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# FORECAST OF MOTOR VEHICLE REGISTRATION, TRAVEL AND REVENUE IN MICHIGAN TO YEAR 1985

MICHIGAN STATE HIGHWAY DEPARTMENT Charles M. Ziegler, State Highway Commissioner

MICHIGAN
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State Highway Commissioner

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FORECAST OF MOTOR VEHICLE REGISTRATION,

TRAVEL AND REVENUE IN MICHIGAN

To Year 1985

Prepared by Planning and Traffic Division

With the cooperation of the United States Department of Commerce Bureau of Public Roads

May, 1956

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# MICHIGAN STATE HIGHWAY DEPARTMENT Charles M. Ziegler State Highway Commissioner

#### PLANNING AND TRAFFIC DIVISION

### FORECAST OF MOTOR VEHICLE REGISTRATION, TRAVEL AND REVENUE IN MICHIGAN TO THE YEAR 1985

This report presents a forecast of the number of motor vehicles, their travel, and the resulting direct tax receipts at 1954 rates and at the rates established in June, 1955. It is in the following parts:

#### CONCLUSIONS

#### SUMMARY OF COMPUTATIONS

#### TABLES AND CHARTS

Estimates of motor vehicle travel are needed for highway planning and design purposes. Road and streets are built to serve for many years. Their location and design should fit the anticipated future traffic needs.

Estimates of income available for highway purposes are essential to proper administration and programming of highway development.

The forecasts made in this study are based mainly on forecasts of United States and Michigan population by the U.S. Department of Commerce, Bureau of Census, supplemented with trend estimates of motor vehicle registration per thousand population, miles of travel per motor vehicle, and weight tax per motor vehicle, based on Michigan data. The estimates are prepared by analysis of available data and will require revision from time to time as major deviations from the forecasts become apparent.

The analysis of the data for this report was started in January of 1954.

The original forecasts were made to the year 1975. In August of 1954 the Nation-wide Finance Study required traffic data to the year 1985.

All the data were therefore extended to the year 1985. Actual data for the year 1954 are shown but the data for that year were not used in the analysis.

Population forecasts were all in thousands, the totals for each year for the other forecasts are not rounded because the relationships between the various forecasts would be destroyed, but such accuracy is not intended.

This report is not intended to be used as a basis for predicting either United States population or Michigan population. Population forecasts by the U.S. Department of Commerce, Bureau of the Census, are used as the most reliable source of basic data on which to base forecasts of motor vehicle registration, travel and revenue.

#### CONCLUSIONS

Michigan's motor vehicle registration which increased at a rate of nearly 110,000 a year in the period 1920-1929 and then dropped off to an average increase of only slightly over 25,000 a year for the period from 1929 to 1941, has been increasing at an average of over 125,000 per year for the past 5 years, (1949 to 1954). This forecast estimates that the motor vehicle registration will increase at the rate of about 85,000 per year for the next 30 years, (1955 to 1985).

This rapid growth in registration has resulted in a rapid increase in travel on Michigan highways. In the period from 1920 to 1929 motor vehicle travel in Michigan increased at a rate of 834 millions of vehicle miles per year. In the period from 1929 to 1941 travel increased at only slightly more than 500 million vehicle miles per year, however, in the past five years the motor vehicle travel has increased at the rate of 1.38 billion vehicle miles per year. This forecast estimates that over the next 30 years (1955 to 1985) vehicle miles of travel will increase at the rate of approximately 1 billion vehicle miles per year.

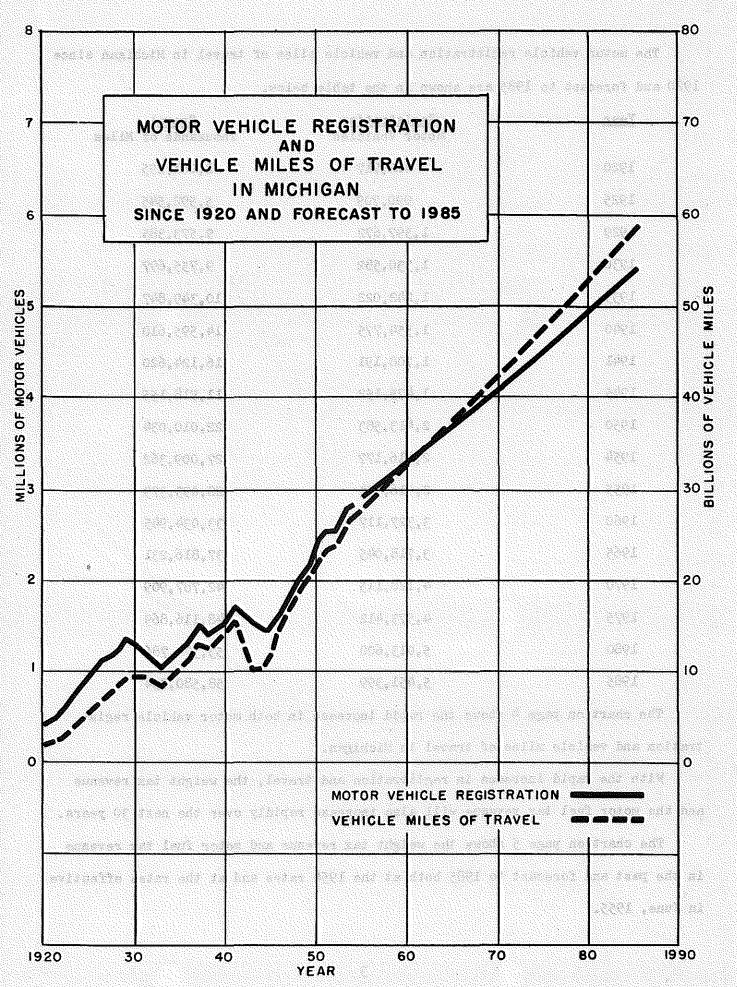
The motor vehicle registration and vehicle miles of travel in Michigan since 1920 and forecast to 1985 are shown in the table below.

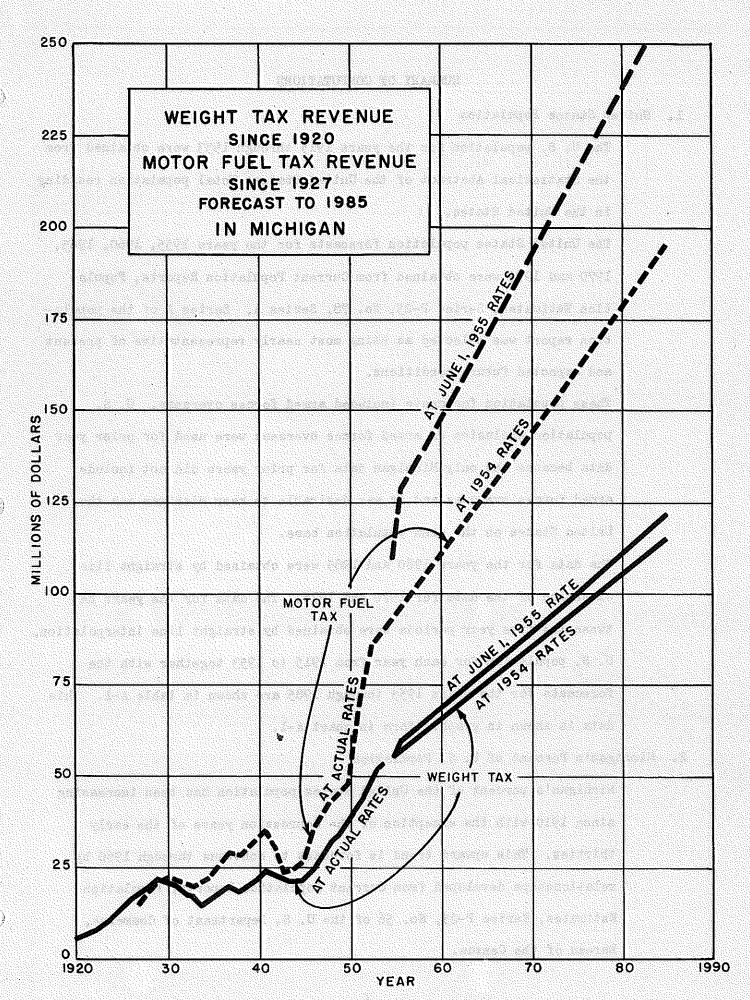
<u>Year</u>	Registration Motor Vehicles	<u>Travel</u> Thousands of Miles		
1920	412,717	2,061,295		
1925	990,709	5,592,545		
1929	1,397,672	9,573,385		
1930	1,330,582	9,755,697		
1935	1,242,022	10,349,847		
1940	1,554,775	14,595,610		
1941	1,708,191	16,124,620		
1945	1,475,152	11,918,155		
1950	2,413,583	22,010,034		
1954	2,816,177	27,009,362		
1955	2,916,974	28,093,373		
1960	3,327,117	33,034,945		
1965	3,718,045	37,816,231		
1970	4,128,115	42,787,909		
1975	4,573,412	48,116,869		
1980	5,013,600	53,374,786		
1985	5,451,399	58,580,734		

