

MARKETING AND CONSUMPTION TRENDS IN THE AUTOMOBILE INDUSTRY

1946-1950, INCLUSIVE

By

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PREFACE

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INTRODUCTION

The objectives outlined for possible attainment, when this study was initiated, were those to be found in an analysis of the various American automobile marketing situations during the post-war period which, roughly, had its inception with the end of hostilities after World War II. Superficially certain of these results appeared to be indicated in such items as the immediate production in motor cars and their sales. However, for the purposes at hand, it was felt necessary that this investigation penetrate beneath the more apparent effects of the post-war period on the marketing of automobiles, in an effort to more concretely define these effects in terms of the components of the market. By examining each of these major factors in turn, it was hoped to discover wherein they had experienced alteration since the end of World War II, and to determine, if possible, which of these changes might be fairly ascribable to the conditions of the post-war period, which might be wholly independent of it, and in what instances the post-war period may have served to continue, and in some cases to emphasize, trends that had their beginnings long prior to 1946.

A few examples of what is meant by this carrying of the investigation from the general to the specific may serve further to illuminate the path that stretched out at the onset of this study. It has been fairly obvious for some time that the production and sale of motor vehicles increased after 1946. Newspaper and periodical comment have dwelt on the subject to a greater or lesser extent, with the result that the general fact of the increase has become more or less common knowledge. Behind this general phenomenon, however, were a number of others, somewhat more specific, which it was the

purpose of this investigation to uncover. Among these questions were: What makes of cars enjoyed the greatest relative increases? How had the change in sales affected the relative standing of various makes? Were any new trends emerging in body styles? What had been the effect of the sales increases on manufacturers and dealers? The fact that consumers were buying more cars was common knowledge, but the question of what types of cars they were buying was still unanswered. Accordingly it was planned to inquire, as far as available data would permit, into the automobile-using activities of consumers and how consumers reacted to the many taxes imposed upon them in the use of their automobiles.

It was felt that this inquiry should properly concern itself with any changes in the product that might be particularly noticeable during the period under observation. Interest was also directed toward a limited study of the pricing methods of the industry. No one who read the newspapers could be unaware of the price increases that took place from time to time as the post-war period progressed, but what manufacturers had indulged most frequently in this activity, and to what extent, were matters requiring further investigation.

The used car situation during the post-war period was of outstanding importance. This study is intended to answer such questions on the used car situation as: Who bought used cars during the post-war period? Did the amount of education, earnings, and age have bearing on the situation?

There are other fields, each more or less independent, but which are sufficiently close to the automobile industry to warrant an interest in their effect upon automotive sales. These fields are taxation, and government controls, especially upon credit.

These then are the more outstanding objectives that were chosen for investigation at the outset of this study. Their complete or partial attainment would result in a relatively complete picture of the marketing of automobiles during a period of economic disturbance, with the possibility of uncovering some significant cause and effect situations that might pass unnoticed in a more casual observation. The study is primarily historical and statistical, with the possibility appearing that the results of some of the investigations will lend themselves to critical analysis.

The means to be utilized in an effort to bring about attainment of these objectives will be briefly described. For the purpose of this study the period from January, 1946, through December 31, 1950, is to be considered as the post-war period. This is not to say that the post-war period was or was not materially changed thereafter, but is purely an arbitrary division made necessary by the urgencies of the undertaking. Also it was decided, in the main, to limit the study to the passenger-car market, with certain exceptions that will be clearly indicated. The reasons for this decision were several and included the relative scarcity of truck and commercial car data, as compared with that pertaining to passenger cars; also, the fundamental differences between truck and passenger-car consumers, and between the methods whereby the two types of motor vehicles are merchandised dictated such a decision. While being produced in some instances, in passenger-car factories, trucks and commercial cars are essentially different merchandise from passenger cars, appealing to different classes of consumers, to different consumer attitudes, and are usually sold through different retail outlets, creating thereby their own marketing problems which are sufficiently different from those of the passenger-car market to prompt the decision to exclude trucks and commercial cars from this study, with the exceptions noted.

The passenger car marketing scene was divided into its component parts, namely, vendors, product, consumers and price. Each of these factors was examined to note the changes that had taken place during the period in question, and insofar as possible, to analyze the phenomena disclosed with a view toward determining which, if any, appeared to be altered as a result of special circumstances of the post-war period. The allied subjects of taxation and government controls will also be examined, in those phases of these fields which appeared to bear on the automobile-marketing scene. By these methods an effort will be made to attain the objectives mentioned in the first of this introduction.

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CHAPTER I

CERTAIN EFFECTS OF THE POST-WAR PERIOD, 1946-1950, ON VENDERS OF THE PASSENGER CAR

A. Manufacturers — Changes in Relative Sales Standing by Major Producing Firms and Individual Subsidiaries.

In examining the automobile marketing scene in terms of its component parts, attention is first given to the manufacturers, who originate the distribution process.

Table I shows new passenger car domestic sales (as measured by registrations) by makes and by various manufacturing groups in the industry, together with the percentage of total sales secured by each during the years 1946-1950 inclusive. This table does not include a pre-war year as a base, because the Kaiser-Frazer Corporation entered the passenger car field shortly after World War II. This manufacturer has placed three makes of passenger cars on the market with the total sales in 1950 of 112,055 cars. During both 1947 and 1948, the Kaiser-Frazer Corporation outranked such old established companies as Studebaker, Packard, Hudson, and Nash; therefore, a comparison providing figures for only those producers who were in the field in possibly 1940 would be of relatively little use in a study of the post-war period of the passenger car industry.

The companies which registered percentage gains in the total sale of cars during the year 1950 as compared to 1946 were: General Motors, which had an increase of 7.60 per cent, the highest increase of the industry (Chevrolet was responsible for 4.29 per cent of this 7.60 per cent gain, or roughly two-thirds); Ford Motor Company was next with a 2.03 per cent

increase; Kaiser-Frazer Corporation showed a 1.48 per cent increase, which was partially the result of the introduction of the Henry J in 1950. Studebaker and Willys, independent firms, showed slight increases of 1.04 per cent and .4 per cent respectively.

Of those firms which showed percentage losses, mention should be made of the following: Chrysler Corporation, which led the field in losses with a 3.14 per cent decrease (Plymouth and Dodge were almost equally affected in this decline); Independents which included Crosley, .50 per cent decrease; Hudson, a 1.87 per cent decrease; Nash, 1.91 per cent decrease; Packard, a .85 per cent decrease. The total loss of the independents was 1.76 per cent, being less in overall than is suggested by the declines just recorded, due to the gains registered by Studebaker and Willys.

The reader should bear the fact in mind that the percentages expressed are the 1950 percentages of the total domestic sales compared with the 1946 percentages of the domestic sales. If absolute units sold were taken in place of the percentages of total sales for each year, a slightly different picture would be brought into view. The Chrysler Corporation as shown above suffered a relative loss in standing in the automobile industry in 1950 as compared to 1946, which could have been the result of getting off to an earlier reconversion than General Motors, thus achieving higher 1946 production. If the base was a relatively high one, the rate of gain would be difficult to sustain. Attention is directed, therefore, to the fact that Chrysler Corporation sales increased from 467,240 units in 1946 to 1,113,794 units in 1950. The present purpose is not to consider absolute gains in units sold, but only to express the relative standing of each company within the automobile industry.

TABLE I

New Passenger Car Registrations by Makes and by Years¹

Make of Car	1950		1949		1948		1947		1946	
	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total
Chrysler	151,300	2.39	130,516	2.70	105,315	3.02	93,871	2.96	65,532	3.61
De Soto	115,023	1.82	103,311	2.14	82,454	2.36	72,966	2.30	54,420	2.99
Dodge	300,104	4.74	273,530	5.65	213,923	6.13	209,552	6.62	135,488	7.46
Plymouth	547,367	8.65	527,915	10.91	347,174	9.94	313,118	9.89	211,800	11.68
Total: Chrysler Corp.	1,113,794	17.60	1,035,272	21.40	748,866	21.45	689,507	21.77	467,240	25.74
Ford	1,166,118	18.43	806,766	16.67	486,888	13.95	532,646	16.82	326,822	18.01
Lincoln	34,318	.54	37,691	.78	32,638	.93	24,081	.76	10,798	.59
Mercury	318,217	5.03	186,629	3.86	137,512	3.94	111,198	3.51	61,187	3.37
Total: Ford Motor Co.	1,518,653	24.00	1,031,086	21.31	657,038	18.82	667,925	21.09	398,807	21.97
Buick	535,807	8.47	372,325	7.10	244,762	7.01	246,115	7.77	126,322	6.96
Cadillac	101,825	1.61	80,880	1.67	59,379	1.70	53,379	1.69	23,666	1.30
Chevrolet	1,420,399	22.45	1,031,466	21.32	709,609	20.33	640,709	20.23	329,601	18.16
Oldsmobile	372,519	5.89	269,351	5.57	175,531	5.03	180,078	5.68	93,094	5.13
Pontiac	440,528	6.96	321,033	6.63	228,939	6.56	206,411	6.52	113,109	6.23
Total: General Motors	2,871,078	45.38	2,075,155	42.89	1,418,220	40.63	1,326,692	40.89	685,792	37.78
Frazer	11,884	.19	15,827	.33	57,994	1.66	51,158	1.62	1,873	.10
Henry J	14,339	.23	—	—	—	—	—	—	—	—
Kaiser	85,832	1.35	57,995	1.20	108,367	3.10	55,571	1.74	3,501	.19
Total: Kaiser-Frazer	112,055	1.77	73,822	1.53	166,361	4.76	106,729	3.36	5,374	.29
Crosley	6,896	.11	10,175	.21	25,400	.73	15,934	.50	2,868	.16
Hudson	134,219	2.12	137,907	2.85	109,497	3.14	83,344	2.63	72,484	3.99
Nash	175,722	2.78	135,328	2.80	104,156	2.98	102,808	3.25	85,169	4.69
Packard	73,155	1.16	97,771	2.02	77,843	2.23	47,875	1.51	36,435	2.01
Studebaker	268,229	4.24	199,460	4.12	143,120	4.10	102,123	3.22	58,051	3.20
Willys	33,926	.53	28,576	.59	21,408	.61	23,400	.74	2,329	.13
Miscellaneous Domestic	2,375	.04	1,539	.03	2,910	.09	894	.03	647	.04
Total: Independent	806,577	10.98	684,578	12.62	650,695	18.64	483,107	15.25	263,357	14.51
British Austin	5,452	.09	3,642	.08	8,610	.25	—	—	—	—
British Ford	1,869	.04	5,087	.10	3,233	.09	—	—	—	—
Miscellaneous Foreign	9,015	.14	3,522	.07	4,300	.12	—	—	—	—
Total Foreign	16,336	.27	12,251	.25	16,133	.46	—	—	—	—
Total: All Makes	6,326,438	100.00	4,838,342	100.00	3,490,952	100.00	3,167,231	100.00	1,815,196	100.00

Close observation of this table will reveal discrepancies in the total figures. This table was rewritten as it was presented in the source. No data were available to correct these inconsistencies. It is believed that this minor inconsistency will not mislead the reader or change the relative standing of the producers.

¹Automotive Industries, March 15, 1951, p. 90.

The leading passenger car producer in 1950 was the General Motors Corporation whose sales totaled 45.38 per cent of all passenger cars sold. The Ford Motor Company was in second place with 24.00 per cent of all passenger cars sold. Chrysler Corporation was third with a total of 17.60 per cent. All the independents, which are listed in Chart I, stood fourth with 12.75 per cent. The total of foreign makes sold in the United States in 1950 amounted to only .27 per cent of all passenger cars sold.

The percentages discussed heretofore do not include comparisons of the years 1947, 1948, and 1949. The different companies showed increases and decreases at various times over the five year period which the reader can pursue at will in Table I. Only Chrysler Corporation showed a fairly consistent decrease in the per cent of total sales in the automobile industry. General Motors showed the most consistent gain since only in 1948 did they drop below their previous year's standing. One of the most striking gains registered was that of the Ford Motor Company in 1950 as compared to 1949.

Further study discloses that not all of the automobiles of the larger groups contributed to their increases (or in some cases, decreases) in the percentage standing. Lincoln of the Ford Motor Company showed a decrease of .05 per cent in 1950 as compared to 1946. In 1948, Lincolns accounted for .93 per cent of all passenger cars sold, then decreased to .54 per cent in 1950. Cadillac of General Motors sustained a decrease of .09 per cent from 1948 to 1950. All makes of the Chrysler Corporation showed a decrease. Dodge and Plymouth were the most outstanding of the Chrysler Corporation with a decrease of 3.72 per cent and 3.03 per cent respectively.

Foreign makes are not discussed, because data were not available in the years 1946 and 1947.² In the years 1949 and 1950, foreign made

² Automotive Industries, 1951, p. 90.

TABLE II

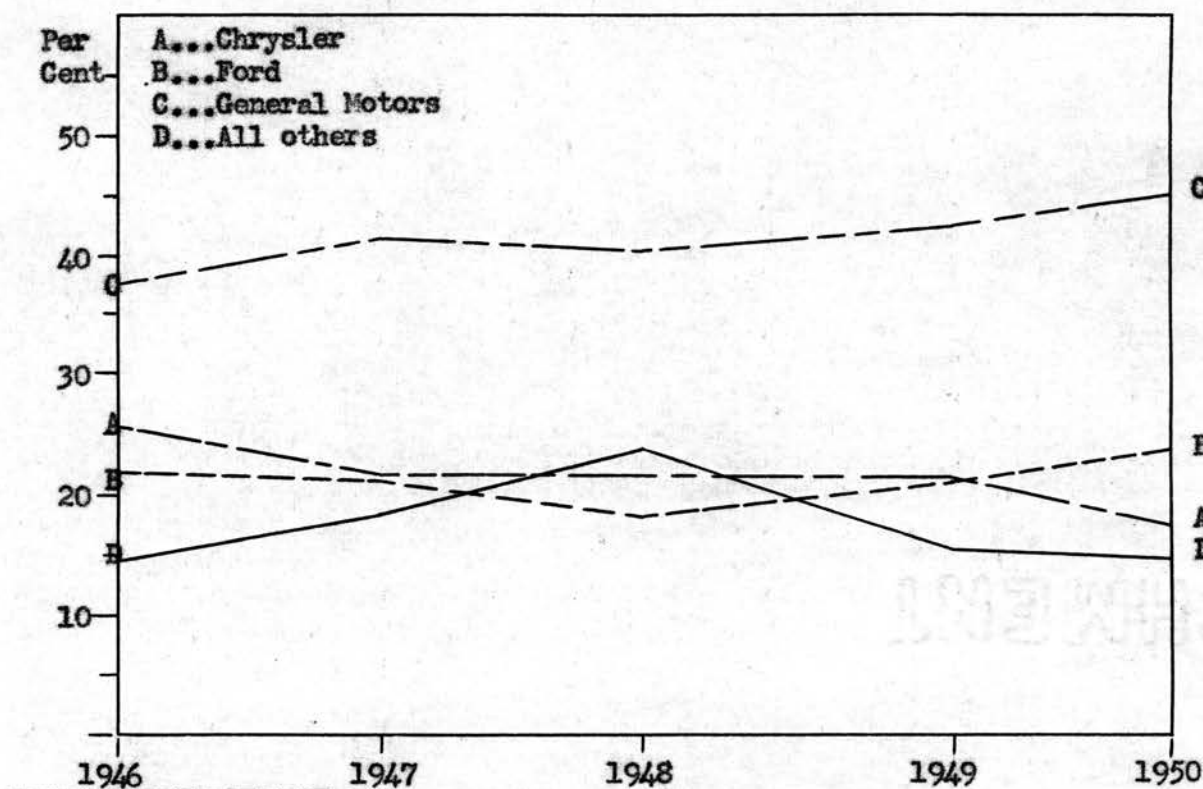
Per Cent of Passenger Automobile Sales
by Leading Manufacturing Groups³

Group	1950	1949	1948	1947	1946
Chrysler	17.60	21.40	21.45	21.77	25.74
Ford	24.00	21.31	18.82	21.09	21.97
General Motors	45.38	42.89	40.63	41.89	37.78
All others	14.79	15.93	23.86	18.61	14.80

These data are presented graphically in Figure I to facilitate comparison. See comment at bottom of Table I which applies here.

FIGURE I

Per Cent of Passenger Automobile Sales
by Leading Manufacturing Groups



³ Automotive Industries, March 15, 1951, p. 90.

automobiles were decreasing in importance as compared to the change in industry output. The decrease from 1948 to 1950 was .19 per cent. They were .46 per cent of total sales in 1948 and only .27 per cent in 1950. The number of foreign cars sold remained almost constant in the years 1948, 1949, and 1950.

Table II is presented to show the sales progress of the three leading manufacturing groups in the passenger car field, and to point out which producers have been least successful in the competitive struggle.

