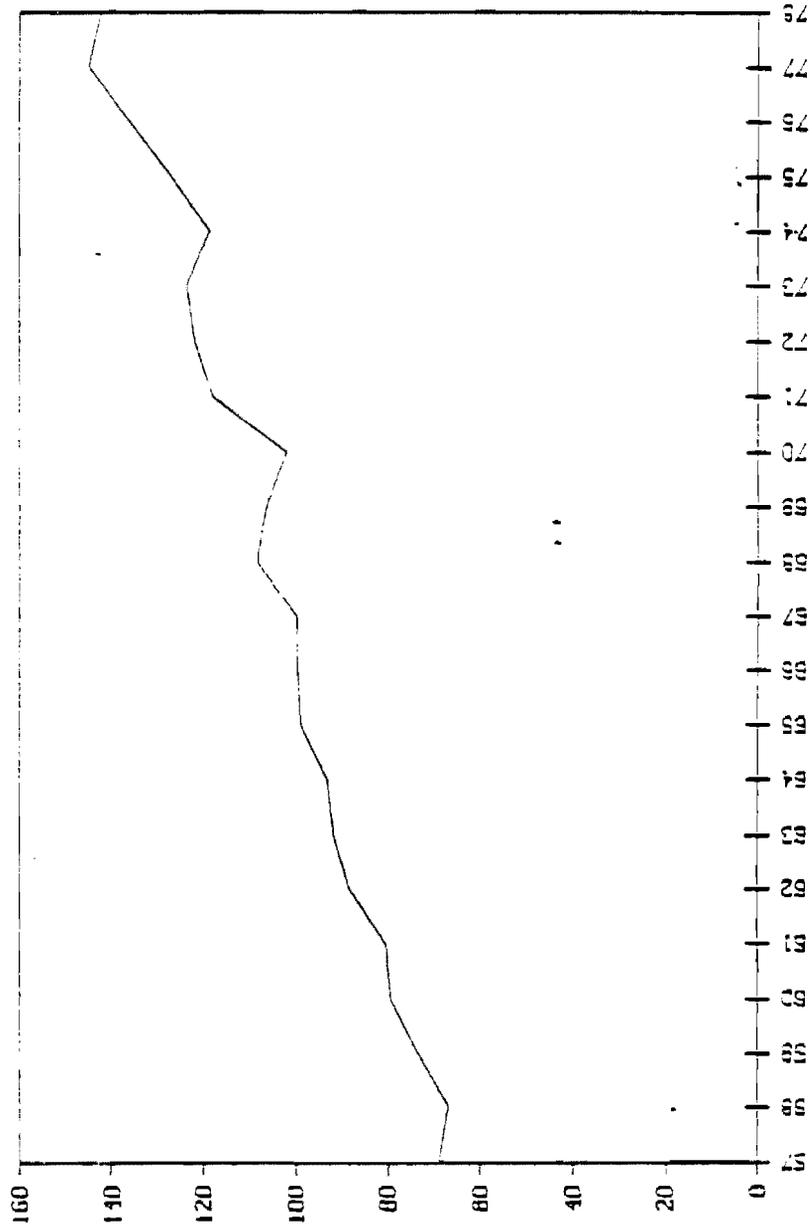
The cars of the future will not necessarily be less complex than those of today. Small cars are generally less complex to build, but increasingly

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<sup>2/</sup> Subcommittee on Trade of the Committee on Ways and Means, U.S. House of Representatives, Auto Situation: 1980, June 6, 1980.

FIGURE 5

OUTPUT PER EMPLOYEE HOUR  
MOTOR VEHICLES AND EQUIPMENT  
(1957 - 1978)



SOURCE: Bureau of Labor Statistics

stringent safety, environmental, and fuel economy standards add to complexity. Further, many newly introduced cars may not be significantly smaller, but only more fuel-efficient versions of large and mid-sized cars.

Internationalization of production will occur for a number of reasons. The switch in American consumer demand (over 30 percent of the worldwide market) toward small cars is toward the type of car demanded worldwide. Ford and GM in particular plan to respond to this change by marketing some of their models throughout the world, as opposed to their current practice of having different models for different markets.

This shift toward a homogeneous worldwide demand is accompanied by a trend toward multinational production. Labor cost differentials still make foreign sites attractive locations for the manufacture of component parts, although the difference between U.S. and foreign wage levels has been shrinking (Table 19).

In addition, many countries have stimulated automobile manufacturing through tax subsidies and laws that set conditions on the access of foreign cars to their markets. National governments are in a good position to exercise leverage, particularly those of countries with rapidly growing auto markets. A compilation of existing practices shows that more than half of the countries examined had local content restrictions, and nearly all--41 out of 49--had non-tariff import restrictions (Table 20).

For these reasons, engines, transmissions, and carburetors for future cars assembled in the United States may well be built in Mexico, Brazil, or Japan. A recent survey of industry managers found that they expected the value of imported parts in a domestic car to increase from the current level of 4 to 7 percent to 10 percent by 1985 and 15 percent by 1990.<sup>3/</sup> Industry's long-range plans are not known, but in the near term Ford, Chrysler, and GM have announced plans to open engine plants in Mexico. Ford plans to build an engine plant in Brazil.

Foreign producers, on the other hand, may increase production in the United States. Volkswagen is the only producer to do so currently; it produced 172 thousand cars in the United States last year, employing over 6,500 workers. Renault is planning a joint venture with American Motors, and Honda is planning to open an assembly plant in this country. Other companies have expressed interest, but have not yet announced any plans.

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<sup>3/</sup> Arthur Anderson and Company, U.S. Automotive Trends for the 1980s. 1979.

TABLE 19. ESTIMATED HOURLY COMPENSATION OF PRODUCTION WORKERS IN THE MOTOR VEHICLES AND EQUIPMENT INDUSTRIES, 14 COUNTRIES, CALENDAR YEARS 1975-1978 AND MID-YEAR 1979.

(Provisional Estimates)

Country	1975		1976		1977		1978		1979	
	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 <sup>a/</sup>	3.56	37	4.02	39	4.82	42	6.68	53	6.85	50
Korea	0.50	5	0.63	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	---	---	---	---	4.40	---	5.03	---	7.39	---
Sweden	7.44	78	8.44	81	9.01	78	9.80	77	11.46	84
United Kingdom	3.95	41	3.75	36	3.91	34	4.85	38	6.36	46

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, unpublished data. An earlier version of this table appeared in "Auto Industry: 1980" (Subcommittee on Trade, House Ways and Means Committee).

<sup>a/</sup> Japan data include spring and year-end bonuses averaged in. For 1979 this was estimated, based on negotiated settlement for the industry and spring bonus percentage.