The chart on page 4 shows the rapid increase in both motor vehicle registration and vehicle miles of travel in Michigan.

With the rapid increase in registration and travel, the weight tax revenue and the motor fuel tax revenue will also increase rapidly over the next 30 years.

The chart on page 5 shows the weight tax revenue and motor fuel tax revenue in the past and forecast to 1985 both at the 1954 rates and at the rates effective in June, 1955.





#### SUMMARY OF COMPUTATIONS

#### 1. United States Population

The U.S. population for the years 1915 through 1953 were obtained from the Statistical Abstract of the United States; Total population residing in the United States.

The United States population forecasts for the years 1955, 1960, 1965, 1970 and 1975 were obtained from Current Population Reports, Population Estimates, Series P-25, No. 78, Series A. Series A of the population report was selected as being most nearly representative of present and expected future conditions.

These population forecasts included armed forces overseas. U. S. population exclusive of armed forces overseas were used for prior year data because the only Michigan data for prior years did not include armed forces overseas and it was desirable to keep Michigan and the United States on the same population base.

The data for the years 1980 and 1985 were obtained by straight line extension of the data for 1970 and 1975. The data for the years between the five year periods were obtained by straight line interpolation.

U. S. population for each year from 1915 to 1953 together with the forecasts for the years 1955 through 1985 are shown in table A-1. This data is shown in graphic form in chart A-1.

#### 2. Michigan's Percent of U. S. Population

Michigan's percent of the United States population has been increasing since 1910 with the exception of the depression years of the early thirties. This upward trend is forecast to continue through 1960 by relationships developed from Current Population Reports, Population Estimates, Series P-25, No. 56 of the U. S. Department of Commerce, Bureau of the Census.

The relationships from the above population estimates were used for the years 1955 and 1960.

Since the year 1935 this upward trend in Michigan's percent of the United States population has been increasing but at a diminishing rate of increase. To determine a reasonable estimate of the population of Michigan for the years 1965, 1970, 1975, 1980 and 1985 this upward trend in Michigan's percent of the U.S. population was continued with a gradual diminishing of the rate of increase. A later check on Michigan's population and Michigan's percent of the U.S. population became available after the basic data for this report had been assembled. The U. S. Department of Commerce, Bureau of the Census, released Current Population Reports, Population Estimates, Series P-25, No. 110 in February of 1955. This report contained 7 different estimates of Michigan population on slightly different bases for the years 1960 and 1965. Michigan's percent of the U.S. population developed therefrom, were slightly higher than the estimates which were used in this forecast for both the years 1960 and 1965. The data for the years between the five year periods were obtained by straight line interpolation. All figures were rounded at three decimal places.

Michigan's percent of the U.S. population for the years 1915 through 1953 together with the forecasts for the years 1955 through 1985 are shown in table A-2. These data are shown in graphic form in chart A-2.

#### 3. Michigan Population

Michigan population for the years 1915 through 1953 were obtained from the Statistical Abstract of the United States. The forecast of Michigan population for the years 1955 and 1960 were obtained from the Current Population Reports, Population Estimates, Series P-25, No. 56 of the U.S. Department of Commerce, Bureau of the Census. Forecasts of

Michigan population for all other years from 1955 to 1985 (except 1955 and 1960) were determined by multiplying U. S. population by Michigan's percent of the U. S. population. All resulting figures were rounded to the nearest thousand.

Michigan's population for the years 1915 through 1953 do not include armed forces overseas as available data did not contain this item. Forecast data for U. S. population were only available including armed forces overseas so Michigan's population for 1955 through 1985 also included armed forces overseas.

Michigan population for each year from 1915 to 1953 together with fore-casts for the years 1955 through 1985 are shown in table A-3. These data are shown in graphic form in chart A-3.

#### 4. Motor Vehicles per Thousand Population

Michigan's motor vehicle registrations as reported by the Secretary of State for the years 1915 through 1953 were divided by the Michigan population to obtain motor vehicles per thousand population.

A Gompertz growth curve of the form y=abcx was fitted to the motor vehicles per thousand population. The data for the war years were included in the original computation of the curve but the final curve was adjusted to give the war years very little weight and to fit the data for the years 1952 and 1953 as closely as possible.

For ease of computation the curve was used in logarithmic form as follows:

Log y= Log a f log b (cx)

The final curve of motor vehicle per thousand population was as follows:

 $\text{Log } y = 2.677385 - .947844 (.93511)^{x}$ 

where x is 0 for 1915, 1 for 1916, etc.

The motor vehicles per thousand population forecast for the years 1955 through 1985 were computed from this equation.

The term "motor vehicle" as used in this report is defined as follows:
All vehicles registered by the Secretary of State in the following classifications:

Passenger Cars
Commercial Vehicles
Farm Vehicles
Hearses and ambulances

Foreign or out-of-state registrations in these four classes are included, but all publicly owned vehicles are excluded. When referring to commercial vehicles; farm vehicles and hearses and ambulances are included.

Passenger cars per thousand population and commercial vehicles per thousand population for the years 1920 through 1953 were computed by dividing the registration of each of these types of vehicles by the Michigan population.

For the years 1955 through 1985 the passenger cars and commercial vehicles per thousand population were computed by dividing the forecast of passenger car, and commercial vehicle registration by the Michigan population. No mathematical curves were fitted to these data. Persons per privately owned vehicle registered in Michigan were obtained for motor vehicles, passenger cars and commercial vehicles for the years 1920 through 1985 by dividing the past and forecast of Michigan population by the Michigan registration of motor vehicles, passenger cars and commercial vehicles. As persons per privately owned vehicle registered in Michigan is only another way of expressing motor vehicles per thousand population, no mathematical curves were fitted to these data. Passenger cars, commercial vehicles and motor vehicles per thousand population are shown by years from 1920 to 1985 in table A-4. Persons per passenger car, commercial vehicle and motor vehicle registration in Michigan are shown in table A-4a. The above data are shown in graphic form in charts A-4 and A-4a.

#### 5. Motor Vehicle Registration

For the years 1915 through 1954, motor vehicle registrations were taken from the reports of the Secretary of State. (An adjustment was made for the years 1953 and 1954 to include only the half-year commercial vehicle registrations for the months of May through October. The Secretary of State includes both plates sold to these vehicles as registrations.)

The forecast of Michigan motor vehicle registration for the years 1955 through 1985 were computed by multiplying the Michigan population by the motor vehicles per thousand population.

The passenger car and commercial vehicle registration forecasts for the years 1955 through 1985 were made by keeping the present relationship between passenger cars and commercial vehicles constant. The relationship used was 87.6% passenger cars and 12.4% commercial vehicles. As all the forecast data for vehicle registrations were obtained by direct computation no mathematical curves were fitted to the data.

Motor vehicle registration from 1915 to the present time and forecast to 1985 are shown in table A-5. Comparable data for passenger cars and commercial vehicles are shown in table A-5a and A-5b. The above data are shown in graphic form in chart A-5.