The group "all others" made an increase in 1948 at the expense of the three large combinations. Of these combinations, General Motors has consistently maintained the lead in sales. The increase, in 1949, of the General Motors and Ford Motor Company over "all others" was probably brought about by the new body designs introduced in that year. Certain phases of these design changes will be discussed in Chapter II.

B. Changes in Number of Dealers and Distributors

In January of 1946 the automotive service industry for passenger car distribution included 6,612 wholesalers and 30,709 dealers. The industry has maintained a steady increase in size and importance which has insured that it will continue to hold a most important place in the national economy. To January 1950 the wholesalers had increased 1,955 in number to 8,567. This was approximately a 30 per cent increase in a period of four years.

During the post-war period 12,370 new passenger car dealers were franchised for a new total of 43,079 by January 1950. The average increase for the four year period was 3,092.5 per year. Considering that there were only 30,709 dealers in January, 1946, such an increase indicates substantial growth for the industry. Kaiser-Frazer, which entered the car industry in 1946, helped to enlarge the number of dealers by a considerable number, although Kaiser-Frazer reduced their dealerships in 1949.

Kaiser-Frazer at one time had more than 4,200 dealers, although, in 1949, the dealer organization underwent a thorough shake-up and strengthening process. After this strengthening process was completed, Kaiser-Frazer had only 2,600 dealers and distributors. This enormous cut back in dealers was probably brought about by the many franchises which were let in the early days of formation of the company. An interesting statement in connection with this cut back is that Kaiser-Frazer took a loss of over 30 million dollars in 1949, although they are now looking ahead with considerable optimism expecting their new and much more complete line of cars to put them back as a strong contender in the automobile business.⁴ A large part of the loss was accounted for by the tooling cost for the three lines of cars which Kaiser-Frazer offered to the public in 1950.

TABLE III

Number of Automobile Wholesalers and Dealers by Years,
1946 through 1950⁵

Year	Wholesalers	Passenger Car Dealers
1946	6,612	30,709
1947	7,328	34,424
1948	7,982	38,480
1949	8,338	40,022
1950	8,567	43,079

The subject of factory-dealer relations has been one of increasing importance during the post-war period. The increased number of franchises and the enlarged number of cars sold during 1946 - 1950, when coupled with the many government regulations, have brought the factory and dealer to a closer understanding in terms of retailing passenger cars.

⁴Business Week, October 1, 1949, p. 52.

⁵Automotive Industries, March 14, 1950, p. 78.

Though 1950 was the first six million passenger car year experienced by the industry, it may live as a milestone in automotive history for a reason of even broader and more lasting significance to dealers and manufacturers. The post-war period marked the most solid progress yet made in bringing nearer a solution, or at least a much improved understanding, of some of the thorniest problems that have long disturbed the factory-dealer relations.

Factory dealer councils, or conferences, were formed in 1950 within ten of the fifteen dealer organizations that retail standard-sized makes of cars. Four of the ten firms which began such councils chose the elective type whose membership was the result of dealer election. Chevrolet, Ford, Lincoln, Mercury and Packard have selected this method. It has not been decided precisely how the membership in the remaining six councils will be determined.

As a result of adoption of such a conference technique of deciding major problems, dealers were provided with more intimate and more influential channels of access to and contact with their factory headquarters organization at top policy-making levels.

Even though there was a much broadened acceptance on the part of the producer of the conference table method of resolving annoying issues, and more machinery had been set up for the purpose, it was altogether probable that some of the touchiest topics have been put aside by mutual consent until the return of more normal competitive conditions.

Probably one of the touchiest topics between the factory and dealer has been that of provisions of franchises. The franchise establishes the rules with which the dealer must comply and under which he operates. If the dealer stepped out of line in the eyes of the company, he could lose his franchise and wind up with a large investment in a building with nothing to sell. On the other hand, if he followed all the rules, he would normally anticipate operating with a considerable amount of profit, at least in the post-war period.

The dealer complained that the factory directed almost every single phase of his operations. The dealer contended that the factory told him how much cash he had to have to go into business, what kind of building to put up, where to put it, and even what kind of accounting forms to use. Once the dealer was in business, the factory told him how many cars he should sell. Considerable opposition has been experienced from such paternalism.

A survey was made in July by the National Automobile Dealers' Association in which dealers were asked to express their opinions on ten major industry subjects, primarily centered around dealers relationships with their respective factories. There were 14,000 dealers who expressed their opinions in this survey. Past-president George F. Ziesmer, who was the 1950 Chairman of the National Automobile Dealers' Association's Industrial Relations Committee, said:

"Answers to the questions in the survey verify widespread opinion among dealers that there are many startling problems on which dealers and factories must co-operate in finding quick solutions for the immediate, as well as the ultimate, benefit of both."⁶

Answers to the ten important questions on which dealers were asked to express opinions were as follows:⁷

1. Have you been influenced to purchase an excess of the following:

	Total Dealer Response	Answers of Dealers			
		"Yes"	%	"No"	%
(a) Cars	12,365	1,686	13.6	10,679	86.4
(b) Trucks	10,572	2,661	25.2	7,911	74.8
(c) Parts	12,041	2,284	19.0	9,757	81.0
(d) Accessories	12,415	3,853	31.0	8,562	69.0
(e) Advertising Programs	12,848	6,425	50.0	6,423	50.0

2. Does your manufacturer ship you new vehicles without specific order?

	13,474	2,813	20.9	10,660	79.1
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⁶National Automobile Dealers' Association, April, 1950, p. 14.

⁷Ibid., p. 14.

3. Do you feel that you are entitled to a normal profit on your investment in freight and transportation cost?
 13,519 11,701 86.6 1,818 13.4
4. Do you feel that you should include in your delivery price the advertising charge made by your manufacturer?
 13,632 12,378 90.8 1,254 9.2
5. Are you receiving new cars and trucks from your factory in a condition which requires more than standard make-ready operations prior to delivery?
 13,633 8,091 59.4 5,542 40.6

(a) If your answer is yes, does your factory fully compensate you for any additional work required?

8,091 1,355 16.8 6,736 83.2

6. Is your present handling and delivery charge sufficient to properly condition vehicles prior to delivery?
 13,423 7,452 55.5 5,971 44.5

(a) If your answer is no, what is your present charge? What should it be?

The present charge reported was from \$15.00 to \$35.00 and the recommended charge averaged from \$25.00 to \$50.00 from 5,971 who replied "no" to this question.

7. Are you satisfied with the manner your factory handles your parts claims under warranty?
 13,604 9,150 67.3 4,454 32.7

8. Are you now receiving an adequate compensation for labor involved in warranty replacements?
 12,967 5,102 39.4 7,865 60.6

9. Do you think your factory should participate financially in a model clean-up? (Model clean-up refers to clearance of old models just preceding introduction of new ones and often results in losses to dealers.)
 12,651 11,257 89.0 1,394 11.0

10. Are new cars of your make being bootlegged in your area?
 12,638 5,298 41.9 7,340 58.1

(a) If answer is "Yes" what steps is your factory taking to correct this condition?

Of the 4,349 who replied to this question, 3,666 (84.3%) replied "None" and 683 (15.7%) replied "Some".

Question ten, on bootlegging, was voted the most outstanding problem at the National Automobile Dealers' Association Conference in 1949.⁸ This

⁸ National Automobile Dealers' Association, July, 1950, p. 12.

bootlegging was defined as a sale of new cars by anyone not enfranchised to handle that make of automobile, usually at prices substantially under local delivered prices.

The way bootlegging of passenger cars works, is for a customer to walk into a dealer's showroom and offer to buy 10 brand new cars at a price not far above what the dealer himself paid for them. The dealer, glad to get rid of his excess stock without loss, closes the deal.

The buyer may be one of a couple of people. He may be a broker operating on a very narrow margin, in which case he will not re-sell the cars himself to an ultimate consumer. He merely lines up a buyer, probably a used-car dealer, in a place where new cars are not too hard to sell. A used-car dealer may do his own scouting to secure new cars in quantity as previously described.

Franchised dealers at the National Automobile Dealers' Association Convention in 1950 laid most of the blame for the bootlegging situation at the manufacturers' doors. The franchised dealers contended that in many areas of the country an oversupply of new motor vehicles existed. This oversupply was attributable to the methods of distribution used by manufacturers, and the selling pressure of their representatives.

General Motors Corporation's time-honored marketing practice had been the use of exclusive-sales territories. If one dealer crossed over into another territory, he was penalized. This plan was to be revised because of the decision by the United States Supreme Court early in 1949, and handed down under anti-trust legislation.⁹

Other car makers did not anticipate any changes in contracts. That was because their selling agreements were different from General Motors. Chrysler prohibits dealers from trying to get business outside their franchise limits,

⁹Business Week, October 1, 1949, p. 52.

but a Chrysler dealer was free to sell anyone who voluntarily came into his showroom. Ford dealers had no territory limits, but their dealers had to pay a fee to the customer's home town Ford dealer for any service charges made in readying the new car for delivery.

There were two other outstanding problems which factory and dealer alike often encountered. The dealers complained that when they developed a new sales territory into a large sales volume producer, the factory enfranchised another dealer to compete in that area. Then there was the problem of the regional sales-staff man that the factory sent around to its dealers every so often to make sure that the dealer was doing things according to the book. Such surveillance was not viewed with high favor by dealers, as one may imagine. Factories generally admitted that their traveling sales-staff men were checking dealers more closely than ever before. The reason for this close check was that many factories, before the war, operated through wholesalers who lessened the burden on individual retailers. During the post-war period most auto makers eliminated some or all of their middlemen-distributors. The sales-staff men were to check on the dealers financial ability to handle their responsibilities. The sales-staff men were also to give advise on the soundest merchandising policies to boost sales and cut costs. Perhaps when dealers become better informed on the values of such services, less discontent will result.

C. An Analysis of the Price Phase of Automobile Marketing, 1946-1950.

The discussion of the price phase of the marketing of automobiles during the post-war period will be treated under two main headings: Price changes of individual selected makes, and the effects of Regulation W.

The prices quoted in this section are the manufacturer's advertised new-car price of each model. This price includes the factory list price, and the

preparation and delivery charges, and provision for recovery of federal excise taxes, but does not include freight, state and local taxes or cost of optional equipment. Only by conforming to such a uniform quotation procedure can the prices of different makes be fairly compared.

1. Price Changes of Individual Selected Makes

In order to secure at least a generalized view of the price changing activities of the manufacturers of passenger cars during the post-war period the following group of makes were selected as being fairly representative of the industry as a whole: Chevrolet, Ford, Plymouth, Buick, Pontiac, Oldsmobile, Mercury, Dodge, Studebaker and Nash. While these makes do not include all the members of the automobile industry, the fact that they comprise 79.37 per cent of the total registrations of passenger cars in 1950 leads to the conviction that they are adequate to portray the price movements of the most important part of the industry. The pattern of pricing developed by this large segment of the industry was doubtless followed closely by others. When an inspection of the data for the coupe, the four-door sedan, and the two-door sedan revealed that prices for these models moved in approximately the same manner, it was decided, for purposes of simplification, to present only the price information for the four-door sedan. Because the four-door sedan thus reflects the price movements of the other two models, and due to the fact that this body type accounted for 45 per cent of the 1950 car registrations, the writer concluded that it is sufficiently representative of the practices of the automobile business for the price-comparison purpose for which it is employed.

Table IV presents the changes in price of the ten leading passenger car makes from 1946 through 1950. Excepting 1950, the trend has been steadily upward. Buick has had an increase in price in each of the five years. These

increases in price have been caused by many factors, but are believed to have predominately stemmed from rising material and labor costs. Plymouth, Mercury, and Dodge had no decreases in price but on occasions held their prices constant for two-year periods. All makes have had rather frequent price increases in the post-war period.

In the price trends noticeable in the automobile industry during the post-war period, several cause factors may be discovered without much difficulty, but any attempt to evaluate them in terms of their relative importance is bound to fail, due, in a measure, to a absence of supporting data, and also to complete reluctance on the part of officials of the motor-car producing companies, to reveal the reasons for their acts. Among the items that might be mentioned as having influence in the price situation of any one manufacturer are production costs, price movements of competitors, degree of public acceptance of current models, sales compared to competitors or the firm's own previous sales records, movement of general price levels, and the general sales philosophy of the company, including such concepts as constantly trying to undersell, equal, or more or less ignore the prices of competitors.

TABLE IV

Passenger Car Prices at Factory, Including Federal Tax¹⁰

Make (Four-Door)	1950	1949	1948	1947	1946
Chevrolet	\$ 1450	\$ 1460	\$ 1371	\$ 1276	\$ 1205
Ford	1545	1546	1346	1346	1287
Plymouth	1492	1440	1440	1284	1231
Buick	1909	1861	1809	1673	1580
Pontiac	1724	1740	1641	1512	1427
Oldsmobile	1819	1832	1801	1659	1568
Mercury	2031	2031	1660	1660	1562
Dodge	1737	1718	1718	1457	1339
Studebaker	1676	1688	1635	1478	1097
Nash	2064	2195	1874	1767	1469

¹⁰ National Automobile Dealers' Association Official Used Car Guide, 1951.

Broadly, and without reference to any particular phase of the business cycle, it might be said that price changes are effected to increase profits. Price advance may be dictated by rising costs, or by a relative inelasticity of demand for a part or all of a line, thereby permitting price advances without any serious sales decline as a consequence.

2. Regulation W, and the Observed Effects

There was a great deal of controversy as to the effects of Regulation W, which the dealers of new passenger cars contended would bring about a decrease in demand and a reduction in price. The discussion in this section is of a general nature as to the effects of Regulation W in the latter part of 1950. Little could be determined, as the restriction had not been in effect long enough to register its full effect upon the automobile industry. The first restriction was put into effect September 18, 1950, with little or no controversy.

On October 13, 1950, five weeks after the issuance of the original regulation, the Board of War Production announced amendment number one to Regulation W, establishing effective October 16, minimum down payment and maximum maturities substantially stricter than those which became effective on September 18. This action forced the consumer to pay one-third down, and the balance in 15 months.

New car inventories were at an abnormally low level when this consumer-credit regulation was inaugurated. This low inventory enabled the manufacturer to go ahead at full production despite the regulation. Some inventory accumulation by dealers took place, but new car inventory for the new-car-dealer trade as a whole was still not above a traditional relationship to sales.

To assay accurately the effects of the 15-month credit curb on automobile sales is still very difficult. Dealers protested the regulation and enlisted the aid of some members of Congress in an effort to get the restrictions eased. The dealers claimed that sales fell off drastically, as much as 50 per cent, in some cases. On the other hand, scattered reports of retail sales issued by the manufacturers, for the remainder of 1950, did not bear out that contention. The reports show, in some cases, that sales during October, 1950, were off from the high level of September, but not seriously. In all cases however, sales were up from 10 to 20 per cent over October, 1949. October, 1950, sales of the Mercury, on the other hand, were 4 per cent higher than September and 21 per cent above October, 1949.¹¹

There appears to have been a wide difference of opinion throughout the country as to the effects of tighter regulations. Large metropolitan areas were apparently harder hit, with some of the smaller outlying areas still clamoring for automobiles. The result was a reshuffling of factory allocations to accommodate demand from areas where it was still strong. There was no doubt that the demand for new cars was somewhat reduced by Regulation W, as amended, but the extent to which 1950 sales were reduced was very slight.

¹¹ Automotive Industries, December 1, 1950, p. 45.

CHAPTER II

THE OBSERVED PREFERENCES OF AUTOMOBILE BUYERS IN THE POST-WAR PERIOD, 1946-1950, INCLUSIVE

A. Sales Trends by Makes During 1950 as Compared to 1946

To effectively study the reasons some makes of automobiles have experienced increased sales while the sales of other declined, figures have been secured showing the relative popularity, as measured in number of cars sold, of each make. By noting the change in relative rank or position in 1950 over that which prevailed in 1946, a considerable amount of light is shed on basic automobile improvement which has caused such a gain or loss in popularity.

During the entire period 1946-1950, inclusive, Chevrolet has held top position in sales with Ford and Plymouth ranking second and third respectively. Efforts of Chevrolet to retain the leadership and of Ford and Plymouth to seize it or at least improve their relative positions have resulted in major improvements of all three makes of cars as well as other competitive makes.

By glancing at Table V, page 19 of this thesis, the reader will immediately observe the relative number of each make of automobile sold during 1950 as compared to sales for 1946 as reflected in license registration figures.

In the somewhat higher price range of automobiles following Chevrolet, Ford, and Plymouth, certain makes have registered significant gains in sales. Most notable is Mercury which has moved from eleventh to seventh place. General Motor's makes, which have established increases of one place standing,

are: Buick, Pontiac, Oldsmobile, and Cadillac. This increase reveals the effectiveness of General Motors to withstand increasing competition. The makes of cars which have exceeded the gains of General Motor's makes are: Studebaker, Kaiser, and Willys which have increased their standing by two or more places. The Henry J, which is in the low price field, was introduced in 1950. This car outranked the Crosley and Frazer makes in standing. Naturally relative ranking of sales is only a relatively rough indication of competitive status, because those makes of which relatively few were sold in 1946 could easily register numerous increases in rank.