TABLE 10: SURVEY OF AUTOMOTIVE TRADE RESTRICTIONS MAINTAINED BY SELECTED NATIONS

<u>Summary of Foreign Automobile Trade Restrictions <sup>a/</sup></u>			
	<u>Local Content Requirements</u>	<u>Import Restrictions <sup>b/</sup></u>	<u>Export Requirements</u>
Algeria	No	Yes	No
Argentina	Yes	Yes	Yes
Australia	Yes	Yes	No
Austria	No	Yes	No
Belgium	No	Yes	No
Bolivia	Yes	Yes	No
Brazil	Yes	Yes	Yes
Chile	Yes	Yes	Yes
Colombia	Yes	Yes	Yes
Denmark	No	No	No
Ecuador	No	Yes	No
Egypt	Yes	Yes	No
France	No	Yes	No
Germany	No	No	No
Ghana	No	Yes	No
Greece	Yes	Yes	No
India	Yes	Yes	No
Indonesia	Yes	Yes	No
Israel	No	Yes	No
Italy	No	Yes	No
Japan	No	No	No
Kenya	No	Yes	Yes
Kuwait	No	No	No
Malaysia	Yes	Yes	N/A
Mexico	Yes	Yes	Yes
Morocco	Yes	Yes	No
Netherlands	No	No	No
New Zealand	No	Yes	No
Nigeria	Yes	Yes	No
Norway	No	Yes	No
Pakistan	Yes	Yes	Yes
Peru	Yes	Yes	No
Philippines	Yes	Yes	Yes
Portugal	Yes	Yes	No
Saudi Arabia	No	No	No
Singapore	No	Yes	No
South Africa	Yes	Yes	No
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
Turkey	Yes	Yes	Yes
United Kingdom	No	Yes	No
Uruguay	Yes	Yes	Yes
Venezuela	Yes	Yes	Yes
Yugoslavia	Yes	Yes	No

SOURCE: Subcommittee on Trade of the House Committee on Ways and Means, Committee Print, "Auto Situation: 1980," June 2, 1980. Compiled by the Office of International Sectoral Policy, U.S. Department of Commerce, from information supplied by embassies, country analysts, and industry sources. The accuracy of the information received has not been verified.

- <sup>a/</sup> The measures cited in this chart are for new cars. Trade restrictions on used cars are not reflected.
- <sup>b/</sup> 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.

### Likely Developments in Fuel Efficiency

Only several years ago there seemed little hope of attaining average fuel economy levels of at least 27.5 miles per gallon by 1985, as required by the Energy Policy and Conservation Act of 1975. Technological progress, together with increasing fuel prices and consumer acceptance of smaller cars, now makes it likely that this standard will be achieved or exceeded by 1985. (General Motors currently projects that, as a result of market shifts to smaller, more fuel-efficient autos, and its own accelerated production plans, its new cars will average 31 mpg in 1985.) These trends could increase the average fuel economy of new cars to 37 mpg by 1985, and technological innovations could make even higher fuel economies possible.

### Capital Requirements

The major restraint on U.S. auto manufacturers' ability to produce more fuel-efficient vehicles is the capital required to convert production facilities. Accelerating product development substantially increases capital investment requirements. The additional capital cost of raising average new-car fuel-economy level from 27.5 mpg to 35 mpg is estimated at about \$40 billion in 1970 dollars. <sup>4/</sup>

The industry's ability to achieve this level of capital expenditure is uncertain. Internal financing is unlikely since the profits of the companies will be constrained by slow market growth and the shift to smaller cars, which have always yielded smaller profits. The industry may thus be forced to finance a large portion of its capital needs through the stock and bond markets. Such financing is contingent upon the ability to attract investors, an ability that varies widely from company to company.

### NATIONAL EFFECTS

These changes in the U.S. automobile market and production process could substantially influence the nation's long-term employment structure, its energy consumption, and its balance of payments.

### Employment Outlook

Relative to the high levels of early 1979, a long-term decline in the U.S. automobile labor force appears likely. Even though domestic auto

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<sup>4/</sup> Testimony of Alice M. Rivlin before the Committee on Energy and Natural Resources of the United States Senate, April 30, 1980.

sales are projected to grow around 2 percent a year, three factors will contribute to a decline in the demand for labor. First, foreign production of components reduces the demand for U.S. labor. Second, small cars are generally less complex and so require somewhat less labor to produce. Third, productivity in automobile manufacturing is likely to increase. While some factors, such as growing exports as well as increasingly stringent safety, environmental, and fuel-economy standards, may increase the labor needed by the industry, the net effect nonetheless appears to be an overall decline in labor requirements over the next 10 years.

An estimate of the decline in labor requirements depends on assumptions as to average hours worked and hours compensated per employee. Some analysts have estimated that 60,000 to 160,000 fewer workers will be needed by 1990 compared to 1979 levels--between one-fourth and two-thirds of the workers now on indefinite layoff.

Gains in productivity and reduced complexity will result in less expensive cars, and so represent a benefit to the consumer. Whether or not increased foreign sourcing results in any such benefit is unclear. If it is less expensive to build various components in other countries and then transport them to assembly locations in the United States, consumers will reap some benefit from the practice. If, however, companies are building parts plants out of the country for non-market reasons (i.e., to comply with local-content restrictions) no clear benefit will accrue to U.S. consumers.

#### Reduction in National Petroleum Consumption

The direction that the U.S. auto market is taking will also lead to significant reductions in energy consumption. For example, one year's production of new cars that average 37 mpg--a fuel efficiency that appears to be technologically feasible <sup>5/</sup>--would save approximately 158,000 barrels of oil relative to a year's production of new cars averaging 27.5 mpg. This represents more than 3 percent of projected automotive fuel consumption in the 1990s. As improved vehicles come to constitute the majority of cars in use, the fuel savings grow correspondingly. By the year 2000, savings of more than a million projected barrels per day--25 percent of present automotive fuel consumption--could be achieved with cars getting 37 mpg instead of 27.5 mpg.

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<sup>5/</sup> Ibid, p. 39.

## Balance of Payments

The value of automotive imports has exceeded the value of automotive exports for the past 11 years (Table 21), resulting in a net drain of about \$9 billion dollars in each of the last two years. This trade balance is likely to remain negative. While the current rise in imported fully assembled cars may be offset in the future, imports of component parts are likely to increase faster than exports of such parts in the next 10 years. The trade balance on component parts (excluding Canada) has fluctuated over the past 10 years, with imports exceeding exports for the past four years (Table 22). While such components now represent less than one-fourth of automotive imports, their importance is likely to increase as the internationalization of the industry continues. Component parts currently represent over three-quarters of our automotive exports.

The effect of foreign sourcing on the balance of payments may be accentuated by the practice of "transfer pricing." This type of pricing arises when the components are built in a country with lower taxes than the United States. It is in the interest of the multinational corporation to show profits where taxes are lowest: thus, a foreign affiliate might charge inflated prices for its components to its U.S. parent, increasing the foreign profits and decreasing the U.S. profits, thus minimizing total taxes.

Increased fuel efficiency will reduce the flow of dollars out of the country to pay for imported oil. Foreseeable improvements in fuel economy could result in greatly reduced fuel consumption--possibly as much as one million barrels a day by the late 1990s. Such savings imply over \$12 billion a year worth of reduced petroleum imports even at today's prices.