#### 6. Miles of Travel per Motor Vehicle

Miles of travel per motor vehicle for the years 1920 through 1953 were computed by dividing the vehicle miles of travel by the motor vehicle registration. A Gompertz growth curve of the form

#### y = a b c<sup>x</sup>

was fitted to miles of travel per motor vehicle. The data for the war years were included in the original computation, but the final curve was adjusted to give the war years very little weight and to fit the data for the years 1952 and 1953 as closely as possible.

For ease of computation the curve was used in the logarithmic form.

The final curve of miles of travel per motor vehicle was as follows:

Log y = 4.0462813 - .3302035 (.9536)x

where x = 0 for 1920, 1 for 1921 etc.

The miles of travel per motor vehicle for the years 1955 through 1985 were computed from the above equation.

Miles of travel per motor vehicle from 1920 to the present time and fore-cast to 1985 are shown in table A-6. The above data in graphic form are shown in chart A-6.

#### 7. Vehicle Miles of Travel

Vehicle miles of travel in Michigan for the years 1920 through 1954 were computed by the use of relationships, established from the data collected in the 1936 Michigan Highway Planning Survey. No similar complete survey has been made since that time.

The forecast of Michigan vehicle miles of travel for the years 1955 through 1985 were computed by multiplying the motor vehicle registration by the miles of travel per motor vehicle. No mathematical curve was fitted to these data. Vehicle miles of travel from 1920 to the present time and forecast to 1985 are shown in table A-7 and the above data are shown in graphic form in chart A-7.

#### 8. Motor Fuel Tax Revenue

Motor fuel tax revenue for the years 1927 through 1954 are the net collections after refunds as reported by the Secretary of State. The forecast of this revenue for the years 1955 through 1985 was made in direct proportion to the vehicle miles of travel. The original computations were based on 1954 rates of motor fuel tax; after Act 87 of the Public Acts of 1955 became effective on June 1, 1955 an additional computation was made for the forecast of motor fuel tax revenue at the amended rates.

Motor fuel tax revenue from 1927 to the present time, and forecast to 1985 at the 1954 rates and at the June 1, 1955 rates are shown in table A-8. The same data are shown in graphic form in chart A-8.

#### 9. Motor Fuel Tax Revenue per Motor Vehicle

Motor fuel tax revenue per motor vehicle for the years 1927 to 1954 were computed by dividing the net motor fuel tax revenue as reported by the Secretary of State by the motor vehicle registration. For the years 1955 through 1985 the forecasts of motor fuel tax revenue were divided by the forecasts of motor vehicle registration. This forecast was made for the rates in effect in 1954 and for the new rates in effect after June 1, 1955. Motor fuel tax revenue per motor vehicle from 1927 to the present time, and forecast to 1985 at the 1954 rates and at the June 1, 1955 rates are shown in table A-9. The same data in graphic form are shown in chart A-9.

#### 10. Weight Tax Revenue per Motor Vehicle

For the years 1920 through 1954 the weight tax revenue per motor vehicle at actual rates was obtained by dividing the weight tax revenue by the motor vehicle registration. An estimate was made of the ratio of increase in weight tax per motor vehicle from the change in rates effective with the beginning of the registration year of 1952. The actual weight tax revenue for the years 1935 through 1953 was multiplied by this ratio of increase to obtain an estimate of weight tax revenue per motor vehicle at the 1954 rates. To project weight tax revenue per motor vehicle a Gompertz growth curve was fitted to this estimated data at 1954 rates. The war years were included in the original computation but the curve was adjusted to give the war years very little weight and to fit the data for the years 1952, and 1953 as closely as possible.

The final curve of weight tax revenue per motor vehicle in logarithmic form is as follows:

Log y = 1.3347925 - .1941913 (.94583)\* where x = 0 for 1935, 1 for 1936 etc.

The weight tax revenue per motor vehicle for the years 1955 through 1985 at the 1954 rates were computed from the above equation. After Act 87 of the Public Acts of 1955 became effective on June 1, 1955 an additional computation was made for the forecast of weight tax revenue per motor vehicle at the amended rates.

Weight tax revenue per motor vehicle from 1920 to the present at the actual rates and from 1935 to the present at the 1954 rates, and forecast to 1985 at the 1954 rates and at the June 1, 1955 rates are shown in table A-10. The same data are shown in graphic form in chart A-10.

#### 11. Weight Tax Revenue

Weight tax revenue for the years 1920 through 1954 are the collections for the registration year as reported by the Secretary of State. The forecast of Michigan weight tax revenue for the years 1955 through 1985 at the 1954 rates and at the rates effective June 1, 1955 were computed by multiplying the weight tax revenue per motor vehicle by the motor vehicle registration. No mathematical curves were fitted to these data. Weight tax revenue from 1920 to the present time, and forecast to 1985 at the 1954 rates and at the rates effective on June 1, 1955 are shown in table A-11 and the same data are shown in graphic form in chart A-11.

Table A-1 was a specimental and assume the second second

#### MID-YEAR ESTIMATES OF UNITED STATES POPULATION

	PAS	T		FORECAST		
		Percent of			Percent of	
Year	Thousands	1953	Year	Thousands	1953	
1915	100,549	63.49				
1916	101,966	64.38				
1917	103,266	65.20				
1918	103,203	65.16				
1919	104,512	65.99		Barrana Barrana	a analia (20)	
1920	106,466	67.22	1955	163,459	103.21	
1921	108,541	68.53	1956	165,989	104.81	
1922	110,055	69.49	1957	168,517	106.40	
1923	111,950	70.69	1958	171,045	108.00	
1924	114,113	72.05	1959	173,574	109.60	
1925	115,832	73.14	1960	176,103	111.19	
1926	117,399	74.13	1961	178,601	112.77	
1927	119,038	75.16	1962	181,099	114.35	
1928	120,501	76.09	1963	183,597	115.93	
1929	121,770	76.89	1964	186,095	117.50	
1930	123.077	77.71	1965	188,593	119.08	
1931	124,040	78.32	1966	191,454	120.89	
1932	124,840	78.83	1967	194,315	122.69	
1933	125,579	79.29	1968	197,177	124.50	
1934	126,374	79.79	1969	200,038	126.31	
1935	127,250	80.35	1970	202,899	128.11	
1936	128,053	80.85	1971	206,251	130.23	
1937	128,825	81.34	1972	209,603	<b>132.3</b> 5	
1938	129,825	81.97	1973	212,955	134.46	
1939	130,880	82,64	1974	216,307	136.58	
1940	131,954	83.32	1975	219,659	138.70	
1941	133,121	84.05	1976	223,011	140.81	
1942	133,920	84.56	1977	226,363	142.93	
1943	134,245	84.76	1978	229,715	145.04	
1944	132,885	83.91	1979	233,067	147.16	
1945	132,481	83 <b>.65</b>	1980	236,419	149.28	
1946	140,054	88.43	1981	239,771	151.39	
1947	143,446	90.57	1982	243,123	153.51	
1948	146,093	92.24	1983	246,475	155.63	
1949	148,665	93.80	1984	249,827	157.74	
1950	151,228	95.49	1985	253,179	159.86	
1951	153,383	96.85				
1952	155,767	98.35				
1953	158,375	100.00				