In expressing the standing of various makes of automobiles, it is also interesting to observe those makes which were decreasing in standing. The passenger car which declined the most in rank during the five year period was Dodge, with a drop from fourth to eighth place. The automobiles which lost one place in standing were Chrysler and Lincoln. These cars are classified in the higher price range. The makes which lost two or more places in standing in 1950, as compared to 1946 standings, were the Nash, Hudson, Packard, and Crosley. There were two makes which held their 1946 position. These were the De Soto, which was in thirteenth position, and the Frazer, which was twentieth. The Frazer, which was introduced in 1946, outranked only the Crosley, which indicates what a weak standing it has in the automobile market.

The sales standing of foreign-made passenger cars, as compared to the standings of domestic automobiles, is of little importance. The sale of all foreign makes, which were sold in the United States, amounted to only a small fraction of the total market. The British Ford, which has appeared in various sections of the United States, had sold only 1,825 units in 1946

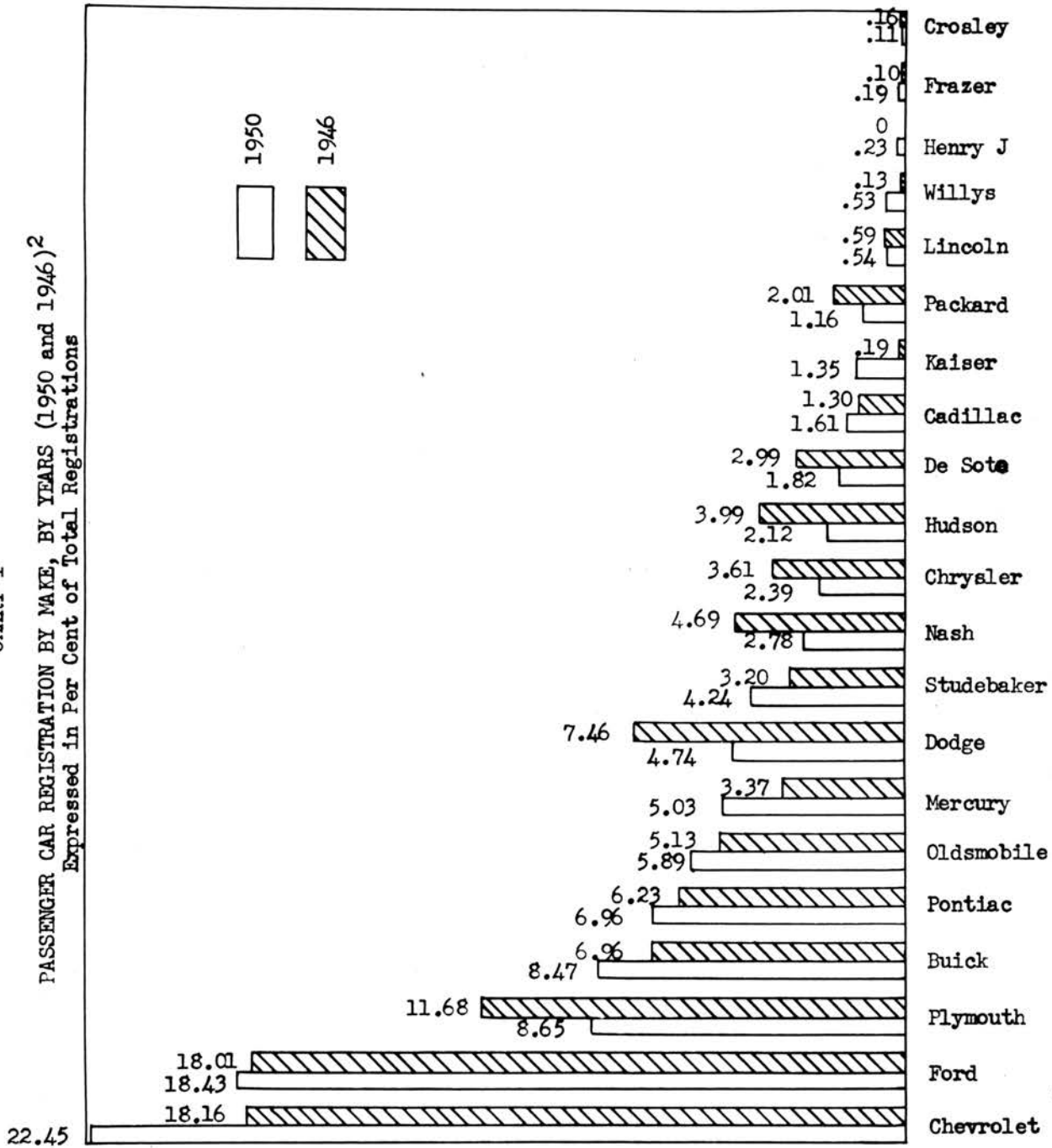
TABLE V
 NUMBERS OF NEW CAR REGISTRATIONS BY MAKE
 (1950 compared to 1946)¹

	<u>1946</u>		<u>1950</u>
Chevrolet	329,601	1. Chevrolet	1,420,399
Ford	326,822	2. Ford	1,166,113
Plymouth	211,800	3. Plymouth	547,367
Dodge	135,488	4. Buick	535,807
Buick	126,322	5. Pontiac	440,528
Pontiac	113,109	6. Oldsmobile	372,519
Oldsmobile	93,094	7. Mercury	318,217
Nash	85,169	8. Dodge	300,104
Hudson	72,484	9. Studebaker	268,229
Chrysler	65,532	10. Nash	175,722
Mercury	61,187	11. Chrysler	151,300
Studebaker	58,051	12. Hudson	134,219
De Soto	54,420	13. De Soto	115,023
Packard	36,435	14. Cadillac	101,825
Cadillac	23,666	15. Kaiser	85,832
Lincoln	10,798	16. Packard	73,155
Kaiser	3,501	17. Lincoln	34,318
Crosley	2,868	18. Willys	33,926
Willys	2,329	19. Henry J	14,339
Frazer	1,873	20. Frazer	11,884
		21. Crosley	6,896

¹ Automotive Industries, March 15, 1951, p. 90.

CHART I

PASSENGER CAR REGISTRATION BY MAKE, BY YEARS (1950 and 1946)²
Expressed in Per Cent of Total Registrations



²Automotive Industries, March 15, 1951, p. 90.

when the passenger car demand was the strongest.³

In comparing 1950 registrations with those of 1946, recognition should be given to the many difficulties which confronted the automobile industry in 1946. With the demand for consumer durables the highest in history, the greatest problems were material shortages and the time required for reconversion of plants to peace-time production.

General Motors, which produces approximately 50 per cent of the passenger cars consumed in the United States, entered 1946 with most of its plants closed by the strike of the United Auto Workers. Other strikes in the steel, glass, electrical and copper industries had crippled these important sources of materials and supplies. By mid-year, the coal, railroad, and numerous lesser strikes in plants of suppliers had created additional shortages, the effects of which continued to be felt long after the disputes themselves had ended. When strikes occur, working inventories of vital material generally are exhausted, after which these vital materials have to be replenished before normal production can be resumed.

The 1946 test of the strength of the individual passenger car producer during this post-war period was not in his ability to sell his products, but rather in his ability to produce them. By 1950, this situation was almost directly reversed, with selling ability coming to assume a dominant position.

B. Demand for Consumer Durable Goods, Especially Automobiles, in the Post-War Period.

The demand for new cars has always been sensitive to changes in price. New automobile demand is also sensitive to changes in business conditions; hence, sharp fluctuations in new car sales occur in response to relatively

³Automotive Industry, March 15, 1949, p. 86.

moderate general changes in real income. Reduction in the final cost of new automobiles to consumers is a factor which would be expected to stimulate the demand for cars. Necessity for lower prices normally becomes much more important as the needs of prospective buyers are met with increased output and backlogs of need disappear.

After the recent war, automobiles were the last type of consumer durable goods to catch up with pent up needs of a public which had been deprived of new cars for nearly half a decade. This was partly a result of considerable time required to put the huge automobile industry into full-scale operation after the end of the war. Although old cars were repaired and kept in use well beyond ages at which they would ordinarily have been scrapped, a considerable number of months elapsed after the war before the total number of cars in use again reached the pre-war peak attained in 1941. Not until 1949, when registrations exceeded 33 million, did the principal deficiency in the total number of cars appear to have been made up.⁴

Although the number of cars in use depends upon economic conditions as well as upon the growth in population, it is of some significance that the increase in registrations of 6.8 millions between 1941 and 1949 was about the same as the increase in the number of households. Other evidence, suggesting that the deficiency in total cars was about made up by 1949, was the return of more normal rates of scrapping old cars. About 2.2 million cars were scrapped in 1949, which was about equal to the pre-war average, but more than doubled the number scrapped in other recent years.⁵ Return to normal

⁴Automobile Facts and Figures, 1949, p. 22.

⁵Atkinson, L. Jay, The Demand for Consumer Durable Goods, Survey of Current Business, June, 1950, p. 6.

scrapping of older cars strongly suggests a weakened market for used cars and new cars as well.

C. Notable Changes and Trends in Design of Motor Cars, 1946-1950

In considering the changes that have taken place in passenger automobiles during the post-war period, there are many factors to be borne in mind, such as general trends in engine design, horsepower, wheelbase, and other mechanical items, on the one hand; and, on the other, style, comfort, convenience and safety. These two basic types of improvement will be discussed by taking various leading makes and noting their most outstanding changes.

The passenger car makes of General Motors are considered first, for they lead the market in sales volume. Chevrolet should be given the lead role among General Motors, because it is the leading make of car in units sold.

The 1946 Chevrolet, in common with many other makes of passenger cars, was similar in style to the 1942 model, because after the war the first need was for cars, regardless of style features. Any producer would have lost out competitively who had sought to create a totally changed model; hence, drastic change in design did not occur until 1949. In 1949, all Chevrolet models had improved features for passenger convenience and safety, one of the first being improved visibility. The window area was enlarged, particularly that of the windshield and rear window, for a total increase of 30 per cent. A new controlled air-circulation system, which minimized interior fogging and frosting of windows and windshield, was added. The body was given a lower, wider appearance. The 1950 model Chevrolet, which was offered in 14 models, had no drastic change in body style. The 1950 Chevrolet, as compared to the 1946 model, has the appearance of an increase in length, but it is in reality

three-fourths of an inch shorter.⁶ This Chevrolet body design resembled the Oldsmobile on certain models. Some observers have expressed the belief that this may gain sales for Chevrolet at a cost of Oldsmobile prestige.

The introduction of Chevrolet's new Powerglide transmission in 1950, as optional equipment on de luxe passenger cars, makes automatic transmissions available on all five General Motor's car lines. The effect of the automatic transmission is to virtually relieve the driver of the necessity for shifting gears manually. Powerglide is a hydraulically-operated automatic transmission of the torque-converter type. Engineering work on the transmission started in July, 1946, and reached its highest point in final testing, tooling, and initial production in 1949 at a new plant in Cleveland.⁷

The Buick went through a gradual change in the post-war period. The front glass area was increased by 22 per cent in 1949.⁸ The Dynaflo drive was first introduced to the public in 1948 on the Buick Roadmaster series. Since then, more than 354,000 of these torque-converter transmissions have been installed on Buick cars.⁹ Of all the Buicks sold in 1949, more than 70 per cent were equipped with Dynaflo drives. It is standard equipment in 1949 and 1950 in the Roadmaster series and optional in the Super series. The Dynaflo drive became optional in the Special series introduced in August, 1949.¹⁰

⁶ Used Car Facts, June 1950, pp. 28, 29.

⁷ General Motors Annual Report, 1949, p. 10.

⁸ Used Car Facts, June 1950.

⁹ General Motors Annual Report, 1949, p. 10.

¹⁰ Ibid., p. 11.

In the Oldsmobile make, the most notable change in body design took place in 1948 and in motor design in 1949. The Oldsmobile came out with a new distinctive body design and the new "rocket" engine. The horsepower was stepped up from 110 to 135 in the V-eight motors and in the six-cylinder motors from 100 to 105 horsepower.¹¹

The Hydra-Matic, which is a combination fluid coupling and automatic transmission, was first offered to the public in 1940 in the eight-cylinder Oldsmobile. In 1941, they were made available on Cadillacs and on Pontiacs in 1948. More than 1,600,000 passenger car Hydra-Matic transmissions have been produced by the Detroit Transmission Division since initial use.¹²

The Pontiac, like most of the other makes, saw its greatest change in 1949. The 1949 model had a completely new body by Fisher with new smarter styling, wider seats, and new horizontally curved windshields. The wide, curved windshield with narrower corner posts and generous all-around glass area provided a broader, safer view in all directions.¹³

The 1948 Cadillac was introduced with a new styling of raised tail lights, sweeping up from aircraft inspired rudder type fenders. In the 1949 Cadillac, the major change was the use of a 160 horsepower high-compression eight-cylinder engine, compared to the 150 horsepower engine in the 1948 models. This new engine offered better performance and savings of 15 to 20 per cent in fuel under normal driving conditions. Cadillac's new engine was almost 200 pounds lighter than its predecessor. Another outstanding feature of the 1949 model was the hydraulic window lifts.¹⁴

¹¹Used Car Facts, June 1950, p. 140.

¹²General Motors Annual Report, 1949, p. 10.

¹³Used Car Facts, June 1950, pp. 142-145.

¹⁴Ibid., pp. 26-27.

The so-called "Hard Tops", which provide a new distinctive style, resemble a convertible in appearance, although they have rigid steel tops. Three of these "Hard Tops", Cadillac's Coupe de Ville, Buick's Riviera, and Oldsmobile's Holiday Coupe, were introduced in 1949. The Pontiac Catalina and Chevrolet Bel Air were offered for the first time in the 1950 lines.¹⁵

The Ford Motor Company changed the body style in the 1949 Ford with a streamlined body, lower center of gravity, and increased driving ease for the consuming public. Independent front wheel suspension with coil springs was included in the 1949 Ford, which reduced vibration and increased riding comfort. The front, sides, and rear provide more than 20 square feet of "seeability" for safety purposes and passenger convenience of view. The brakes are 35 per cent easier to apply, because the car's forward momentum is also used to stop the vehicle. The six-cylinder motor, which has become very popular in 1949 models, was given an increase of 5 horsepower and 10 per cent more gas economy.¹⁶

The Plymouth, which is produced by the Chrysler Corporation, had its most distinctive change in 1949. The Plymouth's wheelbase was increased, giving increased riding comfort. The 1949 model has an automatic ignition key starter which enables the driver to start the engine with one hand by simply turning the key. The horsepower was increased to 97 compared to 95 horsepower in the 1948 models. New improved safety hydraulic brakes increase braking efficiency by 32 per cent. This gives easier control and softer pedal action.¹⁷

¹⁵ General Motors Annual Report, 1949, p. 11.

¹⁶ Used Car Facts, June 1950, pp. 66-67.

¹⁷ Ibid., pp. 134, 135.

Studebaker placed a new style of automobile on the market in 1946 to lead the field in developing new styles for the post-war market. The new style was a complete change in body construction, with an increase in the length of the trunk lid, and a somewhat flat appearance in body design.

Each car will not be considered separately, as this analysis is not a detailed one; however, the 1948 Hudson provided a change in style which is noteworthy. The most outstanding change in the 1948 Hudson was the 14 per cent greater vision for added safety. The newly designed Hudson had a very low center of gravity with a step-down floor board feature. The new "Servo-Action" brakes took advantage of the car's momentum to help stop, as the movement of the wheels pressed the brake shoe tighter when the brakes were applied. The 1947 six-cylinder Hudson operated with 102 horsepower compared to 121 horsepower in the 1948 model.¹⁸

D. Trends in Passenger-Car Production by Body Types, 1947 to 1950, Inclusive

While information to verify the production of various models, as shown in Table VI, is not available prior to 1947, the increasing importance of the closed car, with corresponding decline of the open car, has been a noteworthy trend since around 1919 when closed models first captured about ten per cent of the passenger car market.¹⁹

The "Hard Top" coupes and sedans have entered the market with very good acceptance. The "Hard Top" has gained 8.85 per cent of the market in only two years.

Only 4.89 per cent of the passenger car sales during 1947 were of the convertible type, with the popularity of this model declining further in 1950

¹⁸ Ibid., pp. 78, 79.

¹⁹ Automobile Facts and Figures, 1928, p. 11.

to a mere 3.09 per cent of total sales. The "Hard Top" coupes and sedans may replace the cloth type convertibles because of the durability and safety of the steel tops, as well as the fact that the probable life of a convertible top is two to three years. The convertibles in most makes of passenger cars have a higher list price, causing the more conservative purchaser to buy metal-top passenger cars. Another worthy observation in regard to the convertible sales in 1947, as compared to 1950 sales, was that many automobile buyers in 1947 bought convertibles because they were unable to obtain the body type of their choice.