TABLE 21. VALUE OF U.S. AUTOMOTIVE EXPORTS AND IMPORTS,  
1965-1979 (In millions of dollars)

	Exports	Imports	Balance
1965	1,124.6	853.8	270.8
1966	1,448.9	1,701.1	-252.2
1967	1,838.1	2,296.9	-458.8
1968	2,436.4	3,762.9	-1,326.5
1969	3,177.5	4,583.5	-1,406.0
1970	2,975.9	5,185.8	-2,209.9
1971	3,660.4	7,076.1	-3,415.7
1972	4,284.3	8,191.9	-3,907.6
1973	5,283.4	9,595.2	-4,311.8
1974	6,550.6	10,500.1	-3,949.5
1975	7,618.3	10,359.3	-2,741.0
1976	8,920.8	14,074.7	-5,153.9
1977	9,844.2	16,011.2	-6,170.0
1978	11,574.5	20,578.5	-9,004.0
1979	13,057.1	21,776.9	-8,719.8

SOURCE: Bureau of Labor Statistics

TABLE 22. VALUE OF U.S. AUTOMOTIVE EXPORTS AND IMPORTS, EXCLUDING CANADA, 1965-1979 (In millions of dollars)

	Total			Fully Assembled			Parts Only		
	Export	Import	Balance	Export	Import	Balance	Export	Import	Balance
1965	390.1	663.6	-273.5	144.5	583.2	-438.7	245.6	80.4	165.2
1966	364.7	969.9	-605.2	147.5	865.6	-718.1	217.2	104.3	112.9
1967	227.3	1,004.3	-777.0	113.1	877.5	-764.4	214.2	126.8	87.4
1968	348.1	1,631.3	-1,283.2	118.3	1,433.2	-1,314.9	229.8	198.1	31.7
1969	678.6	1,797.0	-1,118.4	116.2	1,528.1	-1,411.9	562.4	268.9	293.5
1970	649.3	2,297.5	-1,648.2	114.3	1,913.1	-1,798.8	635.0	384.4	250.6
1971	759.7	3,246.1	-2,486.4	124.1	2,735.9	-2,611.8	635.6	510.2	125.4
1972	825.2	3,784.9	-2,959.7	121.8	3,112.9	-2,991.1	703.4	672.0	31.4
1973	1,107.6	4,644.9	-3,537.3	215.1	3,740.0	-3,524.9	892.5	904.9	-12.4
1974	1,633.3	5,847.2	-4,213.9	346.7	4,663.7	-4,317.0	1,286.6	1,183.5	103.1
1975	1,898.9	5,523.4	-3,624.5	427.1	4,321.1	-3,894.0	1,471.8	1,202.3	269.5
1976	2,193.5	7,589.6	-5,396.1	566.2	5,451.4	-4,885.2	1,627.3	2,138.2	-510.9
1977	2,638.1	8,715.3	-6,347.2	637.0	6,831.9	-6,194.9	1,731.1	1,883.4	-152.3
1978	3,419.0	12,466.1	-9,047.1	956.8	9,524.1	-8,567.3	2,462.2	2,942.0	-479.5
1979	4,452.1	14,323.5	-9,871.4	1,323.1	11,107.4	-9,784.3	3,129.0	3,216.1	-87.1
<u>Average Annual Percentage Changes (In Percent)</u>									
1965-1975	+17	+24	---	+11	+12	---	+20	+31	---
1975-1979	+24	+27	---	+13	+27	---	+21	+28	---

SOURCE: Bureau of Labor Statistics.

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## CHAPTER IV. POLICY OPTIONS

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In addressing the current problems of the auto industry it is important to distinguish between long-run structural concerns and the more immediate problems arising from the recession. The primary long-run question is whether the industry can finance the massive capital investment required to produce substantially more fuel-efficient vehicles over the next several years. Failure in this would not only impede the United States' ability to reduce its oil imports; more importantly, it might jeopardize the long-run viability of the industry itself. Even during normal times the industry has had difficulty in meeting its investment requirements, but the recession has greatly diminished its ability to generate internal investment funds.

The current recession is reflected in very serious unemployment within the auto industry, as well as in the economy generally. With about one-third of the nation's auto workers unemployed, the problem profoundly influences the people, industries, cities and states that are most closely associated with the auto industry. Yet, it appears unlikely that employment in the auto industry will return to past levels within the next five years, so that some long-term adjustments must be made in the structure of the labor force.

### Alternative Policies

A variety of federal policies have been proposed to address these concerns. In general, the proposals fall into two groups: short-run proposals, which emphasize relief of current unemployment and stimulation of increased sales as a source of investment funds; and long-run proposals, which would endeavor to increase the industry's ability over the next decade to meet its capital restructuring needs. Both the long- and short-run proposals have implications for the federal budget, consumer prices, competition, the structure of both the domestic and the international auto industry, and the U.S. balance of payments.

This chapter explores the consequences of a variety of broad policies. It does not exhaust all the possibilities, seeking only to show what would be the main effects of each option considered. It highlights some of the questions that should be considered before taking up specific proposals. The preliminary numerical estimates presented here are based on simple estimating procedures and should be interpreted as rough projections.

### The Administration's Actions

Mention should first be made of the package of actions recently announced by the Administration. The package requires no legislative action and will have minimal impact on the federal budget. The three major actions include modifying the high altitude emission standards for 1984, requesting the International Trade Commission (ITC) to speed up its consideration of the request of the United Auto Workers for restrictions on the import of foreign cars, and the creation of a tripartite review panel representing industry, labor, and government to coordinate future policy.

The Environmental Protection Agency estimates that the change in high-altitude standards will save the industry about \$500 million between now and 1984, although some manufacturers disagree with this estimate. The question has also been raised as to whether such a change requires legislative action. The ITC has agreed to rule on the union's request by November 24, but not as quickly as requested by the President. In addition, the Administration plans to target existing economic aid programs more closely to persons and regions hardest hit by the industry's crisis (through such channels as Small Business Administration loans to auto dealers, for example), speed up the Treasury Department's regular review of income tax depreciation schedules for the auto industry, and delay the promulgation of new safety standards. While such policies would assist the industry, a final assessment of the Administration package awaits the findings of the tripartite panel and the ITC decision.

So far as other aid is concerned, the Administration is probably limited to "jawboning" in an attempt to persuade the Japanese to hold down their exports to the United States and to encourage them to invest in U.S. auto production facilities; stimulating consumer credit for auto loans; perhaps making some adjustments in existing tax depreciation rules; and modifying or delaying environmental or safety regulations.

### Short-Term Options

Most of the short-term proposals are driven by concern with unemployment, and are intended to take effect in the next year or two. They could, however, have undesirable long-run effects. Two proposals for improving auto sales in the short term are restrictions on the imports of foreign cars and various government subsidies for the purchase of new U.S. cars. Such steps stimulate auto sales, thereby increasing employment. In addition to their direct costs, however, these actions may have adverse consequences on energy policy and on the long-term development of the industry.