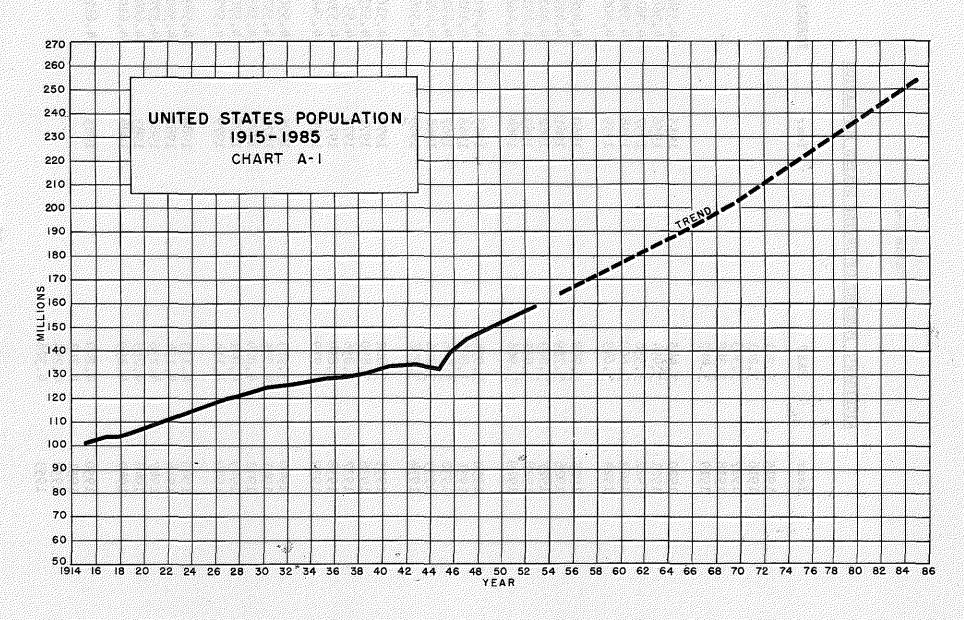


Table A-2

#### MICHIGAN'S PERCENT OF UNITED STATES POPULATION

Year	PAST	Year	FORECAST
1915	3.221		
1916	3.261		
1917	3.303		
1918	<b>3.</b> 388		
1919	3.427		
1920	3.445	1955	4.354
1921	3.494	1956	4.368
1922	3 <b>.</b> 558	1957	4.381
1923	3.609	1958	4.394
1924	3.649	1959	4.406
1925	3.702	, 1960	4.418
1926	3 <b>.</b> 759	1961	4.429
1927	3.803	1962	4.441
1928	3.852	1963	4.451
1929	3.906	1964	4.462
1930	3.934	1965	4.472
1931	3.868	1966	4.481
1932	<b>3.</b> 836	1967	4.491
1933	3.806	1968	4.499
1934	3.778	1969	4.508
1935	3.802	1970	4.516
1936	3.830	1971	4.523
1937	3 <b>.</b> 856	1972	4.530
1938	3.894	1973	4.537
1939	3.939	1974	4.544
1940	3.983	1975	4.550
1941	4.035	1976	4.557
1942	4.024	1977	4.563
1943	4.041	1978	4.570
1944	4.114	1979	4.577
1945	4.133	1980	4.583
1946	4.194	1981	4.590
1947	4.236	1982	4.597
1948	4.253	1983	4.604
1949	4.259	1984	4.610
1950	4.249	1985	4.617
1951	4.263		
1952	4.295		
1953	4.326		

(3)

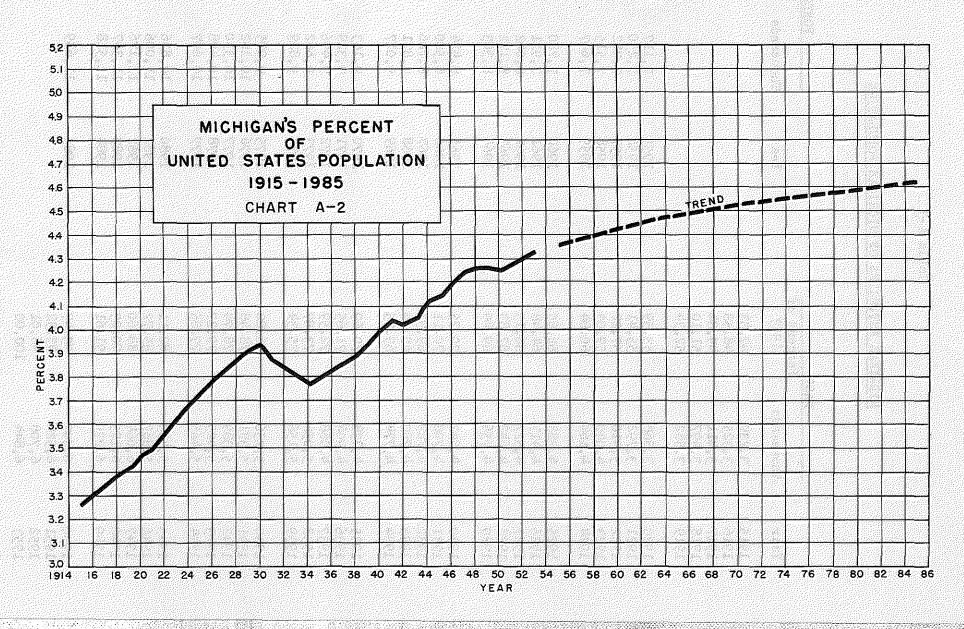
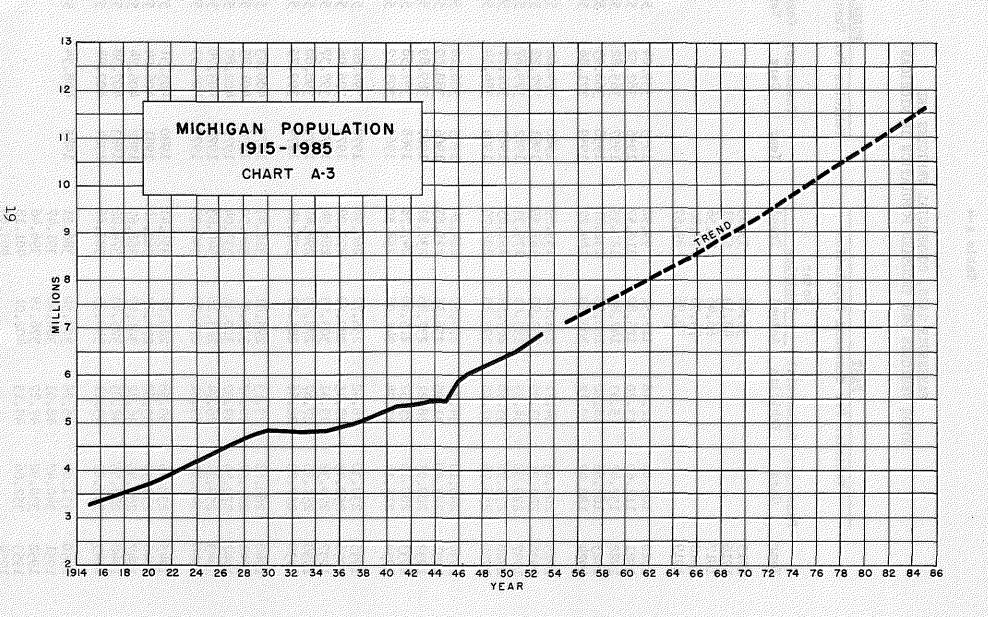


Table A-3

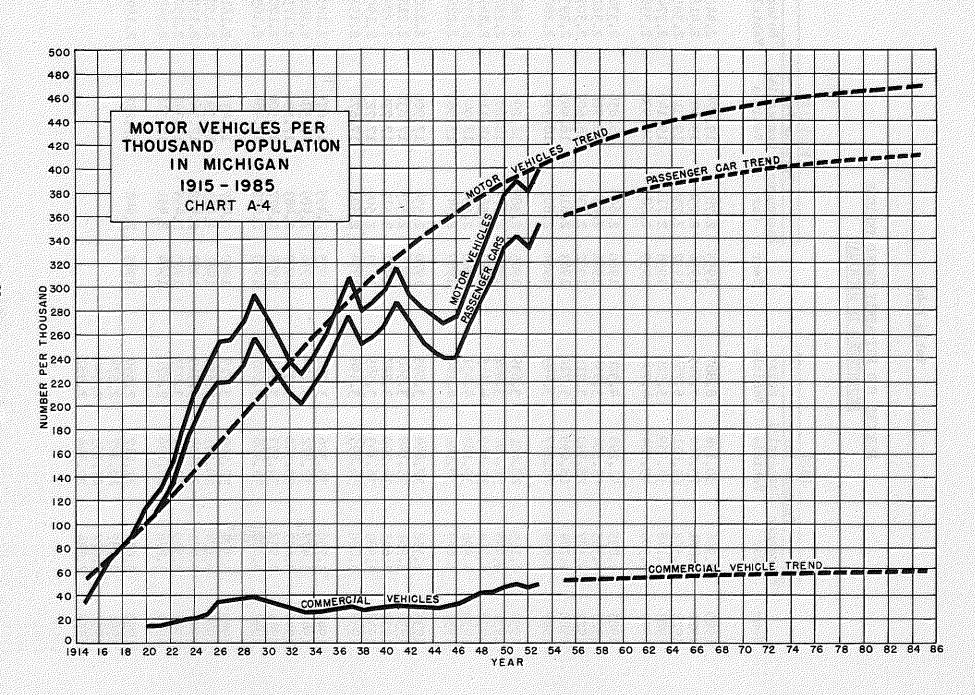
#### MID-YEAR ESTIMATES OF MICHIGAN POPULATION