The four-door sedan was the most popular type for the entire period from 1947 through 1950. This body type was closely followed in popularity by two-door passenger cars which enjoyed a substantially increased demand in the years since 1947. The four-door sedans suffered a slight decrease in relative demand in 1950 with a considerable transfer of demand to the new "Hard Top" from both four-door and two-door sedans.

The changes that took place between the various other body styles, during the post-war period, revealed little significant change in consumer preference.

E. Indications of Changes in Consumer Use of Passenger Cars

Before World War II, the passenger car consumer was, in the main, an individual whose purchase and use of an automobile was largely for reasons of pleasure, convenience, and prestige, who could curtail its use without necessarily affecting his business efficiency.

The census of 1950 reveals that the explosive growth of the suburbs and the accompanying dispersal of the nation's industry were the most significant changes in the United States during the past decade, and therefore, these changes alone have multiplied and compounded the people's dependence on

TABLE VI

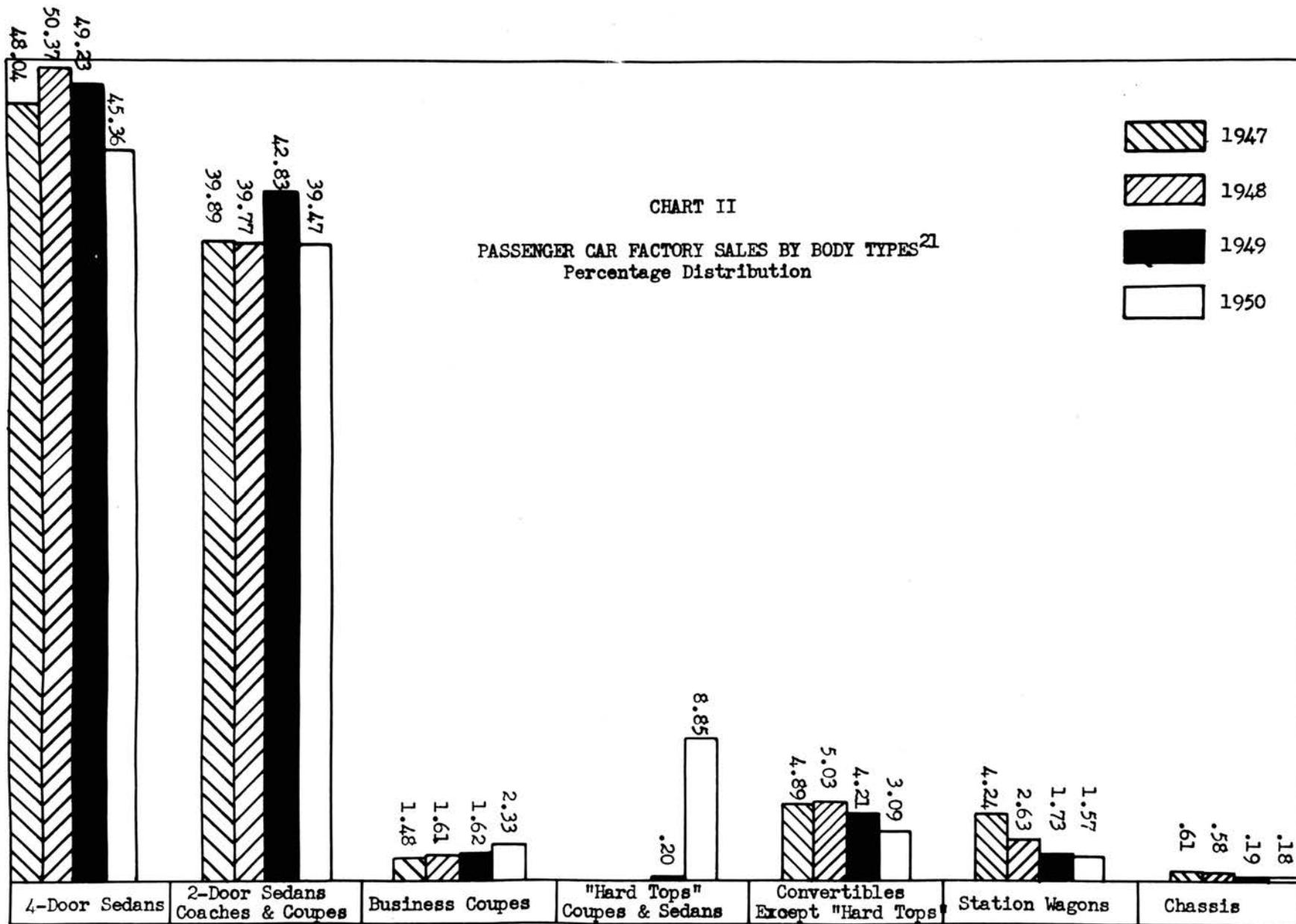
Passenger Car Production By Body Types As
Percentages of Total Production, 1947-1950, Inclusive²⁰

Body Type	1950	1949	1948	1947
4-Door Sedans	45.36	49.23	50.37	48.04
2-Door Sedans, Coaches, Coupes ⁽¹⁾	39.47	42.83	39.77	39.89
Business Coupes	1.48	1.61	1.62	2.33
"Hard Top" Coupes and Sedans	8.85	.20	—	—
Convertibles Except "Hard Tops"	3.09	4.21	5.03	4.89
Station Wagons ⁽²⁾	1.57	1.73	2.63	4.24
Chassis	<u>.18</u>	<u>.19</u>	<u>.58</u>	<u>.61</u>
TOTAL	100.00	100.00	100.00	100.00

(1) Does not include Business Coupes

(2) Includes only station wagons produced on passenger car chassis.

²⁰ Automotive Industries, March 15, 1951, p. 84.



²¹Automotive Industries, March 15, 1951, p. 84.

their cars for essential mobility since 1940.

In 1946, the total automobile mileage, driven for business purposes, was 55 per cent of the total mileage driven by passenger car consumers. The most outstanding occupation was that of the commercial traveler who drove his car or company car in pursuit of economic livelihood. The insurance and real estate business, considered in combination as one business type, was second in standing, because people in their type of activity use their automobiles regularly in their everyday business. Farmers and physicians drove the same amount for business purposes to vie for third position. Laborers were in the last place because only 49 per cent of their total mileage was for business purposes.²²

A survey was conducted in 1950 by the United States Bureau of Public Roads to determine the trip purpose of resident automobile drivers in 32 metropolitan areas. The survey revealed that 52 per cent of the trips were for business purposes. Included in business purposes were trips to the place of employment. Sixteen per cent of the trips were made for social and recreational purposes. Thirteen per cent were shopping trips, and all others grouped together equalled nine per cent to complete the 100 per cent.²³

The main purpose of Table VII is to give the reader a general view of the new car ownership standings of the various states in the post-war period. Each state will not be taken separately and discussed in detail, as the conclusions to be drawn are necessarily quite general.

In 1947 the largest passenger-car registration gain was on the west coast and in southern states. The west coast, which included California,

²²Automobile Facts and Figures, 1946 Issue, p. 8.

²³Ibid., 1950 Issue, p. 37.

Oregon, and Washington, gained most. The southern states that had significant gains were Florida, Arkansas and Texas.²⁴

The relative standings of the states will vary with population changes and other economic factors. As of 1947, the civilian population per passenger car was 4.7 in the total United States. In rating the states in 1947, Nevada lead with 3.1 people for each car registration. Mississippi had the largest number of persons per passenger car with 8.7 persons for each car.²⁵

²⁴Ibid., 1948 Issue, p. 19.

²⁵Ibid., 1948 Issue, p. 20.

TABLE VII

New Passenger Car Registrations by States,
1946 to 1950, Inclusive²⁶

State	1950	1949	1948	1947	1946
Alabama	79,156	58,273	40,432	35,508	21,850
Arizona	26,570	20,995	12,994	10,655	5,711
Arkansas	47,003	34,030	21,319	19,786	10,817
California	519,999	389,544	272,209	253,341	136,419
Colorado	58,953	42,770	27,942	25,958	13,346
Connecticut	86,097	66,278	50,745	48,782	27,797
Delaware	17,421	14,655	9,996	8,846	5,243
Dist. of Columbia	33,466	29,209	25,270	23,186	14,048
Florida	116,904	84,238	53,746	49,009	26,680
Georgia	113,923	80,886	59,703	53,432	25,102
Idaho	27,355	23,211	14,554	12,093	6,106
Illinois	417,871	345,156	241,231	218,536	122,081
Indiana	200,112	148,827	101,128	97,223	55,679
Iowa	128,114	102,183	68,947	54,837	33,008
Kansas	91,572	74,760	48,970	40,864	23,635
Kentucky	78,897	61,597	43,082	38,144	23,291
Louisiana	81,231	65,820	44,925	35,525	19,747
Maine	29,175	23,140	17,298	15,690	8,473
Maryland	93,227	69,985	52,762	48,034	26,309
Massachusetts	166,815	133,288	102,244	97,447	63,188
Michigan	430,321	321,421	250,853	246,973	141,115
Minnesota	153,203	107,435	76,781	60,567	37,325

²⁶ Automotive Industries, March 15, 1951, p. 91.

TABLE VII (Continued)

State	1950	1949	1948	1947	1946
Mississippi	50,797	40,163	28,242	26,382	13,783
Missouri	174,394	131,269	93,266	84,905	49,606
Montana	31,249	23,681	18,014	15,300	7,015
Nebraska	67,964	51,105	35,234	28,654	16,786
Nevada	7,672	6,607	5,028	4,597	2,105
New Hampshire	19,154	15,162	10,539	10,790	5,099
New Jersey	210,785	165,842	116,945	106,585	63,784
New Mexico	23,289	17,571	10,897	8,969	4,685
New York	542,195	415,634	338,254	308,710	183,070
North Carolina	119,477	93,514	59,584	54,756	30,648
North Dakota	27,549	22,905	13,359	11,894	6,046
Ohio	388,389	302,830	220,248	215,359	124,689
Oklahoma	90,591	65,563	44,942	39,119	24,510
Oregon	72,261	55,212	39,655	34,121	17,520
Pennsylvania	435,035	336,446	257,764	228,733	137,695
Rhode Island	32,884	24,463	19,816	18,261	10,052
South Carolina	58,073	45,543	30,599	28,705	16,635
South Dakota	28,158	22,215	14,338	10,808	6,281
Tennessee	105,144	78,850	60,141	59,732	30,689
Texas	366,050	243,837	168,379	139,780	88,069
Utah	27,670	21,366	13,874	12,278	6,280
Vermont	13,554	13,355	8,991	8,164	4,167
Virginia	130,886	104,106	73,515	67,435	31,573
Washington	91,061	74,241	54,109	47,711	25,565

TABLE VII (Continued)

State	1950	1949	1948	1947	1946
West Virginia	45,807	36,293	25,098	22,882	13,432
Wisconsin	151,161	120,845	84,224	71,116	44,608
Wyoming	<u>17,804</u>	<u>12,023</u>	<u>8,766</u>	<u>7,049</u>	<u>3,834</u>
TOTAL	6,326,438	4,838,342	3,490,952	3,167,231	1,815,196

CHAPTER III

TAXATION IN THE AUTOMOBILE FIELD, 1946-1950

Discussion of automobile taxation falls naturally into several categories, including national, state, and local taxes on automobiles, tires and tubes, gasoline, and oil. The foregoing is merely a very general grouping which should be supplemented by some form of detailed listing if the complete field of taxes affecting the automobile industry is to be fully appreciated. The following list of taxes is not intended to be all inclusive, since income and corporation taxes are excluded. All taxes are included which appear to bear a more direct relationship to the marketing of automobiles.

Federal: Excise taxes on new automobiles, tires and tubes, gasoline and lubricating oil.

State: Various taxes on sale or use of new automobiles, gasoline, and upon ownership of automobiles.

Local: Participation in varying degree in the distribution of state gasoline tax receipts and personal property tax on ownership of an automobile.

Most of the taxes to be discussed were levied many years prior to 1946-1950 period under consideration, and information is not at hand which will show the effect that this post-war period may have had on them, although it is the purpose of this analysis to take each type of tax listed and discuss it in general terms.

A. Excise Taxes

The Federal Excise Tax rate, which was in effect during the post-war period, was the result of a 1941 amendment to the Federal Excise Tax law.

To provide an understanding of this tax, a few high-lights and a short history are helpful.

During the years 1947 to 1949, inclusive, the total automobile excise tax payments exceeded one billion dollars, with another 452 million dollars added to that total in 1950. A point which is worth noting here is in regard to taxes paid by highway users. In 1950 the users of highways paid more than 2.5 billion dollars in special state motor vehicle taxes and fees, an average of nearly 55 dollars per vehicle.¹ This statement should serve to give the reader an idea as to the tremendous amount of revenue collected from vehicle users.

It is estimated that 24 cents out of every dollar spent for the purchase of a new car goes for taxes of all kinds.² To further illustrate the significance of the total tax bill, a passenger car with a 1950 list price of 2,000 dollars would cost the purchaser only 1,520 dollars before taxes. This tax burden just noted does not include social security taxes paid by either the company or the employee. Individual income taxes on wages and salaries paid to employees engaged in the intermediate processes from mining and the production of raw materials through the manufacturer of parts and accessories, their transportation, and the final assembly of the automobile, were also excluded.

Of the many products upon which the Federal Government imposes luxury taxes, only the revenue collected on alcoholic beverages exceeds the annual amount levied against automobile owners.

Unlike various so-called "use" taxes paid by motorists for the construction and maintenance of the nation's highways and street systems,

¹ Automobile Facts, March, 1951, p. 2.

² Automobile Facts and Figures, 1950, p. 47.

Federal Excise Taxes were levied to raise revenue for general government expenditures.

The practice of classifying automobiles as luxuries, along with alcoholic beverages, furs, jewelry, perfumes, tobacco, and sporting goods had its origin in horse and buggy days.

When the first self-propelled vehicles appeared on the streets of America, most people regarded them as experimental gadgets or expensive playthings. This was brought about by the noise created by these new gadgets and the high cost as compared to the horse and buggy.

Even as late as World War I, when the automobile excise tax came into being, motor cars still were classified as luxuries. At that time there were less than five million passenger cars in the United States, and by today's standards, their usefulness was somewhat limited.³

The World War I luxury tax on automobiles was imposed as a temporary emergency revenue measure. Not until 1928 however, were the levies lifted, a good ten years after the armistice which ended the war.

The Federal Excise Taxes were put into effect again during the depression of 1932, again as a temporary emergency revenue levy. Despite the "temporary" label, they never were repealed. On the contrary, the 1932 taxes were increased in 1940 and doubled to reach a total rate of seven per cent in 1941. The Federal Excise Tax rate on the sale of automobiles remained at seven per cent during the entire post-war period.

In 1946 the excise tax on automobiles and motorcycles amounted to only slightly over 25 million dollars.⁴ During 1950, receipts amounted to over

³ Automobile Facts, March, 1951, p. 2

⁴ Annual Report of Commissioner of Internal Revenue, fiscal year ended June 30, 1946, 1948, 1950, p. 113, p. 12, p. 123 respectively.

452 million dollars. Excise tax receipts on automobiles and motorcycles are combined in these figures of the Internal Revenue Bureau, but chiefly derive from automobile sales.

TABLE VIII

Federal Automotive Excise Taxes by Years, 1946-1950⁵
(In Millions of Dollars)

	1946	1947	1948	1949	1950
New Passenger Cars*	25.89	204.68	270.96	332.81	452.07
Tires and Tubes	118.09	174.93	159.28	150.90	151.80
Gasoline	405.69	433.68	478.64	503.65	526.73
Lubricating Oil	74.60	82.01	80.89	81.76	77.61

*Motorcycles included

Tires and inner tubes had an increased Federal Excise Tax placed on them in 1941, amounting in total to five cents a pound on tires and nine cents a pound on inner tubes.⁶ On new passenger car sales, the excise tax applied to complete vehicles. The value of the tires and inner tubes was computed and deducted to avoid double taxation on tires and inner tubes. In 1946 the total amount of excise tax on tires and tubes was in excess of 118 million dollars and in 1950 amounted to 151 million dollars.⁷ A possible explanation of this small increase, compared to the gain of revenue from passenger cars, is the fact that in 1946 there was a great back-log of demand

⁵Ibid., 1946, 1948, 1950, p. 113, p. 124, p. 123 respectively.

⁶Automobile Facts and Figures, 1947, p. 52.

⁷Annual Report of Commissioner of Internal Revenue, fiscal year ended June, 1946, 1950, p. 113, p. 123 respectively.

for tires and tubes brought about by the rationing of these goods during World War II. The back-log of demand for tires and tubes was filled a year or so before the new car demand showed evidence of slackening.