Government Rebates. The fastest way to increase employment in the auto industry is to increase sales, and new-car sales could be stimulated rapidly by direct federal cash subsidies. For example, the government could offer rebates to purchasers of new domestic cars. The costs to the government would be partly offset by reduced payments of unemployment benefits and by increased tax revenues. The effectiveness of such a program, however, would be diminished by several factors. First, while a large rebate program could have major effects in the short term, it would be likely to decrease sales in future years, just as manufacturer rebate schemes stimulate current sales partly at the expense of future sales. Second, auto dealers could be expected to raise their prices (by reducing discounts from list prices or by offering lower trade-ins) in order to retain or capture part of the rebate for themselves. Thus, the net price to purchasers of new cars would fall by less than the per-unit cost to the government. This failure to pass discounts along to buyers would likely be greatest for small cars, where demand is relatively strong. To the extent that the net price reductions would be greater for intermediate and large cars, there would be undesirable effects on fuel consumption. Third, sales would probably increase without a rebate program. Current sales are depressed in part by the recession and in part by high interest rates. If both ease over the next year, as appears likely, the rebate program would become largely redundant in stimulating sales, and wasteful in its expenditures.

Nevertheless, a rebate of about \$1,330 per car (\$11.0 billion a year) could generate an additional 2.5 million sales a year, enough to return sales of domestic cars to the 1979 level. <sup>1/</sup> This assumes that a rebate program could be administered in a way that prevented the auto manufacturers from increasing their prices, and that one-fourth of the rebate would be captured by dealers. Relative to the number of car buyers that receive rebates, very few would represent new sales. First of all, about 5.8 million new domestic cars would have been sold anyway. Second, an estimated 1.65 million

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<sup>1/</sup> Current (mid-July, 1980) sales for domestic cars are equivalent to an annual rate of about 5.8 million cars, about 2.5 million cars below the rate for 1979. The long-term price elasticity for new cars is believed to be about -1, so that a one percent real decrease in prices should increase sales by about one percent. The Chrysler Corporation has estimated short-term price elasticity at about -2.5, implying that a one percent decrease in prices would increase sales by about 2.5 percent. The Chrysler estimate of elasticity is high compared to most, although this aspect is particularly uncertain. The estimate presented here assumes a base price of \$7,500, a short-term price elasticity of -2.5, and a long-term elasticity of -1.0.

additional buyers would have purchased a new car soon, and would simply move their purchase forward to take advantage of the rebate. Such sales are not new, but borrowed from the future. Thus, only around 0.85 million of the total of 8.3 million sales would be sales that would not have been made without the rebates. This means that if borrowed sales are not counted, the cost per new sale generated would be about \$13,000. Moreover, not all of the increases in sales would represent new-car production, since the manufacturers would probably sell cars from inventory first. Inventories of many domestic mid-size and large cars are at record levels, so that a delay could be expected before production of these models increased, with a corresponding delay in the creation of jobs.

In one year, such a rebate program could create about 150,000 jobs directly, and an additional 200,000 to 400,000 jobs indirectly. Just as most of the new-car sales generated by rebates would be borrowed from future sales, so would many of the jobs--and they might be lost once the rebate program was over. Nor would this program suffice to rehire all of the 250,000 unemployed auto workers; it would only return production to the level of mid-1979, a level at which significant unemployment existed, and it would do little for the truck-building sector of the industry. 2/

A rebate program could be structured to emphasize energy or employment goals by focusing on particular classes of cars. A subsidy for large cars could do much to alleviate current unemployment, but it would have adverse effects on energy use and would slow the rate at which the industry adjusted to production of smaller cars. Subsidies for smaller cars, however, would be wasteful since sales of many small domestic models are already limited by production capacity.

A rebate program would provide a significant stimulus to the industry, but the direct cost to the federal government would be substantial. Some of the direct federal costs would be offset by reduced payments to unemployed auto workers and by increased federal tax revenues. The increase in federal tax revenues, however, would be smaller than would normally be expected from a reduction in unemployment of this size since many auto workers can qualify for aid equal to about 95 percent of their take-home pay. This minimizes the multiplier effects of reduced unemployment on other

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2/ Total U.S. vehicle production capacity is estimated at about 13 million vehicles a year, of which about 3.5 million or 25 percent are trucks.

workers. Nor would rebates provide a permanent solution: depressed sales and some diminished employment would eventually result in the period from which sales were borrowed. Also, a program of rebates for domestic cars could violate some of our international trade agreements such as GATT and thus lead to some form of trade retaliation by other countries.

Finally, any rebate scheme raises questions of equity. The cost of the program would be borne by all taxpayers, while the benefits would be enjoyed mainly by new car buyers, who tend to be relatively affluent.

Bounties on Old Cars. The Chrysler Corporation has proposed giving buyers of new cars a tax credit of \$1,500 for every pre-1976 car traded in on a new U.S. car. The trade-ins would be scrapped, thus improving the average fuel economy of the fleet. On average, about 7 million cars are scrapped each year, virtually all of them pre-1976 models. Under the bounty program, such cars would increase significantly in value--from around \$100 in scrap value to \$1,500 in trade-in value. In view of this very high premium, most of the cars destined for near-term scrappage would instead likely be traded to new-car buyers. For example, a new-car buyer with a qualified trade-in worth \$1,300 could trade it in for \$1,500 when buying a new car, a gain of \$200 attributable to the bounty. But if this buyer could acquire a near-scrap car for \$300, sell his real trade-in on the used car market for its market value of \$1,300, and collect the bounty of \$1,500 for the near-scrap vehicle, he would realize a gain of \$1,200 attributable to the bounty.

The net result of such transfers is that most all new-car buyers would likely furnish trade-ins to qualify for the bounty, and that many of the cars exchanged would be from the 7 million or so cars that would have been scrapped anyway.

On average, the gain realized by new-car buyers would be smaller than the bounty, since the car being traded would have some value, or, in the case of near-scrap vehicles, cost something to acquire. Also, as under the rebate scheme discussed above, dealers would capture part of the tax credit for themselves, particularly if they assisted buyers in making deals such as that illustrated above. The resulting gain to the buyer could average somewhere around half of the bounty, or \$750 per car.

Assuming that an average new-car buyer realized a gain of \$750 from the bounty program, a one-year version of the Chrysler plan would increase sales by about 1.75 million cars above a base of 5.8 million cars. Of the additional 1.75 million cars sold, roughly 1.2 million would represent borrowing from future sales. The direct cost to the federal government

would be \$11.3 billion, or about \$20,600 per "new" sale induced. The general effects would be similar to those of the rebate scheme discussed above.

Another drawback of this proposal is its possible effect on the used-car market. While most of the trade-ins would probably be cars that would have been scrapped soon, some would not. As a result, the supply of used cars would be decreased, and their prices increased--thereby inducing further sales of new cars. This effect is difficult to estimate, but could result in additional new-car purchases.

The increase in prices of used cars intensifies the equity question, since not only would relatively affluent buyers of new cars enjoy lower prices, but the relatively poor people who buy used cars would have to pay higher prices, while taxpayers as a whole would pay the costs of the program.