	PAS	5 <b>0</b>		FORECAST		
	Percent of				Percent of	
Year	Thousands	1953	Year	Thousands	1953	
1915	3,239	47.33				
1916	3,325	48.58				
1917	3,411	49.84				
1918	3,497	51.10				
1919	3,582	52.34				
1920	3,668	53.59	1955	7,117	103.99	
1921	3,792	55.41	1956	7,250	105.93	
1922	3,916	57.22	1957	7,382	107.86	
1923	4,040	59.03	1958	7,515	109.80	
1924	4,164	60.84	1959	7,647	111.73	
1925	4,288	62.65	1960	7,780	113.68	
1926	4,413	64.48	1961	7,911	115.59	
1927	4,527	66.15	1962	8,042	117.50	
1928	4,642	67.83	1963	8,172	119.40	
1929	4,756	69.49	1964	8,303	121.32	
1930	4,842	70.75	1965	8,434	123.23	
1931	4,798	70.11	1966	8,580	125.37	
1932	4,789	69.97	1967	8,726	127.50	
1933	4,780	69.84	1968	8,871	129.62	
1934	4,774	69.75	1969	9,017	131.75	
1935	4,838	70.69	1970	9,163	133.88	
1936	4,904	71.65	1971	9.329	136.31	
1937	4,968	72.59	1972	9,496	138.75	
1938	5,056	73.87	1973	9,662	141.17	
1939	5,156	75•34	1974	9,829	143.61	
1940	5 <b>,</b> 256	76.80	1975	9,995	146.04	
1941	5,371	78.48	1976	10,162	148.48	
1942	5,389	78.74	1977	10,330	150.94	
1943	5,425	79.27	1978	10,498	153.39	
1944	5,465	79.85	1979	10,667	155.86	
1945	5,483	80.11	1980	10,836	158.33	
1946	5,867	85.72	1981	11,006	160.81	
1947	6,064	88.60	1982	11,176	163.30	
1948	6,175	90.23	1983	11,347	165.79	
1949	6,270	91.61	1984	11,518	168.29	
1950	6,397	93.47	1985	11,689	170.79	
1951	6,524	95.32				
1952	6,708	98.01				
1953	6,844	100.00				



# PASSENGER CARS, COMMERCIAL VEHICLES AND MOTOR VEHICLES PER THOUSAND POPULATION IN MICHIGAN

	PAST				FORECAST			
	Vehicles Per Thousand Population			Vehicles Per Thousand Population				
	Passenger Commer		Motor assenger Commercial Vehicles			Passenger	Commercial	Motor
Year	Cars	Vehicles	Actual	Trend	Year	Cars	Vehicles	Vehicles
1915			35.46	53.65				
1916			48.14	61.81				
1917			66.46	70.56				
1918			74.96	79.86				
1919			90.96	89.67				
1920	100.04	12.48	112.52	99.92	1955	359.04	50.82	409.86
1921	112.60	13.20	125.80	110.57	1956	362.52	51.32	413.84
1922	132.42	15.43	147.85	121.55	1957	365.82	51.78	417.60
1923	162.66	18.20	180.86	132.81	1958	368.93	52.22	421.15
1924	188.47	20.12	208.59	144.27	1959	371.86	52.64	424.50
1925	206.83	24.21	231.04	155.89	1960	374.62	53.03	427.65
1926	220.01	33.89	253.90	167.59	1961	377.22	53.40	430.62
1927	220.88	34.55	255.43	179.33	1962	379.67	53.74	433.41
1928	233.96	35.58	269.54	191.05	1963	381.97	54.07	436.04
1929	256.70	37.18	293.88	202.70	1964	384.14	5 <b>4.3</b> 8	438.52
1930	240.10	34.70	274.80	214.24	1965	386.18	54.66	440.84
1931	225.00	31.95	256.95	225.63	1966	388.09	54.94	443.03
1932	209.05	28.21	237.26	236.82	1967	389.89	55.19	445.08
1933	200.16	25.52	225.68	247.78	1968	391.58	55.43	447.01
1934	215.14	25.94	241.08	258.50	1969	393.17	55.65	448.82
1935	230.30	26.42	256.72	268.94	1970	394.66	55.86	450.52
1936	252.45	28.45	280.90	279.08	1971	396.06	56.06	452.12
1937	274.32	29.41	303.73	288.94	1972	397.37	56.25	453.62
1938	251.26	27.67	278.93	298.41	1973	398.60	56.42	455.02
1939	257.23	28.66	285.89	30 <b>7.</b> 58	1974	399.75	56.59	456.34
1940	266.68	29.13	295.81	316.41	1975	400.83	56.74	457.57
1941	287.57	30.47	318.04	324.90	1976	401.85	56.88	458.73
1942	270.34	29.97	300.31	333.04	1977	402.80	57.02	459.82
1943	254.24	28.94	283.18	340.83	1978	403.70	57.14	460.84
1944	245.19	29.01	274.20	348.29	1979	404.53	57.26	461.79
1945	238.46	30 <b>.5</b> 8	269.04	355.41	1980	405.31	57•37	462.68
1946	239.59	<b>33.6</b> 8	273.27	362.20	1981	406.04	57.48	463.52
1947	264.45	36.82	301.27	368.67	1982	406.74	57.57	464.31
1948	283,35	42.05	325.40	374.82	1983	407.38	57.66	465.04
1949	305.22	43.11	348.33	380.66	1984	407.98	<i>5</i> 7 <b>.</b> 75	465.73
1950	331.04	46.26	377.30	386.21	1985	408.54	<b>57.</b> 83	466.37
1951	340.47	48.01	388.48	391.47				
1952	330.92	47.27	378.19	396.46				
1953	352.86	49.15	402.01	401.18				
1954				405.64				