Lubricating oil, which carried a Federal Excise Tax of six cents a gallon during the entire post-war period, produced a revenue of over 74 million dollars for the Federal Government in 1946, and over 77 million dollars in 1950.⁸ As lubricating oils were not rationed during World War II, there was no back-log of demand to satisfy during the post-war period. The increase of revenue from 1946 to 1950 was chiefly brought about by the enlarged number of new cars sold during this period and freedom of the passenger car owner to buy as much gasoline, tires and inner tubes as desired. With this liberty the motorist could drive his car any time and to any place he chose. Consequently, the more a car is driven, the greater is the need for lubricating oils.

B. Various State Taxes

The gasoline tax will be considered first as it is a very important source of revenue. Gasoline taxes are usually imposed on the sale, distribution, or use of motor fuel in the state. The tax liability in some of the states was limited, though, to gasoline sold. The term "gasoline" is frequently defined as a preparation sold for the use in the generation of power for the propulsion of motor vehicles, airplanes, or motor boats.

Motor-fuel taxes are usually intended to be single turn-over taxes. Each gallon of fuel is to be taxed only once. The statutes differ, however, as to whether the tax is to be borne by the consumer or by the distributor. Some states impose the tax on the consumer for the privilege of operating

⁸ Ibid., 1946, 1950, p. 113, p. 123 respectively.

motor vehicles on the public highways. Under such statutes the distributor is usually made the tax collector for the state. In other states, an excise tax is imposed through all dealers in motor-vehicle fuel, upon the use, distribution, or sale within the state, of motor-vehicle fuel. The general practice under such statutes is for the dealer to pass the tax along to the consumer.

States are prohibited by the Federal Constitution from imposing an excise tax on the sale of gasoline to the Federal Government or its agencies.¹⁰ However, gasoline sold on Federal Reservations is subject to state taxation when such gasoline is not for the exclusive use of the United States.

The Oregon Act of 1919 provided the first gasoline tax of one cent a gallon. This tax was followed by many other states and then in 1933 various states began increasing the rate. The gasoline tax rate per gallon for each state is listed in Table IX for the years 1946-1950 inclusive.

Seven states raised their gasoline tax rates in 1947. California raised its rate from three cents to four and one-half cents and had no definite expiration date. Colorado increased the tax rate to six cents, as compared to the previous four-cent tax. Connecticut and Rhode Island levied a four cent tax in 1947, as compared to the 1946 tax of three cents. Maine and Maryland raised their tax from four cents a gallon to five cents. Vermont, which had the least increase for 1947 of those states changing their tax rates, levied only a one-half cent increase above the 1946 tax of four cents.

Louisiana acquired the dubious honor of having the highest gasoline tax when its legislature raised the tax two cents a gallon to a total level of nine cents, effective June 7, 1948. Effective April 1, 1948, the Kentucky tax was increased from five cents per gallon to seven cents.

¹⁰ Lester, William M. Comparison of State Revenue Systems, p. 59.

TABLE IX

State Gasoline Tax Rates 1946-1950, Inclusive⁹
(In Cents Per Gallon)

State	1946	1947	1948	1949*	1950
Alabama	6	6	6	6	6
Arizona	5	5	5	5	5
Arkansas	6.5	6.5	6.5	6.5	6.5
California	3	4.5	4.5	4.5	4.5
Colorado	4	6	6	6	6
Connecticut	3	4	4	4	4
Delaware	4	4	4	4	5
Florida	7	7	7	7	7
Georgia	6	6	6	6	7
Idaho	6	6	6	6	6
Illinois	3	3	3	3	3
Indiana	4	4	4	4	4
Iowa	4	4	4	4	4
Kansas	4	4	4	5	5
Kentucky	5	5	7	7	7
Louisiana	7	7	9	9	9
Maine	4	6	6	6	6
Maryland	4	5	5	5	5
Massachusetts	3	3	3	3	3
Michigan	3	3	3	3	3
Minnesota	4	4	4	5	5
Mississippi	6	6	6	6	6

⁹The World Almanac, 1948, 1949, 1950, p. 595, p. 252, p. 647, p. 623.

TABLE IX (Continued)

State	1946	1947	1948	1949 *	1950
Missouri	2	2	2	2	2
Montana	5	5	5	6	6
Nebraska	5	5	5	5	6
Nevada	4	4	4	5.5	4.5
New Hampshire	4	4	4	4	4
New Jersey	3	3	3	3	3
New Mexico	5	5	5	7	7
New York	4	4	4	4	4
North Carolina	6	6	6	7	6
North Dakota	4	4	4	6	4
Ohio	4	4	4	4	4
Oklahoma	7.5	5.5	5.5	5.5	6.5
Oregon	5	5	5	6	6
Pennsylvania	4	4	4	5	5
Rhode Island	3	4	4	4	4
South Carolina	6	6	6	6	6
South Dakota	4	4	4	4	4
Tennessee	7	7	7	7	7
Texas	4	4	4	4	4
Utah	4	4	4	4	4
Vermont	4	4.5	4.5	4.5	5
Virginia	6	6	6	6	6
Washington	5	5	5	6.5	6.5
West Virginia	5	5	5	5	5
Wisconsin	4	4	4	4	4
Wyoming	4	4	4	4	4
Washington, D. C.	3	4	4	4	4

*Information Please Almanac, 1950, p. 267.

In 1949, New Mexico and North Dakota increased the gasoline tax by two cents. Washington and Nevada increased their tax rate by one and one-half cents per gallon. Six states raised their rate one cent. The fact that twenty-four states retained their 1946 gasoline tax rate through the entire period, 1946-1950, inclusive, is very interesting.

In 1950 there were three states that reduced their tax rates on gasoline. Nevada and North Carolina had a decrease of one cent per gallon, while North Dakota decreased its tax by two cents. The decreases in 1950 indicate a somewhat lighter tax burden for the gasoline consumer in a few states, but the general trend of gasoline taxes was upward. Oklahoma, which had a decrease in 1947 of two cents a gallon, was the only state to reduce the gasoline tax before the 1950 decreases mentioned above.

The automobile sales tax was in effect during the post-war period in a majority of the states. As to the effects of this tax upon the automobile industry, definitely reasonable assumptions are difficult to make. The tax, during the 1946 through 1950 period, ranged from one-half per cent to three per cent with the tax applying to new cars only in some states.¹¹ This tax has been a good revenue producer for many states and has increased in importance due to the fact that an enlarged number of new cars have been bought during the post-war period. There are twenty states that levy no sales or use tax on either new or used automobiles.

In analyzing the license-plate fees during the post-war period, considerable difficulty was encountered. It was found that motor vehicle registration "years" of the states vary considerably, but most states begin their license period either January 1 or April 1. The registration practices vary considerably among states. Several states register busses with trucks or automobiles.

¹¹ Ibid., p. 222.

In addition to these major differences, the practices of the states in classifying vehicles differ considerably in the registration of taxi-cabs, station wagons and special-type vehicles released by the military services. In Vermont the practice in 1947 was to register trucks of less than 1,500 pounds capacity as automobiles.¹²

The first state to license motor vehicles was New York, in 1901. This state's fees for that year amounted to 954 dollars. By 1909, the licensing of automobiles had become general, and by 1949, with the increases in motor vehicle registration and in the amounts charged per vehicle, the revenue reached a total of nearly 600 million dollars a year.¹³ Some states have established flat rates for all pleasure cars, but the most common practice has been to vary the license fee according to age, weight, horsepower, or value.

C. Various Local Taxes Pertaining to Passenger Cars

The majority of the local governments do not tax the automobile other than the personal property tax which about twenty states levy and in which counties usually share. More than half of the states distribute some part of their gasoline receipts among the local units of government, usually the counties, although the cities are gradually establishing their claim to a share for the paving of their streets. No uniformity exists as to the basis of distribution. Some states divide the money equally among the counties; some return to each county a fixed percentage of the amount collected within its borders; while others apportion the fund on the basis of area, population, highway mileage, or motor-car registration.

¹²

U. S. Public Roads Administration, Highway Statistics, 1945-47, p. 11.

¹³

Macdonald, Austin F. American State Government and Administration, p. 564.

The automobile is normally classified as personal property. It has been a practice for many persons to evade personal property taxes, but with the automobile each state has a record of each registration. In the many states personal property tax rates vary, having in a majority of states been replaced by license levies; therefore, it is impractical to provide a clearer picture of this phase of the taxation problem.

CHAPTER IV

THE USED CAR SITUATION IN THE POST-WAR PERIOD

A. Used Car Price Trends 1946-1950, Inclusive

The used-car dealer during the post-war period owned a thriving enterprise. The shortage of new cars, and the increased demand during this period caused the prices of used cars to go up to unbelievable heights. One of the most outstanding markets for the used car was provided by the returning service men who were being discharged as civilians. A considerable proportion of these men were drafted into the service after finishing high school, and the majority had never owned a car. The service men who had owned cars before World War II usually sold their cars upon entering the service. With a great desire for a means of transportation after returning to civilian life, these men were willing to pay a high price to secure the cars of their choosing.

During World War II no new cars were available, therefore, now that automobiles were again available, civilians also were trying to improve their methods of transportation, and perhaps also to improve their prestige. With the over-use of their war-time cars, came excessive upkeep. Now automobile owners generally wanted to reduce the cost of keeping their car or cars in running condition. These pressures were intensified by the fact that during the last decade a tendency to shift to the outer edges of most cities caused greater dependence upon the automobile.

There are other possible causes for the prices of used cars going up, but the ones presented are believed to have been the most outstanding. The pent up back-log of demand for new cars, the wearing out of old cars, and

the length of time to get plants back into volume production of new cars had an outstanding effect upon the prices of the used cars. Table X gives a general view of the trend of used-car prices. In 1946, when possibly the greatest number of service men were being discharged, the average used-car price was considered very high as compared to the pre-war experience. Occasionally an eight or nine-year-old car in good condition was known to sell during 1947 for more than it cost when originally bought.

The tire and gas rationing must also be taken into consideration at this time. With the discarding of the tire and gas rationing in 1946, the average car owner was driving his car a great deal more, than wartime conditions permitted. This increase in driving caused more wear on the already worn cars which resulted in a greater number of breakdowns and still higher repair costs. The new cars which were being produced, were difficult to obtain. Therefore, in most cases, buying a good used car was better than to put up with the inconvenience and repair costs of keeping the "old jalopy".

The year 1948 saw an average drop in used-car prices of approximately 25 to 50 dollars. The outstanding reason for this decline in prices was the tremendous output of new cars. An exceedingly large number of new cars sold, released used cars which in turn were placed on the used-car market. This increase in used cars placed on the market helped to supply the demand and at the same time reduced the prices.

In 1949 and 1950 the used-car prices were successively reduced, with only the later models of used cars continuing to bring a substantial price.

An interesting comment in regard to used-car prices is the observation that some economists believe that the asking price on the used-car lots provide unique "free-market" quotations on the real value of a car. General Motor's list prices were attuned to the state of the company's labor relations.

As a matter of high corporate policy, the price of a new Chevrolet was somewhat below any reasonable estimate of what the traffic would bear. At the other extreme was Kaiser-Frazer, whose list prices reflected the company's high cost, rather than public enthusiasm for the product.

On the used-car lots all these distortions were effortlessly exposed. In 1950 many used-car dealers were refusing to handle "new-used" Packards, Hudsons, Nashs, Kaisers and Frazers. Even Studebakers, long the best seller of the independents, were becoming hard to move. The "off-brands" could be bought from the regular new-car agencies for as much as 250 dollars below list price, through a fictitiously high allowance for the trade-in. Accordingly, the prices of the one, two and three-year-old models of independents were softening. Late in April, 1950, for example, while factory list price on the 1950 Frazer four-door sedan was set at 2,359 dollars, the 1949 models were selling for a wholesale auction price of 1,310 dollars. On the other hand, a two-door Styleline de luxe Chevrolet, listing at 1,482 dollars in the 1950 model, was bringing 1,450 dollars in the 1949 model.²

No one, least of all the politically sensitive management of General Motors, would like to have seen things get tough for the independents, and used car prices, it must be noted, are capable of exaggerating as well as forecasting trends in new car sales. One can wish the independent automobile manufacturer well and still take some pleasure in the stubborn independence of the United States consumer. At the same time Congressmen were lecturing him on evils of corporate bigness, but he seemed to have shown a pretty lively appreciation of the products that bigness was producing.

²Fortune, June, 1950, p. 54.

TABLE X

Average Used Passenger Car Prices by Year Made¹
(During 1946-1950, Inclusive)*

Year Made	1946	1947	1948	1949	1950
1935	\$ 275	\$ —	\$ —	\$ —	\$ —
1936	300	—	—	—	—
1937	425	450	425	—	—
1938	525	550	500	300	—
1939	650	700	650	450	—
1940	825	900	825	550	—
1941	1100	1175	1100	650	500
1942	1200	1225	1175	700	500
1946	—	1900	1850	1200	975
1947	—	—	2150	1300	1250
1948	—	—	—	1650	1500
1949	—	—	—	—	1800
1950	—	—	—	—	—

*The contents of this table are approximate figures taken from a chart. The average figures which are given provide a general view of the average price of a used car in the years given without reference to make. Naturally the price a used car brings will depend upon the condition of each individual car.

¹Automobile Facts and Figures, 1950, p. 14.

B. Merchandising Used Cars

The post-war period brought with it many new and expressed ideas. One outstanding belief of many new-car dealers was the fact that the only way to sell a new car was on a "clean deal". In other words, the only way to sell a new car was for cash only and let the individual who was buying the new car dispose of his used car the best way possible. The purpose of this section of the thesis is to reveal the many advantages the new-car dealer receives in accepting or even requiring trade-ins and to deal with the problem in general.

Traditionally, one of the most difficult problems of the new-car dealer has been that of selling the used cars which were traded in as part payment on new cars. It has usually been necessary for the new-car dealer to accept used cars in order to sell a satisfactory volume of new cars, since the majority of new-car buyers would go to other dealers who would accept their old car as a trade-in. The practice of accepting trade-ins has been one of the reasons the automobile industry has been so successful in merchandising its product. While it may have been possible to sell a limited number of new cars on clean deals, the volume obtained would not have been sufficient to support a dealership. Thus, the handling of used cars has become an integral function in the selling of new cars.

The objection arose that there were no profit possibilities in the used-car phase of business. When this was examined closely, however, it was learned that used-car dealers have operated very profitably with used cars alone. Generally speaking, used-car dealers got only cars that the new-car dealers did not want.

While the new-car dealer may not be able to make a cash profit on each used-car sale, the used-car phase has been used to great advantage in

furthering the profits of many dealers' over-all operations. Good used-car operations lead to increased volume of new-car sales in the future, with attending profits from sales of parts and accessories.

Many new-car dealers, who were successful during the post-war period in maintaining an efficient used-car operation, were able to prevent used-car stocks from limiting new-car sales, and also managed to prevent used-car losses, which were very few during this period, from interfering with profits. This twofold purpose may be accomplished by selling the necessary number of used cars every month to avoid the inventory of used cars becoming too heavy, especially during off-seasons, forcing the sale of cars at sacrifices in order to get the number of used cars carried down to desired levels.

The used-car business, for a new-car dealer, originates with the buying of used cars from customers who, in turn, are buying new or used cars. Because almost every car sale involves a trade-in, when the dealer accepts a trade-in, the buying of used cars constitutes one of the most vital parts of a dealer's operations. In actual practice, the trade-in allowed on the used car accepted in a new-car sale, determines the new-car gross profit which the business makes on the new-car sale. Subsequently, trading for other used cars in the "trading-down" process will eventually fix the actual profit that may be salvaged. The term "trading-down" refers to the acceptance of a used car as part of the original price of the new car and, in turn, selling the used car to realize the profit from the transaction. Every sale involving a trade, had to be watched and carefully managed to bring the maximum profit into the business. To maximize profits the dealer must be careful in buying used cars. The basic principle in buying used cars is to buy those which can be sold readily. Naturally every dealer prefers "fast moving" cars, but a list of desirable used cars will include more than just

those makes which sold new at a low price. During the early post-war period these lists usually included all makes and models. Almost every used car could be sold quickly, if it was bought properly.

Price was one of the most important factors in selling used cars and proper buying permitted pricing that made it possible to sell on a large scale basis. Every dealership, on the other hand, at sometime bought used cars that were known from experience to be "slow movers". Everything possible must be done in such cases to get the maximum cash difference from the customer when selling him a new car. This strategy permits a lower used-car selling price so that the slow-moving cars can be sold without excessive delay.

In the years 1946-1948 inclusive, used-cars, being eagerly sought, could scarcely be termed a problem to dealers. In 1949 and 1950 the necessity of dealing carefully on trade-ins became apparent. With the easy sales of the first three years after World War II, the occasional new-car dealer who was reluctant to undertake the problems of used cars usually found his customers only too happy to sell their own used cars. During the past two years, with the need of aggressive selling, most of the new-car dealers have decided to return to the trade-in deal. There were a few exceptions where the new-car dealer's product was still in heavy demand.