The bounty system would provide larger energy savings than the rebate plan, since the older, less fuel-efficient cars would be junked. Assuming that cars would be driven 10,000 miles a year (about the national average), and based on the number of net new cars sold, less than 6,000 barrels a day of petroleum could be saved over the remaining useful life of the bountied cars. Since there would be a clear incentive to trade in older cars first, the remaining useful life would be likely to average no more than two or three years. But, for several reasons, the estimate of 6,000 barrels a day for energy savings is too high. First, the fuel economy of future domestic cars will be better than the current models, so that a bounty would tend to retard the increase in average fuel efficiency of cars by emphasizing sales in earlier years. Second, a recycled car typically yields only about one-third of the energy needed to construct a new one, so that early retirement of cars increases the energy consumed in automotive production. Third, new cars tend to be driven more than older cars. Although much of the additional use presumably stems from the fact that persons who drive a lot tend to buy disproportionately many new cars, some buyers may tend to use a car more because it is new.

The bounty proposal could be refined in a number of ways that might make it more cost-effective. For example, the government might require proof (perhaps the previous year's registration) that the vehicle traded in had not been purchased as a used car solely to take advantage of the tax credit. The bounty could also be made more effective by reducing the amount of the tax credit to correspond somewhat more closely to the expected value of the cars to be traded in. Or the tax credit could be restricted to cars with particularly poor gas mileage, such as even older cars or heavy cars.

Import Restrictions. Another way advanced to stimulate employment in the U.S. auto industry is to limit foreign competition. Import quotas would have two major effects: first, by reducing imports, they would force some consumers to buy U.S. cars or not to buy any car at all, and second, U.S. manufacturers would take advantage of reduced competition to raise their prices. Quotas would improve the financial position of domestic firms and would probably increase sales of domestic cars, reducing unemployment in the process. Quotas would also increase energy consumption, since U.S. cars are less fuel-efficient than imports--even imports in the same size class. It is possible that a reduction in competition from abroad would decrease the speed with which U.S. producers modify and improve their cars.

The United Auto Workers union has asked the International Trade Commission for relief from imports on the ground that they have seriously damaged the U.S. auto industry. The Commission is reviewing this application and expects to make a recommendation by November 24 to the President, who will have 60 days to review the Commission's recommendations. Under this process, the President could impose import quotas without additional legislation. The union is requesting a five-year restriction on imports to the levels of 1975 or 1976 (about 1.5 to 1.6 million cars a year), or about .9 to 1.1 million cars a year below the current rate. The union is also requesting an increase in the import duty to 20 percent from the current 2.9 percent. Past experience indicates that this would lead to increases in the prices of domestic cars. Price increases by Japanese auto makers have been followed by increases by their chief U.S. competitors equal to about 75 percent of the Japanese increase (Table 23).

Assuming that the prices of competitive domestic cars (about 3.3 million such cars during the 1981 model year 3/) would be increased by 75 percent of the new import duties, total sales could be expected to drop off by one-half the decreased supply of imports. The short-run drop in sales would roughly equal the drop in imports. Total sales would drop even further if the prices of other domestic cars were increased as well. These estimates are conservative since they assume that all buyers of imports would purchase a domestic car if imports were not available. Thus, import quotas together with import duties would probably generate only a small net increase in domestic auto sales and in jobs, although the net profit per unit could rise considerably. Controls on domestic car prices would help to boost domestic auto sales and employment, but would mean lower profits. In

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3/ See Table 17 above.

TABLE 23. JAPANESE PRICE LEADERSHIP IN THE SUBCOMPACT MARKET--FOUR ROUNDS OF PRICE CHANGES ON 1978 MODELS

	Initial Base Price (in dollars)	Final Base Price (in dollars)
Corolla	3,048	3,498
Datsun B-210	3,148	3,488
Chevette	3,354	3,734
Pinto	3,336	3,536

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	Date of Price Increase	Percent Increase	Dollar Increase	Adjusted Base Price (in dollars)
<u>Round 1</u>				
Corolla	12/5/77	2.6	80	3,128
Datsun B-210	12/12/77	1.6	50	3,198
Chevette	1/2/78	3.0	100	3,454
Pinto	1/16/78	4.0	135	3,471
<u>Round 2</u>				
Corolla	2/27/78	2.0	60	3,188
Datsun B-210	3/6/78	1.9	60	3,258
Chevette	3/27/78	2.72	95	3,549
Pinto	---	---	---	3,471
<u>Round 3</u>				
Corolla	4/24/78	6.0	200	3,388
Datsun B-210	4/24/78	4.3	140	3,398
Pinto	4/24/78	2.0	65	3,536
Chevette	6/5/78	2.6	95	3,644
<u>Round 4</u>				
Corolla	7/10/78	3.2	110	3,498
Datsun B-210	7/17/78	2.6	90	3,488
Chevette	8/7/78	2.4	90	3,734
Pinto	---	---	---	3,536

SOURCE: Harbridge House Inc., The Imported Automobile Industry, June 1979, p. 51; from Automotive News, late 1977 and all 1978 issues.

addition, government experience with wage and price controls suggests that price restraints would be difficult to administer, particularly at the dealer level where trade-ins and discounts from list prices make price restraints virtually impossible to enforce.

The drawbacks to this proposal lie in the effect it would have on prices, and in the fact that it conflicts with the U.S. tradition of relatively free international trade. In particular, it appears to run counter to international trade arrangements such as GATT, to which the United States is a party.

The Ford Motor Company has proposed import quotas without an increase in tariffs. Automobile prices would not be likely to rise as dramatically under this proposal, permitting a somewhat larger increase in domestic sales and jobs. The Administration is reported to have estimated that to restrict imports by 500,000 cars a year would result in price increases for imports of \$700 per car. <sup>4/</sup> If, in response, the prices of U.S.-made small cars were increased by about \$500, long-term domestic sales would be about 230,000 cars a year less than otherwise. The net increase in sales (about 270,000) would increase jobs by about 16,000 directly and perhaps by another 20,000 to 30,000 indirectly. Over the short run, the price increase could discourage sales so as to completely offset the reduced imports.

Restricting imports has adverse consequences for energy conservation. Imported cars are about 30 percent more fuel-efficient than domestic cars on the average, so that for every 500,000 domestic cars bought instead of imports, energy consumption increases by about 6,000 barrels a day. Also, quotas aimed exclusively at one part of the import market (Japan) run the risk of creating a surge in imports from Europe.

#### Long-Term Options: Introduction

Several proposals have been made designed to ease the financial strain on the auto industry or to assist permanently displaced workers in their transition to other jobs. In considering these proposals it is important to distinguish between those that are specifically oriented toward the automobile industry and those that also represent a comprehensive approach to revitalizing the overall industrial sector of the United States economy. For

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<sup>4/</sup> Washington Post, July 25, 1980, p. A12.

example, the relaxation of safety and environmental regulations and domestic content legislation would be primarily intended to help the automobile industry, while changing the asset lives on depreciation schedules would have the goal of stimulating investment and productivity in the entire economy. From an overall efficiency standpoint the second category of policies has a clear advantage, since development of a sound national industrial policy requires that the viability of all industries be considered, and that resources be made available to those in which the United States has the greatest competitive advantage.