#### Table A-4a

## PERSONS PER PRIVATELY OWNED VEHICLE REGISTERED IN MICHIGAN

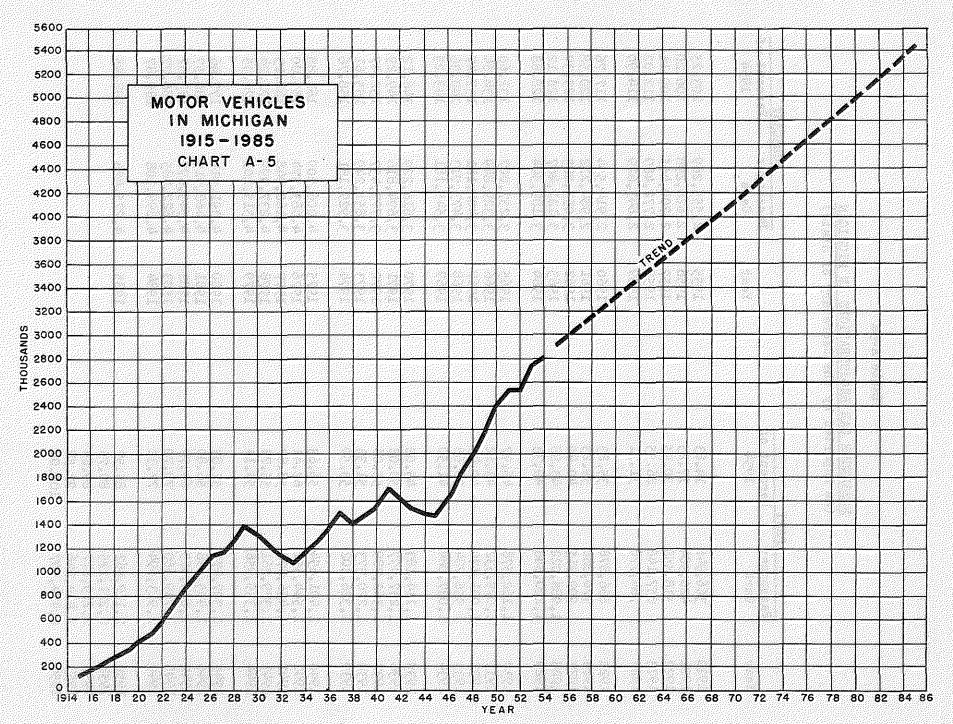
	PAST				FORECAST			
Pers		rsons Per -			Persons Per -			
	Passenger	Commercial	Motor		Passenger	Commercial	Motor	
Year	Car	Vehicle	Vehicle	Year	Car	Vehicle	Vehicle	
1920	9.996	80.138	8.887	1955	2.785	19.676	2.440	
1921	8.881	75.760	7.949	1956	2.758	19.487	2.416	
1922	7.552	64.811	6.764	1957	2.734	19.312	2.395	
1923	6.148	54.959	5.529	1958	2.711	19.149	2.374	
1924	5.306	49.684	4.794	1959	2.689	18.998	2.356	
1925	4.835	41.298	4.328	1960	2.669	18.858	2.338	
1926	4.545	29.506	3.939	1961	2.651	18.728	2.322	
1927	4.527	28.940	3.915	1962	2.634	18.607	2.307	
1928	4.274	28.099	3.710	1963	2.618	18.495	2.293	
1929	3.896	26.897	3.403	1964	2.603	18.390	2,280	
1930	4.165	28.821	3.639	1965	2.589	18.294	2.268	
1931	4.445	31.292	3.892	1966	2.577	18.203	2.257	
1932	4.784	35.449	4.215	1967	2.565	18.119	2.247	
1933	4.996	39.189	4.431	1968	2.554	18.041	2.237	
1934	4.648	38.542	4.148	1969	2.543	17.968	2,228	
1935	4.342	37.844	3.895	1970	2.534	17.900	2.220	
1936	3.961	35.149	3.560	1971	2.525	17.837	2.212	
1937	3.645	34.000	3.292	1972	2.517	17.778	2.204	
1938	3.980	36.143	3.585	1973	2.509	17.723	2.198	
1939	3.888	34.895	3.498	1974	2.502	17.672	2,191	
1940	3.750	34.326	3.381	1975	2.495	17.625	2.185	
1941	3.477	32.822	3.144	1976	2.489	17.580	2.180	
1942	3.699	33.368	3.330	1977	2.483	17.538	2.175	
1943	3.933	34.553	3.531	1978	2.477	17.500	2.170	
1944	4.078	34.468	3.647	1979	2.472	17.464	2.165	
1945	4.194	32.700	3.717	1980	2.467	17.430	2.161	
1946	4.174	29.691	3.659	1981	2.463	17.398	2.157	
1947	3.781	27.159	3.319	1982	2.459	17.369	2.154	
1948	3.529	23.781	3.073	1983	2.455	17.342	2.150	
1949	3.276	23.196	2.871	1984	2.451	17.316	2.147	
1950	3.021	21.617	2.650	1985	2.448	17.292	2.144	
1951	2.937	20.827	2.574					
1952	3.022	21.155	2.644					
1953	2.834	20.344	2.487					

1920 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 YEAR

Table A-5

MOTOR VEHICLE REGISTRATIONS IN MICHIGAN
(As Reported by the Secretary of State)

	PAST			FORECAST		
Year	Motor	Percent of		Motor	Percent of	
	Vehicles	1954	Year	Vehicles	1954	
3 63 7	331. Obe			0.017.011		
1915	114,845	4.08	1955	2,916,974	103.58	
1916	160,052	5.68	1956	3,000,340	106.54	
1917	226,693	8.05	1957	3,082,723	109.46	
1918	262,125	9,31	1958	3,164,942	112.38	
1919	325,813	11.57	1959	3,246,152	115.27	
1920	412,717	14.66	1960	3,327,117	118.14	
1921	477,037	16.94	1961	3,406,635	120.97	
1922	578,980	20.56	1962	3,485,483	123.77	
1923	730,658	25.95	1963	3,563,319	126.53	
1924	868,587	30.84	1964	3,641,032	129.29	
1925	990,709	35 <b>.</b> 18	1965	3,718,045	132.02	
1926	1,120,441	39•79	1966	3,801,197	134.98	
1927	1,156,344	41.06	1967	3,883,768	137.91	
1928	1,251,221	44.43	1968	3,965,426	140.81	
1929	1,397,672	49.63	1969	4,047,010	143.71	
1930	1,330,582	47.25	1970	4,128,115	146.59	
1931	1,232,864	43.78	1971	4,217,827	149.77	
1932	1,136,224	40.35	1972	4,307,576	152.96	
1933	1,078,757	38.31	1973	4,396,403	156.11	
1934	1,150,929	40.87	1974	4,485,366	159.27	
1935	1,242,022	44.10	1975	4,573,412	162.40	
1936	1,377,517	48.91	1976	4,661,614	165.53	
1937	1,508,906	53.58	1977	4,749,941	168.67	
1938	1,410,262	50.08	1978	4,837,898	171.79	
1939	1,474,058	52.34	1979	4,925,914	174.91	
1940	1,554,775	55.21	1980	5,013,600	178.03	
1941	1,708,191	60.66	1981	5,101,501	181.15	
1942	1,618,372	57.47	1982	5,189,129	184.26	
1943	1,536,265	54.55	1983	5,276,809	187.37	
1944	1,498,509	53.21	1984	5,364,278	190.48	
1945	1,475,152	<i>5</i> 2 <b>.</b> 38	1985	5,451,399	193.57	
1946	1,603,299	56.93				
1947	1,826,893	64.87				
1948	2,009,322	71.35	168 s.a.u			
1949	2,184,003	77•55				
1950	2,413,583	85 <b>.7</b> 0			tion or experience out of the second of the second out of the seco	
1951	2,534,476	90.00				
1952	2,536,907	90.08				
1953	2,751,361	97.70				
1954	2,816,177	100.00				



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Table A-5a

PASSENGER CAR REGISTRATIONS IN MICHIGAN
(As Reported by the Secretary of State)