C. The Used Car Purchaser

In this study of the used-car trends, one of the questions that came into mind was who were the purchasers of used cars in the post-war period? This question can be broken down into many component parts as: Did the urban residents buy more used cars than the rural residents? Did the size of the city have any effect upon the used car buyer as compared to farm and non-farm families? How did the different age groups buy used cars? What

income group bought the most used cars? Do different levels of education enter into the picture?

The data used for this analysis were obtained through a survey which was conducted by the Curtis Publishing Company in the months of November and December of 1949. One of the objectives of this Curtis survey was to provide information as to who buys new and used cars. Personal interviews were obtained with families in 63 cities of 2,500 population and over, in 137 towns under 2,500, and with families living in open country in 100 groups drawn from 116 counties.

In this survey, the division of urban and rural territories follows the definitions used in the 1946 census. "Urban" comprises all cities and towns with population 2,500 and over, and some incorporated places under 2,500 population.

Rural families were divided into farm and non-farm families. In 1940 the census defined a farm as the land on which some agricultural operation was performed. The census, therefore, may consider families as farmers although the primary occupation was not farming. In this survey a family was classified as a farm family only when the primary occupation of the chief wage earner was a farmer. The farm classification in this report, therefore, was not an indication of a place of residence but rather results from an answer to a question to determine the principle occupation of the chief wage earner. Because of this difference in definition, the number of farm families surveyed was somewhat less than the census number of farm families.

Rural non-farming families were defined as those living in open country and in towns under 2,500 population where the occupation of the chief wage earner was not farming. This type of family usually has a cow and chickens

but does not depend upon them or the soil for livelihood.

The Curtis survey results, as presented in Table XI, showed that a larger per cent of urban families owned cars that were bought new than was the case with rural families. More used cars were purchased by rural families than were bought by urban families. If the survey results are projected for the entire United States, it is seen that more families owned cars in 1949 which were purchased as used cars than the number who had bought new cars.

TABLE XI

Sample of Urban and Rural Car-Owning Families
Owning Cars Bought New and Used³

Type of Family Studied	Percentage of Families Who Own Car Bought	
	New	Used
Average	45.5	54.5
Urban	49.9	50.1
Rural	40.8	59.2

The tables presented are simple and reveal the desired information at a glance. Table XII shows that the per cent of families owning cars bought new, increases with the size of the city, except that for families living in cities of 10,000 to 50,000 population the ratio of new to used cars is especially high. It will also be seen that families who live in open country, but do not farm as an occupation, buy the largest per cent of used cars.

³The Market For Passenger Cars, 1950, p. 32.

TABLE XII

City, Farm and Non-Farm Car-Owning Families Owning Cars
Bought New and Used⁴

Type Family Studied	Percentage of Cars Owned Bought	
	New	Used
New York City	54.4	45.6
1,000,000 and over	51.3	48.7
500,000 - 999,999	48.8	51.2
100,000 - 499,999	47.2	52.8
50,000 - 99,999	46.2	53.8
10,000 - 49,999	54.8	45.2
2,500 - 9,999	46.8	53.2
Farm	42.0	58.0
Non-Farm	40.3	59.7

Reference to Table XIII indicates that purchasing power increases with age. A larger per cent, 50.9 per cent to be exact, of the cars owned by families where the age of the chief wage earner was 45 or over, were bought new as compared with 44.2 per cent for the age group through 44, and 25.4 per cent for families where the age of the chief wage earner was under 30. This would tend to indicate that the used-car dealers should concentrate upon the young family man.

TABLE XIII

Car-Owning Families in Each Age Group Owning Cars
Bought New and Used⁵

Age Group Chief Wage Earner	Percentage of Cars Owned Bought	
	New	Used
Under 30	25.4	74.6
30 - 44	44.2	55.8
45 and over	50.9	49.1

⁴The Market for Passenger Cars, 1950, p. 33.

⁵Ibid., p. 33.

Table XIV illustrates the total cars owned by upper-half income families, 52.8 per cent were cars bought new as compared with 29.1 per cent bought new by lower-half families. By income levels the per cent of cars bought new increases in direct relation to income. Conversely, this study showed that many families with a low income bought a used car as they were often not financially able to purchase a new one.

TABLE XIV
 Car-Owning Families in Income Groups and Levels
 Owning Cars Bought New and Used⁶

Income Group	Percentage of Cars Owned Bought New	Used
Upper Half	52.8	47.2
Lower Half	29.1	70.9
<u>Income Levels</u>		
\$7,500 and over	83.6	16.4
5,000 - 7,499	66.9	33.1
4,000	57.0	43.0
3,000	42.8	57.2
2,000	33.2	66.8
1,000	22.2	77.8
Under 1,000	23.7	76.3

As income and education tend to have a correlation, one might naturally expect to find college graduates purchasing mostly new cars. The per cent of college graduates who bought used cars was very small. The high school graduate bought approximately 50 per cent of all the used cars sold. Individuals with a grade school education or less bought approximately 45 per cent of all the used cars sold.

⁶ Ibid., p. 33.

In addition, it was found that the person most likely to own a car bought used during the post-war period was someone living in the rural area, although farming was not his occupation; he was under 30 years of age; and had an annual income of approximately 1,000 dollars.

With this information, the used-car dealers should direct their efforts toward selling people who fit the preceding description. One must keep in mind, however, that although the majority of people of the type just previously discussed buy used cars, probably the largest potential market for used cars is usually in the middle income group which numbers by far the largest in total families comprising the group.

D. Age of Cars in Use During the Post-War Period

During the post-war period used cars were either very old or had been used only a short time. Middle-aged cars were non-existent due to non-production of the war period. The absence of the middle-aged car during this period contributed to the increased demand and high prices of the used cars. The passenger-car consumer learned during this period that a car could be driven considerably more than cars had been driven in the past.

Back in 1925 if you owned a car that was $6\frac{1}{2}$ years old and had been driven 25,000 miles, chances were you had to sell it for junk, because that was the average age and mileage at which cars in the United States wore out completely at that time. Thanks to the steady advances made in automotive design and engineering, a modern car that had gone only 25,000 miles or so was regarded, during the post-war period, as "just nicely broken in", and good for at least 75,000 more miles.

A recent survey of average passenger-car life in the United States indicated a steady rise in value built into automobiles. Aside from being much longer and having many more features than earlier cars, the post-war automobiles were built to last longer than ever before.

For example, the average car scrapped in 1946 was built 12.7 years earlier and ran nearly 90,000 miles during its lifetime.⁷ This average figure for years of use would be higher if it were possible to leave out of the scrappage figures those cars whose lives were cut short by traffic mishaps.

Thus the average car scrapped in 1946 was built in 1933. Such cars lacked many features that made the post-war car more durable such as all steel bodies; coil springs; improved transmissions; and numerous hidden advances, made since 1933, in engines and other parts of the cars.

Over the years United States cars have been lasting longer and traveling more miles per year. The car scrapped in 1925, with its 25,000 miles of lifetime travel, had been used an average of less than 4,000 miles per year. By 1941 this yearly travel average was nearly 8,000 miles. Cars scrapped that year averaged 81,500 miles of lifetime travel and were 10.2 years old.⁸ In 1950 the average car traveled about 9,500 miles a year. The new cars produced in that year got more use than older cars, because as cars get older they are driven fewer miles yearly.

Table XV reveals the number and per cent of passenger cars in use, classified by age groups as of July 1 of each year, 1946 through 1950. The vacancies in the table show the years in which no automobiles were produced, 1943 - 1945, inclusive.

⁷ Automobile Facts, May 1948, p. 3.

⁸ Ibid., p. 3.

In 1946 it is observed that approximately 59 per cent of the passenger cars in use were five to nine years of age. Thirty-five per cent were ten or more years old, and only six per cent were less than five years old. The 1941 model cars constituted perhaps the largest number of cars in use in 1946, as World War II began before very many 1942 models were produced. The automobile industry in 1942 converted to the producing of war material.

Table XV reveals that in 1947 45.2 per cent of the passenger cars in use were five to nine years old. The cars, which were ten or more years old, made up 42.2 per cent of the total in use, and 12.6 per cent were less than five years old. These figures seem to indicate that the older cars, perhaps the ten to twelve year olds, were holding their own compared to the standings of the other cars.

In 1948, the 1941 models still represented the largest single units of cars in use amounting to 13.5 per cent of the total. The increased production of cars, during the first three years of the post-war period, brought the standing of cars under five years of age up to 22.9 per cent of all cars in use in 1948. The passenger cars that were five to nine years of age mounted to 35.2 per cent. The ten-year-and-over cars amounted to 41.9 per cent of all cars in use in 1948.

Record post-war output of replacement parts for automobiles helped the United States motorist keep in use about 14 million cars in 1948 which normally would have been in the automobile grave yards. There were cars in 1948 that were more than ten years old, and past the age at which the average car was scrapped in pre-war years. In fact, in 1948, two million cars were 15-or-more years old.

TABLE XV

Number and Per Cent of Passenger Cars in Use
Classified by Age Groups as of July 1, 1946-1950⁹
(In Thousands)

Age in Years	1946		1947		1948		1949		1950	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Under 1	480	1.8	1,367	5.0	1,673	5.6	2,638	8.3	2,989	8.3
1 - 2	0	0.0	2,056	7.6	3,100	10.4	2,981	9.1	4,935	13.9
2 - 3	0	0.0	0	0.0	2,048	6.9	3,066	9.4	3,033	8.5
3 - 4	0	0.0	0	0.0	0	0.0	2,047	6.3	3,052	8.5
4 - 5	997	4.0	0	0.0	0	0.0	0	0.0	2,032	5.7
5 - 6	4,104	16.5	1,065	3.9	0	0.0	0	0.0	0	0.0
6 - 7	3,182	12.7	4,086	15.0	1,012	3.4	0	0.0	0	0.0
7 - 8	2,426	9.7	3,113	11.4	4,004	13.5	1,006	3.1	0	0.0
8 - 9	1,736	7.0	2,379	8.7	3,093	10.4	4,005	12.3	999	2.8
9 - 10	3,390	13.6	1,679	6.2	2,345	7.9	3,089	9.5	3,955	11.0
10-11	2,893	11.6	3,304	12.1	1,662	5.6	2,326	7.1	3,033	8.5
11-12	1,675	6.7	2,790	10.2	3,186	10.7	1,621	5.0	2,245	6.2
12-13	1,021	4.1	1,592	5.8	2,657	9.0	3,075	9.4	1,490	4.2
13-14	607	2.4	967	3.5	1,490	5.0	2,495	7.7	2,709	7.6
14-15	369	1.5	568	2.1	886	3.0	1,035	4.1	2,075	5.8
15-16	626	2.5	346	1.3	509	1.7	762	2.3	1,053	2.9
16-17	596	2.4	596	2.2	317	1.1	435	1.3	567	1.6
17 and up	<u>889</u>	<u>3.6</u>	<u>1,377</u>	<u>5.0</u>	<u>1,732</u>	<u>5.8</u>	<u>1,738</u>	<u>5.3</u>	<u>1,657</u>	<u>4.5</u>
	24,991	100.0	27,285	100.0	29,714	100.0	32,619	100.0	35,824	100.0

(Each class interval includes the lower, but not the higher, age given.)

⁹Automobile Facts and Figures, 1947, 1948, 1950.

Replacement parts output reached an all-time high in 1947 of 2.3 billion dollars in wholesale value. This was three times the highest post-war record.¹⁰ By comparison, the wholesale value of all United States motor vehicles built in 1947 was 5.6 billion dollars.¹¹ So the parts business was about 30 per cent of the total industry output. The output of replacement parts in 1947 was used to keep the old cars on the road in 1948.

Table XV shows that 32.9 per cent of the cars in 1949 were less than five years old and 44.9 per cent were under five years in 1950. The five to nine year olds were 24.9 per cent in 1949 and 13.8 per cent in 1950. The ten year and older models were still a sizable portion of all cars in use in 1949 and 1950, accounting for 42.2 per cent and 41.3 per cent, respectively.

As the situation stood in 1950, there were no middle-aged cars in the United States. Five, six, and seven-year-old models were missing from the passenger-car population. They represent a "lost generation" of automobiles resulting from the World War II interruption in production. Their ranks were filled largely by veterans eight-or-more years of age.

Post-war production rapidly replenished the supply of young cars, but it had not, by 1950, entirely made up for the lost generation that by 1950 would have been middle-aged. Passenger cars in 1950 were either young or old, with no in-betweens. In terms of numbers, the nation's supply of automobiles was greater than ever before, but in terms of car age and use potential, the nation was not as well off as it was in 1941. More than one-third of the cars in operation were old enough in 1950 to be scrapped.

¹⁰ Automobile Facts, October 1948, p. 6.

¹¹ Ibid., p. 6.

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In assessing the economic value of any kind of tool, it is necessary to account for age and depreciation. The same holds true for automobiles in their primary role as essential transport tools. All tools wear out eventually, and their efficiency diminishes as they grow older.

The nation's passenger car population was much older in 1950, than it was in 1941. The average car in 1950 was 7.8 years old, compared with the pre-war average age of 5.5 years.¹² In 1941 less than one-fourth of all automobiles were beyond seven years of age. In 1950, more than one-half of the cars on the road were in that class.

Lack of middle-aged cars during the post-war period created a serious gap in the supply of used cars, upon which a great proportion of the population depends. Since the rate at which old cars dropped out of service was high, the nation's supply of automotive transport tools diminished rapidly and will continue to drop if the new car production should have to be cut off again.

The cars during the post-war period were tired vehicles. They not only gave long years of service, but were subject to hard usage as well.

The current high prices of new automobiles may cause a general lengthening of the period of use most people plan to derive from their car. The experience of the war period proved that cars can be used for longer periods successfully.

¹² Automobile Facts, February, 1951, p. 4.

CHAPTER V

CONCLUSION

In bringing to a close this study of the marketing of automobiles during the post-war period, it might be well to review, briefly, the more outstanding phenomena that have been noted, following, for purposes of easy reference, much the same sequence undertaken in the more detailed part of the work. This will be followed by such comments as appear logical and desirable in terminating the discussion.

The various effects of the post-war period on vendors of the passenger car may be stated as: Changes in relative sales standing by major producing firms and individual subsidiaries; changes in number of dealers and distributors and changes of the price phase of automobile marketing. General Motors, which was the leader in the field at the beginning of the post-war period, was at the end of the period still leading, commanding approximately 50 per cent of the total sales of the automobile industry. The Ford Motor Company was next in line, followed by the Chrysler Corporation. These three are sometimes referred to as the "big three" in the automobile producing field. Kaiser-Frazer, the only outstanding new-comer in the car producing industry during this period, made a remarkable showing in the years 1947 and 1948, outranking such old established companies as Studebaker, Packard, Hudson and Nash. The Kaiser-Frazer, in the latter part of the period studied, lost a portion of the prestige it had gained.

The changes in number of dealers and distributors during the period 1946-1950, inclusive, were difficult to analyze, as the only data available were yearly totals. These yearly totals indicated a consistently enlarging

number of dealers during the period studied. Factory-dealer relations in this period had a promising outlook, as changes here were believed to have been of major importance in bringing nearer a solution of the troublesome and long-standing problems in factory-dealer relations. The chief improvement was the setting up of councils that provided the dealers with better channels whereby they could hope to solve their problems at top policy-making levels.

The prices of passenger cars during the post-war period, with some few exceptions, mounted steadily upward. Chevrolet was found to be the lowest-priced car, in the standard-size car class, over the entire period, with the exception of the price of the Plymouth in 1949. Regulation W, which was included in the pricing phase, created the necessity for changes in factory allocations of cars. The metropolitan areas experienced a decrease in demand, but the small outlying areas still clamored for automobiles.

The ways in which consumers of passenger cars reacted in the post-war period were explained in an analysis of trends in sales, the demand for consumer durable goods, the notable changes and trends in design of motor cars, and the trends in passenger-car production by body types.

General Motors had increased the standing of all its makes during the post-war period. Chevrolet was in the top position with Ford following next in line giving it strong competition especially in 1950. The most notable gain in rank was made by Mercury which was in eleventh place in 1946 and moved to seventh place in 1950.

The demand for cars piled up because of the no-production years of World War II and the increased dependence upon the automobile as the trend of the population was toward suburban areas. This heavy post-war demand for cars brought with it new designs such as automatic transmissions with lower, wider

appearance in the body design. This period also witnessed an increase in window and windshield area. The most outstanding change in motor design was the increase in horsepower and possibly the shift to v-eight type motors.

The trends in passenger-car production by body types revealed that the four-door sedan continued to be the most popular body type, closely followed by the two-door sedan. A new body style entered the market during this period. It was the "Hard Top" substitute for the convertible, and had a very good acceptance.

Taxation in the automobile field was broken down into Federal, State, and Local. The Federal tax dealt with the excise tax on the passenger car, tires and tubes, gasoline and lubrication oil. It was found that the tax rate on cars was seven per cent on sales. The rate on tires and tubes amounted to five cents a pound on tires and nine cents on inner tubes. The lubricating oil was taxed by the Federal Government at a rate of six cents a gallon. The amount of revenue collected from these taxes amounted to over a billion dollars in 1950. The main emphasis of state taxes was placed on gasoline taxes. The trend of tax rates was in an upward movement, with many of the states increasing the gasoline rate, during the period studied. Louisiana had the highest tax rate of nine cents a gallon in 1950. The most significant local tax on the automobile was the personal property tax, as this is a field in itself no concise summary is practical here.