### Long-Term Options: National Industrial Policy

General Tax Changes. Some of the general tax reforms that have been proposed as a means of stimulating capital investment in the economy as a whole could also help the auto industry. The most prominent proposal under consideration, the so-called 10-5-3 changes in depreciation, would allow a depreciable life for buildings of 10 years (as against 30 years typically used now), for machinery and equipment of 5 years (rather than a typical 12), and for light vehicles of 3 years (but with a dollar limit on the total depreciation that could be taken for light vehicles). These changes would be phased in over five years. Other provisions in the bill (H.R. 4646) are also designed to encourage greater investment.

The auto industry has objected that the 10-5-3 plan would change its current three-year depreciation schedule for special tools to a five-year schedule, and that this could cause a significant loss to the industry; special tools accounted for 38 percent (\$3.6 billion) of the industry's \$9.6 billion worldwide expenditures on plant, land, and equipment last year. Special tools are likely to grow in importance as the industry retools to build more fuel-efficient cars. Other features of the 10-5-3 proposal are likely to help the industry, however, by reducing the depreciation period for buildings and for larger machinery and equipment. In sum, the 10-5-3 proposal, as currently structured, would help the auto industry less than it would help most other industries. Modification of the 10-5-3 proposal with a "hold harmless" provision so that no company would be forced to lengthen its depreciation period would remove the major objection of the auto industry.

Aid provided by way of the tax code is likely to have disproportionate effects on different companies. With all U.S. auto companies experiencing large deficits, the immediate benefit to be found in faster depreciation would depend on the extent that it could be used to generate tax refunds by offsetting profits in previous years. Such carrybacks are currently allowed for only three years. Table 24 shows the domestic profits and federal taxes

TABLE 24. NET PROFITS OF MAJOR U.S. AUTO FIRMS ON U.S OPERATIONS, AND FEDERAL TAXES PAID (Millions of dollars)

	<u>General Motors</u>		<u>Ford</u>		<u>Chrysler</u>	
	Profits	Taxes	Profits	Taxes	Profits	Taxes
1979	2,321	1,579	(199) <u>a/</u>	(208) <u>b/</u>	(1,072) <u>a/</u>	(14) <u>b/</u>
1978	3,073	2,259	809	386	220 <u>d/</u>	(103) <u>b/</u>
1977	2,976	2,468	942	543	163.0	54
1976	2,380	2,007	429	232	NA	38
1975	1,065	857	67 <u>c/</u>	(132)	NA	(7)
1974	846	330	290 <u>c/</u>	(57)	NA	NA
1973	2,062	1,750	690 <u>c/</u>	NA	NA	NA

SOURCES: Annual reports or 10-K report.

a/ Loss.

b/ Refund.

c/ Includes net income from United States and Canada.

of the major auto companies in recent years. In 1977-1979, General Motors had profits on its U.S. operations of \$8.4 billion; Ford had profits of \$1.6 billion; and Chrysler had losses of \$1.1 billion. This year Ford is expecting sizable losses on its U.S. operations, which will probably offset most of these profits. General Motors may be the only firm in a position to take full advantage of such tax changes since even if it shows a loss for all of 1980, sizable previous profits will remain to offset increased deductions. Longer carrybacks of losses have been proposed. Even this would do little to help Chrysler unless a carryback of more than 10 years were allowed. Even a 10-year carryback might provide only limited help for Ford, because it did not pay taxes in 1974 and 1975.

### Long-Term Options: Industry-Specific Proposals

Several proposals have been made that would provide financial incentives to the auto industry to continue or accelerate current plans for redesigning and retooling production of domestic autos. For example, government price supports could be set for new, fuel-efficient cars or for cars produced with new technologies; an extra investment tax credit (or grant) could be given to producers of cars that exceed the automobile fuel-economy standards; or tax credits could be provided for research and development expenditures. While the potential costs to the federal government could be large, so could the energy savings and eventual consumer benefits.

The rationale for these proposals rests on the difficulties the industry is likely to face in financing future capital expenditures. Considerable controversy has arisen on this point, for two primary reasons. First, if the industry can finance its needed investment itself, then government subsidies would mainly serve to increase corporate profits. Government aid could also be diverted to financing auto plants in other countries because of the growing multinational character of the auto industry. Second, substantive government aid to one industry could distort the capital and job markets by diverting resources away from other industries. It is questionable whether the federal government offers the best mechanism for selecting future growth industries.

Refundable Tax Credits. Refundable tax credits have been suggested as one way to channel capital into the industry, given that Ford, Chrysler, and American Motors would find it very difficult to benefit from existing tax incentives. Such a financing mechanism would represent a significant change from current tax policy, and could have far-reaching effects if

applied generally. Refundable tax credits are equivalent to federal grants, requiring annual budget outlays. If they are to be used at all, it might be advisable to tie their use to investments linked with specific long-term national goals--for example, plant and tools to produce particularly fuel-efficient autos, or projects for developing new technologies.

Relaxation of Safety and Environmental Regulations. The industry has pushed for changes in the emissions and safety requirements as one way to ease the designing of new autos, and to reduce financing requirements. Since a relaxation of those standards would apply to imports as well, the domestic auto industry would gain little if any competitive advantage from it. It could help the industry's cash flow problems over the next several years, and have the advantage of benefiting companies regardless of their profitability. Some of the companies have advocated a delay in applying certain environmental standards, including new and more stringent test procedures, until after the industry's current financial crisis has ended--perhaps in the late 1980s. The Ford Motor Company, for example, has drawn up a package of changes that it maintains would save it \$500 million in capital expenditures between now and 1984.

Minimum Domestic Content. The existing federal fuel economy standards require that at least 75 percent of the value of domestically manufactured cars be produced in this country if they are to be counted as part of the basis over which a company's average fuel economy is computed. Current domestic content is over 90 percent, although this is likely to drop during the next decade as U.S. manufacturers switch to a "world car." While the 75 percent limit is not so strict as to discourage future rapid growth in imported parts, it has been credited with encouraging U.S. manufacturers to produce their foreign models (the Ford Fiesta, for example) in this country in order to include them in their corporate average fuel economy.

If similar provisions were applied to imported cars, foreign manufacturers would have to use more U.S. parts, to perform subassembly, or perhaps even to manufacture whole cars in this country, or else lose their share of the U.S. market. In general, minimum domestic content requirements could force greater automotive investment in this country and thus create more jobs. By restricting international competition, however, they could push up domestic auto prices, slow the transformation of the U.S. industry, and retard the development towards more fuel-efficient cars. As with import quotas, domestic content restrictions would represent a sharp shift in the U.S. posture toward international trade, and would probably conflict with U.S. commitments under the General Agreement on Tariffs and Trade. Any significant shift in international trade policy could lead to retaliation by other countries. Thus, the employment gains that would

accrue from setting a minimum domestic content standard for auto imports might be more than offset by jobs lost if other countries restricted their markets for U.S. non-automotive exports.

Industry-Specific Tax Changes. Some people have argued that the auto industry has special investment requirements that can best be met by tax changes geared to the specific needs of the industry. One major proposal would permit the write-off of special-tool expenditures in one year, as against the three years currently used. Special tools are needed to rebuild production lines to produce new automobiles. Given that the industry is likely to spend \$4 billion a year or so worldwide on special tools, such a tax change could be of enormous financial aid, particularly in the first year or two of any change.