	PAST			<u> </u>		
	Passenger	Percent of		Passenger	Percent of	
Year	Cars	1954	Year	Cars	1954	
1920	366,946	14.83	1955	2,555,269	103.25	
1921	426,984	17.25	1956	2,628,298	106.20	
1922	518,558	20.95	1957	2,700,465	109.11	
1923	657.148	26.55	1958	2.772.489	112.02	
1924	784,778	31 <b>.</b> 71	1959	2,843,629	114.90	
<b>-</b> // LT	104,110		+727	2,047,027	±14.70	
1925	886,878	35.83	1960	2,914,554	117.76	
1926	970,880	39.23	1961	2,984,212	120.58	
1927	999,915	40.40	1962	3,053,283	123.37	
1928	1,086,022	43.88	1963	3,121,467	126.12	
1929	1,220,848	49.33	1964	3,189,544	128.88	
		1777		<b>,,</b> ,, <b>,</b> ,,		
1930	1,162,578	46.97	1965	3,257,007	131.60	
1931	1.079.532	43.62	1966	3,329,849	134.54	
1932	1,001,130	40.45	1967	3,402,181	137.47	
1933	956,784	38 <b>.</b> 66	1968	3,473,713	140.36	
1934	1,027,064	41.50	1969	3,545,181	143.25	
		5		,,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,		
1935	1,114,183	45.02	1970	3,616,229	146.12	
1936	1,237,997	50.02	1971	3,694,816	149.29	
1937	1,362,789	55.06	1972	3,773,437	152.47	
1938	1,270,373	<i>5</i> 1.33	1973	3,851,249	155.61	
1939	1,326,302	53.59	1974	3,929,181	158.76	
1940	1,401,654	56.63	1975	4,006,309	161.88	
1941	1,544,551	62.41	1976	4,083,574	165.00	
1942	1,456,872	58.87	1977	4,160,948	168.13	
1943	1,379,261	55 <b>.</b> 73	1978	4,237,999	171.24	
1944	1,339,956	54.14	1979	4,315,101	174.35	
1945	1,307,475	52.83	1980	4,391,914	177.46	
1946	1,405,698	<i>5</i> 6 <b>.</b> 80	1981	4,468,915	180.57	
1947	1,603,613	64.79	1982	4,545,677	183.67	
1948	1,749,660	70.70	1983	4,622,485	186.77	
1949	1,913,694	77 •32	1984	4,699,108	189.87	
1950	2,117,662	85 <b>.</b> 57	1985	4,775,426	192.95	
1951	2,221,225	89.75				
1952	2,219,817	89.69				
1953	2,414,946	97.58				
1954	2,474,907	100.00				
	~ * * * * * * * * * * * * * * * * * * *					

COMMERCIAL VEHICLE REGISTRATIONS IN MICHIGAN
(As Reported by the Secretary of State)

Table A-5b

	PAST			FORECAST		
Year	Commercial Vehicles	Percent of 1954	Year	Commercial Vehicles	Percent of 1954	
1920	45,771	13.41	1955	361,705	105.99	
1921	50,053	14.67	1956	372,042	109.02	
1922	60,422	17.71	1957	382,258	112.01	
1923	73,510	21.54	1958	392,453	115.00	
1924	83,809	24 <b>.</b> 56	1959	402,523	117.95	
1/61	J, 007	4 <b>7•</b> / υ	+///	402,727	**(*)	
1925	103,831	30.42	1960	412,563	120.89	
1926	149,561	43.82	1961	422,423	123.78	
1927	156,429	45.84	1962	432,200	126.64	
1928	165,199	48.41	1963	441,852	129,47	
1929	176,824	51.81	1964	451,488	132.30	
1930	168,004	49.23	1965	461,038	135.09	
1931	153,332	44.93	1966	471,348	138.12	
1932	135,094	39.59	1967	481,587	141.12	
1933	121,973	35 <b>.</b> 74	1968	491,713	144.08	
1934	123,865	36 <b>.</b> 30	1969	501,829	147.05	
1005	100 000	20.10	1.000	rnn 00/	140.00	
1935	127,839	37.46	1970	511,886	149.99	
1936	139,520	40.88	1971	523,011	153.25	
1937	146,117	42.82	1972	534,139	156.52	
1938	139,889	40.99	1973	545,154	159.74	
1939	147,756	43.30	1974	556 <b>,1</b> 85	162.98	
1940	153,121	44.87	1975	567,103	166.17	
1941	163,640	47.95	1976	578,040	169.38	
1942	161,500	47.32	1977	588,993	172.59	
1943	157,004	46.01	1978	<b>599,89</b> 9	175.78	
1944	158 <b>,</b> 553	46.46	1979	610,813	178.98	
1945	167,677	49.13	1980	621,686	182.17	
1946	197,601	57 <b>.</b> 90	1981	632,586	185.36	
1947	223,280	65.43	1982	643,452	188.55	
1948	259,662	76.09	1983	654,324	191.73	
1949	270,309	79.21	1984	665,170	194.91	
1950	295,921	86.71	1985	696 092	308.08	
1951	313,251	91.79	エブロブ	675,973	198.08	
1952						
1953	317,090 336,415	92.91 08.58				
1954		98 <b>.</b> 58				
± 7. <b>/~"</b>	341,270	100.00				

Table A-6

MILES OF TRAVEL PER MOTOR VEHICLE

	PAST				FORECAST		
		Percent of	Trend			Percent of	
Year	Miles	1954	Miles	Year	Miles	1954	
1920	4,994	52.07	5,201	1955	9,631	100.42	
1921	5,049	52.64	5,388	1956	9,696	101.09	
1922	5,165	53.85	5,572	1957	9.758	101.74	
1923	5,276	55.01	5.753	1958	9.817	102.36	
1924	5,435	56.67	5,932	1959	9,874	102.95	
1925	5,645	58.86	6,108	1960	9,929	103.52	
1926	5,948	62.02	6,280	1961	9,982	104.08	
1927	6,455	67.30	6,449	1962	10,032	104.60	
1928	6,600	68.81	6,614	1963	.10,080	105.10	
1929	6,850	71.42	6,776	1964	10,126	105.58	
1930	7.332	76.45	6,934	1965	10,171	106.05	
1931	7,943	82.82	7,087	1966	10,213	106.49	
1932	8,001	83.42	7,237	1967	10,254	106.91	
1933	8,035	83 <b>.7</b> 8	7,383	1968	10,293	107.32	
1934	8,215	85 <b>.</b> 65	7,525	1969	10,330	107.71	
1935	8,333	86.88	7,663	1970	10,365	108.07	
1936	8,524	88,87	7,796	1971	10,399	108.42	
1937	8,727	90.99	7,926	1972	10,432	108.77	
1938	8,867	92.45	8,052	1973	10,463	109.09	
1939	9,154	95.44	8,173	1974	10,493	109.40	
1940	9,388	97.88	8,291	1975	10,521	109.70	
1941	9,440	98.43	8,405	1976	10,549	109.99	
1942	8,371	87.28	8,505	1977	10,575	110.26	
1943	6,862	71.55	8,621	1978	10,600	110.52	
1944	6,982	72.80	8,724	1979	10,623	110.76	
1945	8,079	84.24	8,823	1980	10,646	111.00	
1946	9,968	103,93	8,918	1981	10,668	111.23	
1947	9,640	100.51	9,010	1982	10,689	111.45	
1948	9,515	99.21	9,099	1983	10,709	111.66	
1949	9,208	96.01	9,184	1984	10,727	111.84	
1950	9,119	95.08	9,266	1985	10,746	112.04	
1951	9 <b>,26</b> 6	96.61	9,345				
1952	9,445	98.48	9,421				
1953	9,481	98.85	9,494				
1954	9,591	100.00	9,564				