The used-car situation in the post-war period was of great importance in the marketing of automobiles. The problem was analyzed in its major parts as: used car price trends; merchandising used cars; the used car purchaser, and the age of cars in use.

The used-car price trend was toward increased prices in 1947 and 1948, with a gradual decline in the remaining years. The large demand which was

present during this period was brought about by the return of millions of service men and the lifting of gasoline and tire rationing. The post-war period saw many new car dealers selling cars and not accepting trade-ins. This old established policy of taking trade-ins helped to build the automobile industry, and the reason for not accepting the trade-ins was perhaps that the dealers did not understand the advantages of doing so. There is also reason to believe many dealers were virtually "stealing" used cars traded in as a mandatory requirement to obtaining a new one. Perhaps some dealers wished entirely to avoid any claim that they were dealing in such a manner. A survey conducted by the Curtis Publishing Company in 1949 showed that rural families buy more used cars than families of urban residence. The survey also revealed that education, age and the size of the city where a person lived all created differences in the purchasing of used cars. The study of the age of cars in use during the post-war period revealed that the cars in use during this period were older than those of any period prior to 1946. It was also seen that there were no middle-aged cars, because World War II stopped the production in 1942. The average car in 1950 was 7.8 years old compared with the pre-war average of 5.5 years.

In concluding, it might be said that the post-war period has seen two major factors, production and distribution, expand to meet the increased need. The system in its external appearance still remains about the same, but some of the underlying concepts have changed for the betterment, it would appear, of the industry. It may be presumed that a narrowing of producers is in prospect and that only the strongest will survive. However, as long as such individual firms as Ford and Chrysler remain in the field, there appears to be no threat of monopoly. Indeed, there is nothing naturally monopolistic about the industry so far as the writer has been able to observe.

APPENDIX

1951 United States Vehicle Fees and Taxes

STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
ALABAMA	Under 2,000 lbs., \$5.50; 2,000-2,500 lbs., \$9.50; 2,000-3,250 lbs., \$13.50; Over 3,250 lbs., \$18.50. Monthly reductions for first registration	\$1.10 Duplicate 25¢. Expires every odd yr.	Plates \$1. Card, no fee	Sept. 30	Nov. 15	25¢ Plates stay on car when sold	Not required	Not required but cities may have local law	6¢*	½ of 1% on new cars only, based on full price of car	½ of 1% on new cars bought out of state	Personal property taxes at varied rates
ARIZONA	Before July --\$3.50; After July 1--\$2	Owner's, none; Others 50¢; Duplicate 50¢. License good until revoked	Plates \$1. Card 50¢	Dec. 31	Jan. 31	50¢ Plates stay on car when sold	Original \$1; Transfer \$1; Dupl. 50¢	Not required	5¢*	2% of value on new & used cars, based on full price of car	None	"In lieu" tax, rate fixed annually
ARKANSAS	6½¢ per hp. + wt. tax. Under 3,500 lbs., 27½¢ per 100 lbs.; 3,501-4,500 lbs., 30¢; Over 4,500 lbs., 32½¢. Reduced ½ July 1, & Oct. 1	\$1. Duplicate \$1. Expires each year Dec. 31	Plate \$1. Card, \$1	Dec. 31	Jan. 31	50¢ Plate stays on car when sold	Required	Not required	6½¢*	2% on new & used cars, based on full price of car	None	Personal property tax
CALIFORNIA	Flat rate \$6 + license fee of \$2 per \$100 of market value. Add'l fee of \$3 if previously registered out of state. Monthly reductions for first registration	\$2.00 Dupl. 50¢ Good for 4 years from date of issue	Plates \$1. Card, \$1	Dec. 31	None technically but can be applied for until Feb. 4th	\$1 Plates stay on car when sold	Original no fee; Transfer \$1; Duplicate \$1	Not required	4½¢*	3% on new & used cars, based on full price of car	3% on new & used cars bought out of state. Based on full price of car	None

*State gasoline tax increase proposal expected to be introduced during 1951 legislative session.

STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
COLORADO	Under 2,600 lbs., \$5; 15¢ per 100 lbs., from 2,600-4,500 lbs.; 60¢ per 100 lbs., above 4,500 lbs. Reduced $\frac{1}{2}$ May 1, $\frac{3}{4}$ Oct. 1	\$1. Duplicate \$1. Expires every 3rd yr. on licensee's birthday	Plates \$1. Card, no fee	Dec. 31	Jan. 31	\$1. Plates remain with owner when car is sold	Original \$1; Transfer \$1; Dupl. \$1	Required at time plates are put on, & July 1. Fee, 50¢ per inspection	6¢*	2% on new and used cars, based on balance after credit for trade-in	2% on new and used cars bought out of state. Based on full price of car	Specific ownership tax collected at time license issued at varying rates
CONNECTICUT	To 3,500 lbs., \$7; 3,501-4,500 lbs., \$9; Over 4,500 lbs., \$11. One-half reduction Oct. 1	\$3 plus \$2 for examination; each succeeding year \$3. Duplicate, 50¢. Expires April 30, each yr.	Plates \$5. Markers \$1. Card 50¢	Feb. 28	None	\$1. Plates stay with owner when car is sold	Not required	\$1 fee when car enters state. Voluntary inspection at authorized garages. "Spot inspection" by uniformed inspectors	4¢*	2% on 1st registration of new or used car	2% tax	None
DELAWARE	To 4,000 lbs., \$8; Over 4,000 lbs., \$12. Six month period, $\frac{1}{2}$ of fee + \$1. Three mo. period, $\frac{1}{4}$ of fee + \$1	\$1. Duplicate, \$1. Permanent license \$5 if safe record for 3 years in Del.	Plate \$1.50. Card, 50¢	Mar. 31 or June 30, or Sept. 30, or Dec. 31	None	None. Plate remains on car upon transfer of title	Original & transfer \$1 without incumbrance, \$1.50 with incumbrance; Dupl. 50¢	Required annually at state inspection stations; No fee	5¢	None	None	None
DISTRICT OF COLUMBIA	To 3,500 lbs., \$5; 3,501-4,500 lbs., \$8; Over 4,500 lbs., \$12. $\frac{1}{2}$ reduction after Sept. 30. Reduced $\frac{1}{2}$ Sept. 30	\$3. Duplicate, 50¢. Expires 3 years after issued date	Plates \$1. Card, 50¢	Mar. 31	None	\$1. Plates remain with owner when car is sold	Original & transfer \$1 each if title clear. \$2 with incumbrance; Dupl. \$1	Required annually at official station. Fee \$1	4¢*	None	2% excise tax on the fair market value charged when original title issued	Personal property tax of \$2 per \$100 valuation

*State gasoline tax increase proposal expected to be introduced during 1951 legislative session.

STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLI-CATES	EXPIRA-TION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
FLORIDA	To 2,000 lbs., \$5; 2,000-2,500 lbs., \$10; 2,500-3,500 lbs., \$15; 3,500-4,500 lbs., \$20; Over 4,500 lbs., \$25. Reduced $\frac{1}{2}$ if acquired after June 30; $\frac{2}{3}$ Sept. 30; \$5 minimum	\$1. Duplicate, 25¢. Expires each yr. Oct. 1	Plate \$1 + 25¢ serv. fee. Card, no fee	Dec. 31	Jan. 15	No fee. Plate remains with car when sold	Original \$1; Transfer \$1; Dupl. 50¢ + 25¢ service charge if handled through local tag bureau	Not required	7¢*	None	None	None
GEORGIA	To 2,500 lbs., \$1.50; Over 2,500 lbs., \$1.50 + \$1 for each add'l 500 lbs. No periodic reductions	\$1. Duplicate, 50¢. Expires June 30, each yr. Family license, 50¢ for spouse, 25¢ each minor. Five yr. license \$5.	Plate \$1. Card, 50¢	Dec. 31	Apr. 1	50¢. Plate remains with car upon title transfer	Not required	Not required	7¢	None	None	Personal property taxes at varied rates
IDAHO	Flat rate, \$5. No periodic reductions	\$1. Duplicate, 50¢. Expires on licensee's birthday every 2 years	Plate \$2. Card, 50¢	Mar. 31	None	None. Plates stay on car upon transfer of title	Original 50¢; Transfer 50¢; Dupl. 50¢. If previously licensed in another state, \$1	Car bought out of state must have prompt motor inspection	6¢	None	None	None
ILLINOIS	To 25 hp., \$6.50; 26-35 hp., \$10.50; 36-50 hp., \$17; Over 50 hp., \$22. $\frac{1}{2}$ year fee if car bought after July 1	\$1. Duplicate, \$1. Expires on licensee's birthday every 3 years	Plates \$1 each. Card, 50¢	Dec. 31	None, but extension granted	\$1 if in same hp. classification. Plates remain with owner when car is sold	Original 50¢; Transfer 50¢; Dupl. 50¢	Cities over 40,000 population may provide compulsory inspection	3¢*	2% on new & used cars sold by dealers in state, based on full price	None	Personal property tax levied

*State gasoline tax increase proposal expected to be introduced during 1951 legislative session.

STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLI-CATES	EXPIRA-TION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
INDIANA	Less than 25 hp.: To 2,500 lbs., \$7; To 3,000 lbs., \$8; To 3,500 lbs., \$9; Over 3,500 lbs., \$10. Over 25 hp.: To 2,500 lbs., \$10; To 3,500 lbs., \$11; Over 3,500 lbs., \$12. Reduced $\frac{1}{2}$ Aug. 1	\$1.25. Dupl., \$1.25. Expires on last day of licen-see's birthday month	Plate \$1. Card, no fee	Feb. 28	None	\$1 if in same classification	Original \$1; Transfer \$1; Dupl. \$1	Not required	4¢*	None	None	Personal property tax levied
IOWA	40¢ per 100 lbs., plus add'l tax: First 5 yrs., 1% of list price; 6th yr., $\frac{2}{3}$ of 1% of list; 7th & 8th yrs., $\frac{1}{2}$ of 1% of list; Over 8 yrs., 1/10 of 1% of list. Monthly reductions	50¢. Duplicate, 25¢. Expires on licen-see's birthday every 2 years	Plates 50¢. Card, 50¢	Dec. 31	Jan. 31	50¢. Plates stay on car when sold	Not required	Cities & towns may provide for compulsory inspection	4¢*	2% on new and used cars, based on full price of car	2% on new and used cars un-less 2% tax was paid in state purchased. Based on full price of car	None
KANSAS	\$6.50 + 35¢ of gross wt. in excess of 2,050 lbs. Quarterly reductions if car acquired after start of registration yr.	\$1. Duplicate, 50¢. Expires on July 1 of odd years	Plate \$1. Card, 25¢	Dec. 31	50¢ per month penalty after Feb. 15	25¢. Plates remain with owner when car is sold	Original 50¢; Dupl., 50¢	Not required	5¢**	2% on new and used cars, based on balance after credit for trade-in	2% on new and used cars bought out of state. Based on full price of car	Personal property taxes levied on basis of local chattel rates

*State gasoline tax increase proposal expected to be introduced during 1951 legislative session.

**Possible extension of 1¢ temporary gasoline tax which expires June 30, 1951.

STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
KENTUCKY	\$4.50 + 50¢ clerical fee. Monthly reduction on new cars and cars brought in from other states	\$1. Duplicate, 25¢. Expires July 31, each yr.	Plate 50¢ + 50¢ clerk fee. Card, 50¢	Dec. 31	Mar. 1	\$1.50. Plate remains with car when sold	Not required. Ownership transferred by bill of sale in triplicate	Not required	7¢	---	3% on new and used cars. Exemption form available for non-residents previously registered out of state	State, county and city personal property taxes levied
LOUISIANA	Flat rate, \$3. No periodic reductions	\$1. Except in cities over 300,000 pop., \$2	Plates \$1. Card, \$1.	Dec. 31	Feb. 6	\$1. Plates remain on car when sold	Original \$1	Not required	9¢	2% on new and used cars	None	None
MAINE	To 17 hp., \$10; 18-24 hp., \$12; 25-30 hp., \$14; Over 30 hp., \$16. Reduced ½ Sept. 1	\$2. Duplicate, 25¢. Original driving test fee, \$1. Expires each yr., Dec. 31	Plate 75¢. Card, 25¢	Dec. 31	Feb. 28	\$2 + any difference in registration fee	Not required	Required twice a year, April & Oct., fee, 50¢ each	6¢*	---	None	Excise taxes. Minimum \$5, maximum after 7th year, \$10
MARYLAND	To 3,700 lbs., \$15; Over 3,700 lbs., \$23. Reduced ½ Oct. 1	\$3.50. Dupl. 50¢ Good until revoked	Plate \$1 each. Card, 50¢	Mar. 31	None	\$1. Plates remain with owner	Original \$1 + 2% excise tax of fair market value. Transfer \$1; Dupl. 50¢	Not required	5¢*	2%	None	None
MASSACHUSETTS	To 30 hp., \$3; 30-40 hp., \$4.50; 40-50 hp., \$6; 50 hp., & over \$7.50. Reduced ½ Oct. 1	Original \$6; Renewal \$4; Dupl. \$1	Plate \$1. Card, \$1	Dec. 31	None	\$1. Plates remain with owner when sold	Not required	Required twice a year, April & Oct., fee, 50¢ each	3¢*	---	None	Excise tax based on car value

*State gasoline tax increase proposal expected to be introduced during 1951 legislative session.

STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
MICHIGAN	35¢ per 100 lbs. Reduced ½ Sept. 1	\$1.25. Dupl. \$1. Good for 3 years from issue date	Plate \$1. Card, no fee	Feb. 28	None	\$1. Plate remains with car when sold	Original \$1; Dupl. \$1; Transfer \$1	Not required	3¢*	3% on new and used cars, based on full price	3% on cars bought out of state, based on full price	None
MINNESOTA	Rates graduated from \$15.20 for under 2,000 lbs., to \$75 for over 5,000 lbs. Monthly reductions for first time registration	\$1. Duplicate, 35¢. Expires on licensee's birthday every 4 years	Plate \$2. Card, 25¢	Dec. 31	None	No fee. Plates follow car upon transfer of title	Not required	Cities may provide for compulsory inspection	5¢*	None	None	None
MISSISSIPPI	30¢ per 100 lbs., gross wt., + 10¢ per hp., + \$1 tag fee. Prorated monthly reduction but none for tag fee	\$2. Expires 2 years from issue date	Plate \$2.50. Card, no fee	Oct. 31	None	No fee. Plate remains on car when car is sold	Not required	At least once a year at official station. Fee, 50¢	7¢	2% on new cars based on full price	2% on new and used cars bought out of state, unless collected in other state	Personal property tax rates fixed annually
MISSOURI	Less than 12 hp., \$5; 12-23 hp., \$8.50; 24-35 hp., \$11; 36-47 hp., \$20; 48-59 hp., \$25; 60-71 hp., \$31.50; Over 71 hp., \$37.50. No periodic reductions	25¢. Expires on licensee's birthday every 2 years	Plate \$1. Card, no fee	Monthly expiration system	None	\$2. Plate remains with owner when car is sold	Original \$1; Dupl., \$1	Not required	2¢*	2% on new and used cars, based on full price	2% on cars bought in other states unless registered there for over 90 days	Personal property tax

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STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
MONTANA	To 2,850 lbs., \$5; Over 2,850 lbs., \$10	\$1.50 Expires Dec. 31, annually	Plate \$1. Card, 50¢	Dec. 31	Feb. 15	\$1. Plate remains with car when sold	Original \$1; Transfer \$1; Dupl., 50¢	Cities may provide for compulsory inspection	6¢*	None	\$8 per quarter on new cars brought into state on which no property tax has been paid	Personal property tax rate varies in local taxing divisions
NEBRASKA	To 2,600 lbs., \$6; 2,600 lbs., & over \$8. Reduced ½ after July 1	\$2. Renewal \$2. Expires Sept. 1 every odd yr. Fee \$1 after 1st year has expired	Plate \$1. Card, \$1	Dec. 31	Feb. 15	\$1. Plates remain with owner when car is sold	Original \$1; Transfer \$1; Dupl., \$2	Not required	5¢	None	None	Personal property taxes levied
NEVADA	Flat rate, \$5. No periodic reductions	\$1. Expires June 30, every odd year	Plate \$1. Card, 50¢	Dec. 31	Feb. 1 Penalty \$3	\$1. Plate follows car when title is transferred	Original, no fee; Transfer \$1; Dupl., 50¢	Not required	5½¢*	None	None	Personal property tax at varying rates by counties
NEW HAMPSHIRE	Minimum \$10. 2,801-2,900 lbs., \$10.15; 35¢ per 100 lbs., to 4,000; 45¢ per 100 lbs., above 4,000. Periodic reductions. ½ Dec. 1	Original \$3. Renewal \$2. Dupl., 50¢. Expires each yr. on licensee's birthday	Plate \$1. Card, 50¢	Mar. 31	None	\$2 plus any difference. Plates remain with owner when car is sold	Not required	Twice a year, May and Oct. Fee 50¢ per inspection	5¢	None	None	None