The asset depreciation range (ADR) method currently allows corporations to depreciate their investments over a 20 percent shorter time period than their stated life. A change to 40 percent has been discussed as one way to aid the auto industry, and is reported to be under consideration by the Administration. This would allow buildings, for example, to be depreciated over 18 years rather than the 24 years permitted under the current 20 percent ADR, given the typical estimated life of 30 years. A change to 40 percent ADR from the current 20 percent would increase the first year's depreciation by 34 percent, from \$8.3 million to \$11.1 for each \$100 million invested. <sup>5/</sup> Given the large capital investment being made by the auto industry, any change permitting faster depreciation could provide substantial benefits for those firms that are either currently profitable or have had domestic profits within the last three years (General Motors, and, to a limited extent, Ford). The change would help the industry meet its long-term financing problems, although it would be unlikely to have much effect on auto industry employment or sales over the short term.

To the extent that these tax changes would encourage greater investment by the industry, they could have positive effects on the speed with which it adjusts to foreign competition and higher energy prices, on employment in the industry, on the price of cars, and on national energy consumption. The direct cost to the federal government could be substantial, although part of the costs would be offset by reduced long-term unemployment.

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<sup>5/</sup> This assumes use of the double-declining-balance method of accelerating depreciation.

Loan Guarantees. Federal loan guarantees, such as those Chrysler is now receiving, could stimulate investment. One advantage of loan guarantees is that, unlike tax changes, they provide aid regardless of the profitability of the firm. Such off-budget financing mechanisms often have hidden costs, however, insofar as there are real risks that the loans may not be fully repaid and since they represent government interference in the capital markets.

Aid to Workers. Special efforts might be made to retrain or relocate auto workers whose jobs have been permanently eliminated. <sup>6/</sup> Direct aid to the industry would be small. An early start on such a program could also provide short-term help for the 250,000 auto workers who are now indefinitely out of work and the 350,000 unemployed workers in supplier industries.

### Conclusions

Table 25 presents a brief, qualitative summary of some of the proposals discussed in this chapter. This list of options is not meant to be all-inclusive, but rather to give an idea of the range of policy options available. Each option is assessed on several criteria: possible impact on short-term unemployment, direct and indirect effects on the federal budget, effect on energy consumption, direct effect on consumer prices, possibility of conflicts with international trade agreements such as GATT, and the chance that aid will be reinvested in plants abroad.

Table 26 provides some rough quantitative estimates of the effects of the short-term policy options on new car sales, on short-term employment, on direct federal costs, and on energy savings. No attempt has been made to quantify the effects of the long-term policy options.

Past experience with auto industry rebates suggests that a government-sponsored rebate program could significantly increase sales over a period of a few months, but that most of the increase would represent sales "borrowed" from the future. In part, the effect would be to shift the industry's production problems six months to a year into the future. The long-term problems of the industry can hardly be solved that quickly; subsidies to boost sales now may simply defer, rather than eliminate, periods of high unemployment.

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<sup>6/</sup> See the discussion of long-term employment prospects in Chapter III above.

TABLE 25. QUALITATIVE ASSESSMENT OF PROPOSALS TO AID THE U.S. AUTO INDUSTRY

Proposal	Short-Run Increase in Jobs	Impact on Federal Budget		Energy Savings	Direct Change in Consumer Prices	Possible GATT Conflict	Use of aid for Investment in Other Countries
		Direct	Offset a/				
<b>Short-Term Proposals</b>							
Subsidies to reduce car prices	Yes	Large in short run	Yes	Possible	Large decrease	Yes	Possible
Bounties on old cars	Yes	Large in short run	Yes	Possible short-run savings, long-run losses	Large decrease for new cars, increase for used cars	Yes	Possible
Import quotas	Yes	No	Possible	Loss in short and long run	Large increase	Yes	Possible
<b>Long-Term: National Industrial Policy</b>							
General tax changes	No	Could be large	Possible	Small savings	No	Possible	Possible
<b>Long-Term: Specific to Auto Industry</b>							
Subsidies tied to long-run goals	No	Could be large	Yes	Possible large savings	Long-run decrease	Yes	Possible
Relaxation of regulations	No	No	Yes	Possible savings	Small decrease	No	NA
Minimum domestic content	No	No	Yes	Possible loss	Small increase	Yes	NA
Industry-specific tax changes	No	Could be large	Possible	Possible large savings	Long-run decrease	Yes	Depends on proposal
Loan guarantees	No	Possibly large if default	Possible	Possible savings	NA	Yes	Possible
Aid to workers (retrain, relocate)	Possible	Small, but could be long-run costs	Long-run	NA	NA	No	NA

NA = Not Applicable

NOTE: The results in this table are preliminary, and are subject to further analysis.

a/ Reduced unemployment payments and increased federal tax receipts

TABLE 26. ROUGH QUANTITATIVE ASSESSMENT OF SOME SHORT-TERM PROPOSALS TO AID THE UNITED STATES AUTO INDUSTRY

Proposal	New Car Sales Generated		Direct Increase in Short-Term Jobs <u>a/</u>	Direct Federal Costs (\$ billions)	Energy Savings (barrels per day)
	Short-Term	Long-Term			
Federal Car Subsidy (\$1,330)	2,500,000	850,000	150,000	11.0	---
Bounty (\$1,500) on Old Cars	1,750,000	550,000	100,000	11.3	6,000 <u>b/</u>
Import Quotas and Tariffs (UAW Proposal)	0-500,000		0-30,000	NA	(6,000)
Import Quotas (500,000 Reductions in Imports)	0-200,000	300,000	0-16,000	NA	(3,000)

NOTE: The results in this table are preliminary, and are subject to further analysis.

a/ An additional 1 to 2-1/2 jobs could be generated in supplier industries.

b/ In the short term. There would be a long-term energy loss.

Over the longer term, the industry faces serious financing problems as part of its current retooling efforts; it also faces the prospect of lower employment because of improved productivity and the trend to smaller cars. There are two broad avenues of approach to these problems--one as dealing with them in the context of a national policy to encourage more productive investment, and the other aimed specifically at the problems of the auto industry. The latter would normally be regarded as the less desirable of the two approaches because of its potential for distorting the nation's capital and labor markets.

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APPENDIX

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TABLE A-1. LIGHT TRUCK SALES, 1970-1980

Year	Retail Sales (in millions of units)
1970	1.5
1971	1.8
1972	2.2
1973	2.7
1974	2.3
1975	2.2
1976	2.9
1977	3.3
1978	3.7
1979	3.2
January-June	1.7
July-August	1.5
1980	
January-June	1.2

SOURCE: Motor Vehicle Manufacturers Association and Ward's Automotive Reports.

TABLE A-2. CREDIT SALES OF NEW PASSENGER CARS AS A PERCENT OF TOTAL NUMBER SOLD, 1972-1978 a/

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Year	Percent of New Car Sales
1972	70
1973	72
1974	72
1975	68
1976	66
1977	72
1978	74

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SOURCE: Federal Reserve Board.

a/ Federal Reserve Board discontinued compiling information in 1978.

TABLE A-3. COMPARISON OF INTEREST RATES ON AUTO LOANS BY  
COMMERCIAL BANKS AND FINANCE COMPANIES

	Commercial Banks	Finance Companies
1979		
May	11.73	13.40
August	11.88	13.39
November	12.85	13.82
1980		
February	13.28	14.12

SOURCE: Federal Reserve Board.

TABLE A-4. RETAIL SALES OF DOMESTIC AND FOREIGN CARS BY MONTH, JANUARY 1979 TO MAY 1980: SEASONALLY ADJUSTED ANNUAL RATES, MILLIONS OF UNITS

	Domestic Autos			Imported Autos			Total Autos		
	1979	1980	Percent Change From 1979 to 1980	1979	1980	Percent Change From 1979 to 1980	1979	1980	Percent Change From 1979 to 1980
January	9.093	8.668	-4.7	1.987	3.057	+53.9	11.080	11.725	+5.8
February	9.182	7.701	-16.1	2.218	2.885	+30.1	11.400	10.586	-7.1
March	9.724	7.712	-20.7	2.700	2.511	-7.0	12.424	10.223	-17.7
April	8.545	6.103	-28.6	2.580	2.235	-13.4	11.125	8.338	-25.1
May	8.438	5.328	-36.9	2.642	2.107	-20.2	11.080	7.435	-32.9
June	7.168	5.211	-27.3	2.266	2.152	-5.0	9.434	7.363	-22.0
July	8.296	—	—	2.255	—	—	10.551	—	—
August	8.854	—	—	2.122	—	—	10.976	—	—
September	8.733	—	—	2.078	—	—	10.811	—	—
October	7.262	—	—	2.145	—	—	9.407	—	—
November	7.211	—	—	2.412	—	—	9.623	—	—
December	8.032	—	—	2.497	—	—	10.529	—	—

SOURCE: Unpublished data from U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE A-5. RANK ORDER OF 1980 MINICOMPACT MODELS BY EPA MILEAGE RATING

	1980 EPA Estimated MPG	Production Source Domestic (D) vs. Foreign (F)
<b>Minicompacts:</b>		
Honda Civic	30.9	F
Renault LeCar	30.0	F
Plymouth Arrow	25.75	F a/
Dodge Celeste	25.75	F a/
Honda Prelude	24.0	F
Ford Pinto	23.0	D
Lincoln Mercury Bobcat	23.0	D
Porsche 928	15.0	F
Avanti	13.0	F

a/ Produced in Japan. Dodge Celeste is not available in U.S.

TABLE A-6. RANK ORDER OF 1980 SUBCOMPACT MODELS BY EPA MILEAGE RATING

	1980 EPA Estimated MPG	Production Source Domestic (D) vs. Foreign (F)
Subcompacts:		
Dodge Colt	33.8	F a/
Plymouth Champ	33.8	F a/
Toyota Corolla Tercel	31.0	F
VW Rabbit	30.2	F
Datsun 210	30.1	F
Datsun 310	30.0	F
Datsun 510	29.2	F
Mazda GLC	28.7	F
Subaru	27.0	F
Toyota Corolla	27.0	F
VW Dasher	27.0	F
Datsun 200SX	26.5	F
Ford Fiesta	26.0	F b/
BMW 320i	26.0	F
Chevy Chevette	25.5	D
Dodge De Tomaso	24.0	D
Plymouth Turismo	24.0	D
Honda Accord	24.0	F
VW Scirocco	24.0	F
Mazda 626	24.0	F
VW Jetta	23.5	F
Dodge Omni	23.0	D
Plymouth Horizon	23.0	D
Subaru 4WD	23.0	F
Fiat Brava	22.5	F
Dodge Challenger	21.5	F a/
Plymouth Sapporo	21.5	F a/
Toyota Celica	21.3	F
Toyota Corona	21.3	F
Datsun 810	21.2	F
Toyota Cressida	21.0	F
Audi 4000	21.0	F
Pontiac Sunbird	20.3	D
Ford Mustang	20.1	D
Lincoln Mercury Capri	20.1	D
Chevy Monza	20.0	D
Olds Starfire	20.0	D
Toyota Celica Supra	20.0	F
Datsun 280Z 2+2	20.0	F
AMC Spirit	19.5	D
BMW 528i	18.0	F
Buick Skylark	17.0	D
Alfa 6	17.0	F
Pontiac Firebird	16.7	D
Chevy Camaro	16.6	D
Mercedes 450SLC	16.0	F
BMW 633CSI	16.0	F
Aston Martin Vantage/Volante	10.0	F
Aston Martin Saloon	9.0	F

TABLE A-7 TRENDS IN FUEL ECONOMY AND RELATED MEASURES OF EFFICIENCY

	EPA Rating (in mpgs)	Volume (Cubic Feet)	Weight (Pounds)	Cubic Foot Miles per Gallon <u>a/</u>	Cubic Feet per 1,000 Pounds <u>b/</u>
<b>Domestic Fleet:</b>					
1977	17.2	116.5	4,218	2,004	27.6
1978	18.7	117.3	3,848	2,193	30.5
1979	19.2	116.1	3,703	2,223	31.4
<b>European Fleet:</b>					
1977	25.1	91.7	2,715	2,303	33.8
1978	25.1	89.7	2,658	2,254	33.8
1979	25.5	89.1	2,759	2,265	32.3
<b>Japanese Fleet:</b>					
1977	29.3	99.1	2,483	2,907	40.0
1978	28.2	92.2	2,482	2,596	37.2
1979	26.8	96.8	2,487	2,588	38.9
<b>Total Fleet:</b>					
1977	18.3	113.5	3,943	2,078	28.8
1978	19.6	113.6	3,649	2,223	31.2
1979	20.1	112.6	3,508	2,264	32.1

SOURCE: Light Duty Automotive Fuel Economy . . . Trends Through 1979, SAE Technical Paper Series, p. 14.

a/ Measure of "transport efficiency."

b/ Measure of "specific volume."

TABLE A-3. LIST PRICES OF DOMESTICALLY PRODUCED COMPACT CARS AND IMPORTED CARS: IN CURRENT DOLLARS

	Average List Price for Domestic Compact Cars	Average List Price for Imported Cars	Ratios of Domestic to Imported Prices
1979			
January	5,636.9	7,112.4	.7925
February	5,610.1	6,850.4	.8189
March	5,576.0	6,719.6	.8298
April	5,584.6	6,766.5	.8253
May	5,632.8	6,728.7	.8371
June	5,728.4	6,801.0	.8423
July	5,726.4	6,797.4	.8424
August	5,749.3	6,911.8	.8318
September	5,812.7	6,978.7	.8329
October	6,003.7	6,881.0	.8725
November	6,120.9	6,742.9	.9078
December	6,059.4	6,769.9	.8951
1980			
January	6,202.1	7,178.7	.8640
February	6,164.0	7,233.8	.8521
March	6,162.4	7,116.8	.8659
April	6,332.1	7,143.6	.8864

SOURCE: Unpublished data from U.S. Department of Commerce, Bureau of Economic Analysis.