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STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
NEW JERSEY	10 to 29 hp., 40¢ per hp.; 30 hp., or over, 50¢ per hp. $\frac{1}{2}$ reduction Oct. 1	\$3. Duplicate, \$1. Expires each year Mar. 31	Plate \$1. Card, \$1	Mar. 31	None	\$1. Plates remain with owner when car is sold	Must file evidence of purchase in 5 days. Fees, \$1.50 to \$2.25. Over 5 days penalty of \$5. Dupl. \$1.	Twice each registration year; Notice by mail; 50¢ each inspection	3¢*	None	None	None
NEW MEXICO	Not registered before, in any state, at least 1 yr.; \$18 + \$2 per 100 lbs., over 2,400. Previously registered in any state at least 1 yr., \$15 + \$1.50 per 100 lbs., over 2,400. Lesser fees based on time & wt. Quarterly reductions	\$1. Duplicate, 50¢. Expires each yr., Dec. 31	Plate \$1. Card, 50¢	Dec. 31	Mar. 2	\$1. Plates remain on car when sold	Original, 50¢ if no lien; No cost if lien filed. Transfer \$1; Dupl., \$1	Three times yearly. Final dates, Jan. 1, May 1, Sept. 1. Fee, 50¢	7¢	1% on new and used cars, based on balance after credit for trade-in	1% on cars bought out of state, based on balance after credit for trade-in	None
NEW YORK	To 3,500 lbs., 50¢ per 100 lbs.; 75¢ each add'l 100 lbs. $\frac{1}{2}$ reduction July 1. $\frac{1}{4}$ Oct 1	Original \$2; Renewal \$1.50; Dupl. \$1. Expires Sept. 30, every 3 years	Plate \$1. Card, \$1	Dec. 31	Jan. 31	\$1 if no wt. difference. Plates remain with owner when car is sold	Not required	Not required	4¢*	None	None	None
NORTH CAROLINA	To 3,500 lbs., \$10; 3,501-4,500 lbs., \$12; Over 4,500 lbs., \$15. Quarterly reductions	\$2. Duplicate, 50¢. Expires every 4 years on licen-see's birthday	Plate \$1. Card, no fee	Dec. 31	Jan. 31	\$1. Plates remain with car when sold	Original 50¢; Transfer 50¢; Dupl., 50¢	Required of used cars from out of state before license issued	7¢*	3% on new and used cars, \$15 maximum. Based on full price of car	3% on new cars bought out of state, \$15 maximum. Based on full price of car	None

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STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
NORTH DAKOTA	To 2,000 lbs., \$15.50; 2,001-2,500 lbs., \$17.50; 2,501-2,800 lbs., \$20.50; 2,801-3,200 lbs., \$25; 3,201-3,600 lbs., \$31.25; 3,601-4,000 lbs., \$34.25; 4,001-4,500 lbs., \$46.75; 4,501-5,000 lbs., \$62.50; 5,001-6,000 lbs., \$87.50. Fee reduced 5% for each year after year of original purchase. $\frac{1}{2}$ reduction July 1	\$2. Duplicate, 25¢. Expires June 30, each odd-numbered year	Plate \$1. Card, 50¢	Dec. 31	None	Plate remains with car when sold	Original \$1; Transfer \$1; Dupl., 50¢	Not required	5¢	2% on new and used cars, based on balance after deduction for trade-in	2% on new and used cars bought from dealers out of state. Based on full price of car	None
OHIO	Flat fee, \$10. Quarterly reductions granted	75¢. Duplicate, 25¢. Plus issuance fee of 25¢	Plate \$1. Card, \$1	Mar. 31	None	\$1. Plates remain with owner when car is sold	Original 75¢; Transfer 75¢; Dupl., 75¢	Not required	4¢*	3% on new and used cars, based on full price of car	3% on new and used cars bought out of state. Based on full price	None
OKLAHOMA	\$19.50 for 1st \$649.99 of mfrs., factory delivered price; Over \$649.99, \$1.50 per \$100, or major fraction. Each yr. thereafter, 90% of previous yrs. fee. Min. \$5.50. Quarterly reductions	\$3. Duplicate, \$1. Expires 2nd yr., after issuance date, during month of birth	Plate \$1.50. Card, 50¢	Dec. 31	After Jan. 31 10¢ per day penalty	No fee. Plate remains with car when sold	Original, \$1.25; Transfer, \$1.25; Dupl., \$1.25; 10¢ per day penalty after 10 days	Not required	6½¢	2% excise tax on new & used cars, based on factory delivered price	Excise tax also applies to new & used cars bought out of state. Based on full price of car	None

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STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLI-CATES	EXPIRA-TION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
OREGON	Flat fee, \$10. Registrations expire in arbitrary blocks of numbers at end of each month	\$1.25. Dupl., 25¢. Expires every 2 years on licensee's birthday	Plate \$1. Card, 50¢	Expire on monthly schedule	None officially	\$1. Plates remain with car upon title transfer	Original \$1; Transfer \$1; Dupl., 50¢	Not required	6¢*	None	None	None
PENNSYLVANIA	Flat fee, \$10. ½ reduction Oct. 1; ¼ on Jan. 1	Original \$2; Renewal \$1; Dupl., 50¢	Plate \$1. Card, 50¢	Mar. 31	None	\$2. Plates remain with owner when car is sold	Original \$2; Transfer \$2; Dupl., \$1. Duplicate to record lien, \$2	Twice a year. 3 month inspection periods begin May 1 & Nov. 1. Fee usually \$1	5¢*	None	None	None
RHODE ISLAND	To 2,500 lbs., \$8; 2,501-3,000 lbs., \$9; 3,001-3,500 lbs., \$10; 3,501-4,000 lbs., \$12; 4,001-4,500 lbs., \$14; 4,501-5,000 lbs., \$16; 5,001-5,500 lbs., \$18. Gross wt., computed on mfr's., light wt., + 150 lbs., per passenger capacity. Quarterly reductions	\$2. Duplicate, \$1. Expires Sept. 30 following date of issue	Plate \$1. Card, \$1	Mar. 31	None	\$1. Plates remain with owner when car is sold	Not required	No regular inspection	4¢	1% tax	None	None
SOUTH CAROLINA	To 2,000 lbs., \$2.15; Each add'l 500 lbs., \$1. No periodic reductions	50¢. Duplicate, 50¢. Good for 4 yrs.	Plate \$1.15. Card, 25¢	Oct. 31	Indefinite extension of enforcement	50¢ if made in 15 days, \$2.50 thereafter. Plates stay on car	Not required	Not required	7¢	None	None	Personal property tax at varying rates

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STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
SOUTH DAKOTA	To 2,000 lbs., \$13; 2,001-3,000 lbs., \$17; 3,001-3,500 lbs., \$20; 3,501-4,000 lbs., \$25; 4,001-4,250 lbs., \$30; 4,251-4,500 lbs., \$35; 4,501-4,750 lbs., \$40; 4,751-5,000 lbs., \$45; 5,001-5,500 lbs., \$55. $\frac{1}{2}$ reduction if acquired after July 1; $\frac{3}{4}$ after Oct. 1	Not required	Plate \$1. Card, no fee	Mar. 31	None	No fee. Plates remain with car when sold	Original, no fee; Transfer, 50¢; Dupl., \$1	Not required	4¢*	None	"Registry" tax of 3% on 1st registration in state	None
TENNESSEE	To 3,500 lbs., \$7.50; Over 3,500 lbs., \$10. $\frac{3}{5}$ reduction Jan. 1	\$1. Duplicate, 25¢. Expires July 1, each odd-numbered year	Plate 50¢. Card, 50¢	Apr. 1	None	\$1 plus 50¢ clerk fee. Plates remain with car when sold	Not required. Bill of sale must be presented upon transfer of ownership	Permissive law. Certain cities have inspections	7¢	2% tax	None	None
TEXAS	Based on per 100 lbs. 1,000-2,000 lbs., 28¢; 2,001-3,500 lbs., 36¢; 3,501-4,500 lbs., 48¢; Over 4,500 lbs., 50¢. Monthly reductions	50¢. Duplicate, 50¢. Expires 2 years from issuance	Plate \$1. Rec'pt, 25¢	Mar. 31	Apr. 1	Transfer of registration receipt. Plates remain with car when sold	Original 50¢; Transfer 50¢; Dupl. 25¢	Certain cities allowed compulsory inspection. State Police may inspect any car upon reasonable cause	4¢*	1 1/10% on new & used cars, based on full price of car	---	Personal property taxes levied with varying rates

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STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
UTAH	Flat fee, \$5. Reduced $\frac{1}{2}$ July 1. Credit toward registration of another car upon return of expired plates	Original \$1; Renewal 50¢; Duplicate 25¢. Renewal every 3 yrs. if issued after Jan. 1, 1936. If issued before 1936, good until revoked	Plate \$1. Card, \$1	Dec. 31	Feb. 28	Plates returned to tax commission when car is sold	Original \$1; Transfer \$1; Dupl., \$1	Once or twice a year; Fee 50¢ each. Mechanical inspection required within 20 days of title transfer	4¢*	2% on new and used cars, based on full price of car	2% on cars bought out of state, based on full price of car	County personal property taxes levied
VERMONT	Flat rate, \$22. Models earlier than 1937 & 2,500 lbs., or less, \$14. Reduced $\frac{1}{2}$ on Oct. 1; $\frac{1}{4}$ on Jan. 1	\$2.50 to June 1, then prorated @20¢ per month to birthday. After June 1 \$2.50. Dupl. 50¢. Expires on eve of birthday	Plate \$1. Card, 50¢	Mar. 31	None	\$2. Plates remain with owner when car is sold if tr., made within 5 days	Not required	Twice a year, May & Oct. Fee, \$1 each	5¢*	None	None	None
VIRGINIA	30¢ per 100 lbs. Minimum \$6. Reduced $\frac{1}{2}$ Oct. 1, $\frac{2}{3}$ Jan. 16	50¢. Duplicate, 25¢. Expires 3 yrs. from birthday month in which application for renewal is made	Plate \$1. Card, no fee	Mar. 31	Apr. 15	\$1 plus any difference in registration fee. Plates must remain with owner or be returned	Original \$1; Transfer \$1; Dupl., \$2	Twice a year, May 1 to June 15, & Oct. 1 to Nov. 15	6¢	None	None	None

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STATE	LICENSE FEES		REGISTRATION				CERTIFICATE OF TITLE	VEHICLE INSPECTION	STATE TAXES			
	AUTOMOBILE	OPERATOR	DUPLICATES	EXPIRATION	GRACE PERIOD	TRANSFER FEE			GAS	SALES	"USE"	OTHER
WASHINGTON	Flat fee, \$5.50. No periodic reductions	\$3. Duplicate, 50¢. Expires every 2 years on licensee's birthday	Single plate, \$1; Two, \$5.50. Card, 50¢	Dec. 31	None. Purchase penalty after Jan. 10	\$1.50 for fee, plates & title	Original 50¢; Transfer of title and plates \$1.50; Dupl., 50¢	Once a year. No fee, and limited enforcement	6½¢	3% on new and used cars, based on full price of car	3% on new and used cars, bought out of state. Based on full price of car	Annual excise tax 1.5% of fair market value. Minimum \$1
WEST VIRGINIA	First 2,000 lbs., \$11 + 60¢ for each add'l 100 lbs. Quarterly reductions	\$1. Duplicate, \$1. After expiration date \$2. Expires 4 years from date of issuance	Plate \$1. Card, \$1	June 30	None officially	\$1. Plate remains with owner when car is sold	Original \$1 + 2% title privilege tax. transfer \$1; Duplicate \$1	No regular inspection, but State Police hold tests, unannounced on highways	5¢*	None	None	Personal property tax, fees determined by local taxing body,
WISCONSIN	Flat rate, \$16 except for cars previously registered in Wis., at fee lower than \$16	Original \$1. Renewal 25¢ if filed within 30 days after notice; late renewals \$1. Dupl. 25¢	Plate \$1. Card, 25¢	Use monthly expiration system	None	\$1. Plates remain with owner when car is sold	Original, no fee. Transfer \$1. Duplicate 25¢	Not required	4¢*	None	None	None
WYOMING	Flat fee, \$5. After July 15, \$2.50; After Dec. 1, \$1	---	Plate \$2. Card, \$1	Dec. 31	Feb. 1	No fee. Plates remain with owner when car is sold	Original \$1; Transfer \$1; Dupl., 50¢	Not required	4¢*	2% on new and used cars, based on full price of car	2% on new and used cars, bought out of state. Based on full price of car	County tax, 3% of 60% of factory cost during 1st year. 10% yearly reduction for 5 yrs.

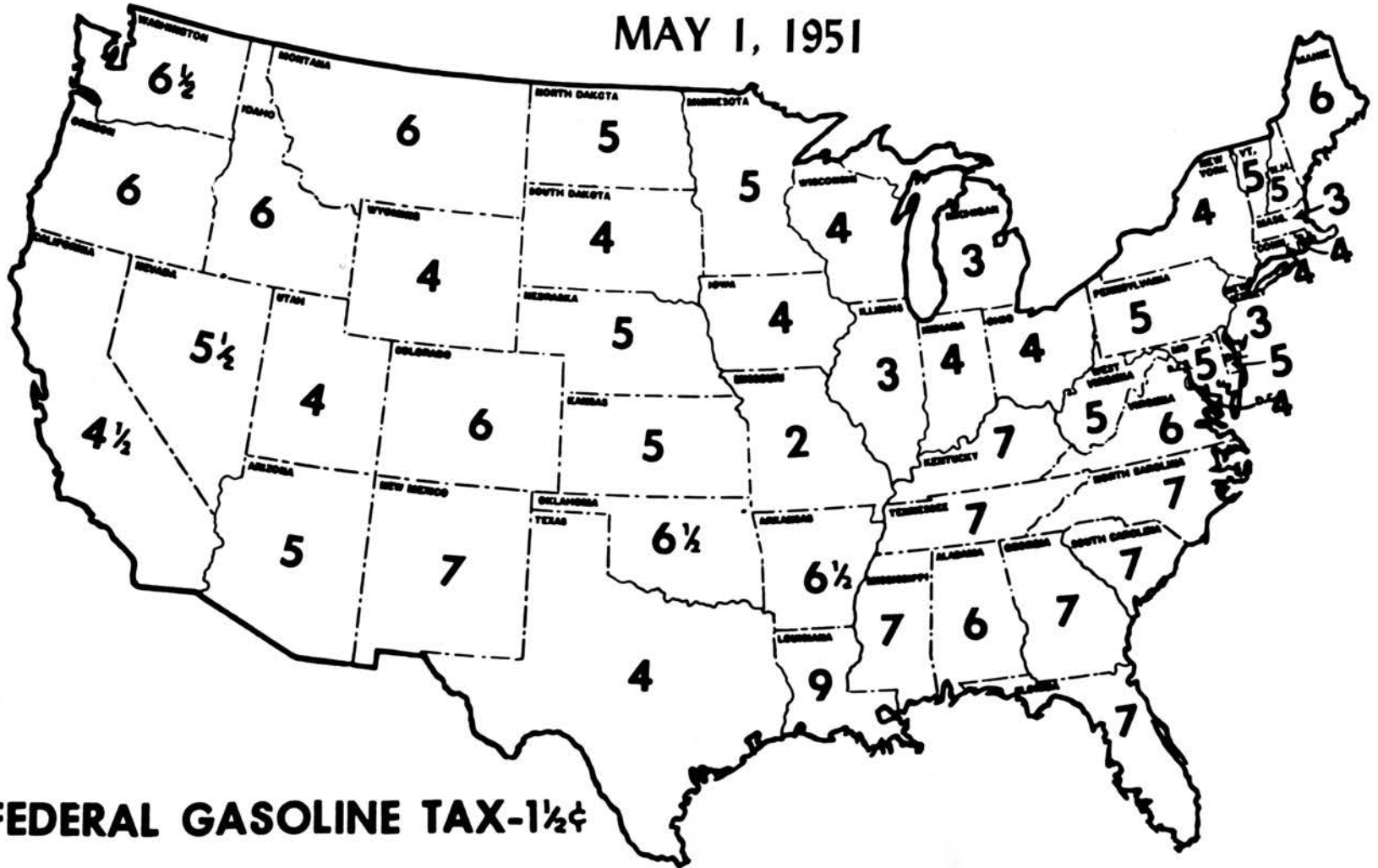
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Courtesy of
American Petroleum Industries Committee

STATE GASOLINE TAX RATES

(IN CENTS PER GALLON)

MAY 1, 1951



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