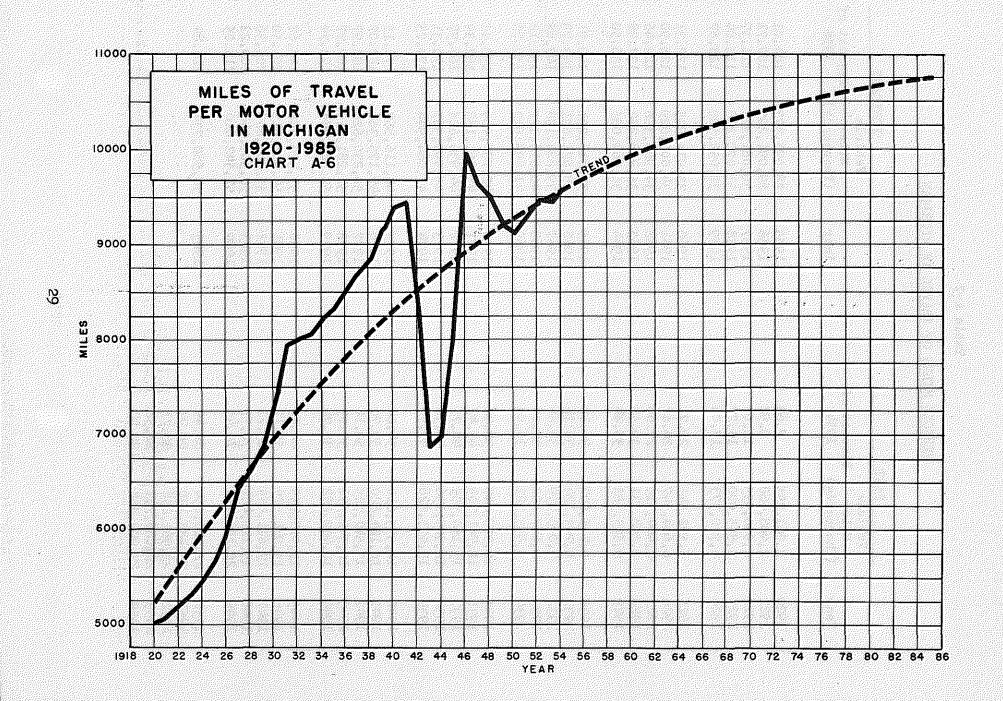


Table A-7

<u>VEHICLE MILES OF TRAVEL IN MICHIGAN</u>

PAS		PAST		FORECAST		
	Vehicle Miles	Percent of		Vehicle Miles	Percent of	
Year	(Thousands)	1954	Year	(Thousands)	1954	
1920	2,061,295	7.63	1955	28,093,373	104.01	
1921	2,408,460	8.92	1956	29,091,297	107.71	
1922	2,990,555	11.07	1957	30,081,213	111.37	
1923	3.855,000	14.27	1958	31,070,238	115.04	
1924	4,720,373	17.48	1959	32,052,500	118.67	
1925	5,592,545	20.71	1960	33,034,945	122.31	
1926	6,664,547	24.67	1961	34,005,029	125.90	
1927	7,464,316	27.64	1962	34,966,368	129.46	
1928	8,258,531	30.58	1963	35,918,254	132.98	
1929	9,573,385	35 <b>.</b> 44	1964	36,869,086	136.50	
1930	9,755,697	36.12	1965	37,816,231	140.01	
1931	9,793,124	36.26	1966	38,821,621	143.73	
1932	9,090,839	33.66	1967	39,824,158	147.45	
1933	8,667,682	32.09	1968	40,816,127	151.12	
1934	9,455,121	35.01	1969	41,805,613	154.78	
1935	10,349,847	38.32	1970	42,787,909	158.42	
1936	11,741,705	43.47	1971	43,861,188	162.39	
1937	13,168,305	48.75	1972	44,936,628	166.37	
1938	12,505,136	46.30	1973	45,999,567	170.31	
1939	13,493,528	49.96	1974	47,064,944	174.25	
1940	14,595,610	54.04	1975	48,116,869	178.15	
1941	16,124,620	59.70	1976	49,175,366	182.07	
1942	13,547,725	50.16	1977	50,230,626	185.97	
1943	10,541,591	39.03	1978	51,281,719	189.87	
1944	10,462,252	38.74	1979	52,327,984	193.74	
1945	11,918,155	44.13	1980	53,374,786	197.62	
1946	15,981,575	59.17	1981	54,422,813	201.50	
1947	17,611,855	65.21	<b>19</b> 82	55,466,600	205.36	
1948	19,119,421	70.79	1983	56,509,348	209.22	
1949	20,109,311	74.45	1984	57,542,610	213.05	
1950	22,010,034	81.49	1985	58,580,734	216.89	
1951	23,483,190	86.94				
1952	23,961,058	88.71				
1953	26,086,739	96.58				
1954	27,009,362	100.00				

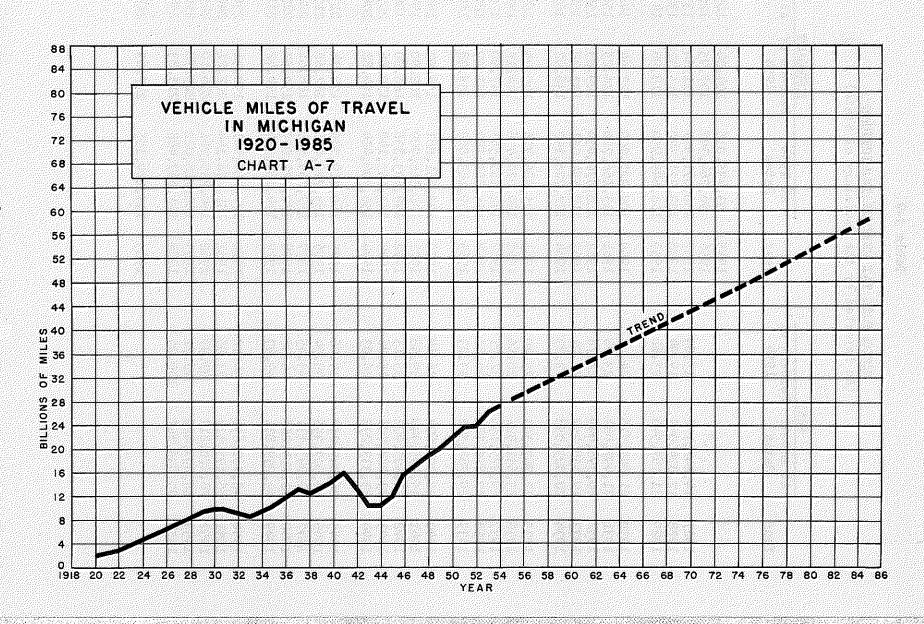


Table A-8

MOTOR FUEL TAX REVENUE IN MICHIGAN
(As Reported by the Secretary of State)

	PAST			FORECAST		
	At Actual	Percent of		At 1954	Percent of	At June 1955
Year	Rates	1954	Year	Rates	1954	Rates
			1955	93,435,016	104.24	109,744,294
			1956	96,764,347	107.95	128,646,301
1927	14,242,172	15.89	1957	100,071,597	111.64	133,043,225
1928	17,874,089	19.94	1958	103,371,372	115.32	137,430,211
1929	21,169,546	23.62	1959	106,649,950	118.98	141,789,016
1930	21,709,716	24,22	1960	109,927,209	122.64	146,146,068
1931	21,497,084	23 <b>.</b> 98	1961	113,166,720	126.25	150,452,934
1932	20,398,449	22,76	1962	116,376,054	129.83	154,719,680
1933	19,458,458	21.71	1963	119,554,051	133.38	158,944,765
1934	20,823,058	23.23	1964	122,726,197	136.92	163,162,071
1935	22,763,305	25.40	1965	125,886,776	140.44	167,363,999
1936	25,691,821	28.66	1966	129,224,436	144.17	171,801,352
1937	29,375,155	32.77	1967	132,569,563	147.90	176,248,633
1938	27,679,386	30.88	1968	135,881,581	151.59	180,651,896
1939	29,788,542	33.23	1969	139,183,069	155.28	185,041,159
1940	32,392,694	36 <b>.</b> 14	1970	142,461,881	158.93	189,400,276
1941	35,475,347	39.58	1971	146,016,909	162.90	194,126,616
1942	31,505,972	35.15	1972	149,603,838	166.90	198,895,367
1943	23,088,701	25.76	1973	153,153,140	170.86	203,614,095
1944	23,333,232	26.03	1974	156,706,424	174.82	208,338,116
1945	26,047,257	29.06	1975	160,219,249	178.74	213,008,348
1946	34,907,356	38.94	1976	163,748,426	182.68	217,700,320
1947	38,943,131	43.45	1977	167,269,538	186.61	222,381,569
1948	42,113,268	46.98	1978	170,777,007	190.52	227,044,680
1949	44,759,821	49.93	1979	174,268,554	194.42	231,686,623
1950	48,562,630	54 <b>.</b> 18	1980	177,760,401	198.31	236,328,965
1951	66,193,320	73.85	1981	181,256,144	202.21	240,976,487
1952	78,872,212	87.99	1982	184,739,261	206.10	245,607,223
1953	86,693,429	96 <b>.7</b> 2	1983	188,218,022	209.98	250,232,167
1954	89,636,367	100.00	1984	191,667,488	213.83	254,818,165
			1985	195,129,185	217.69	259,420,423

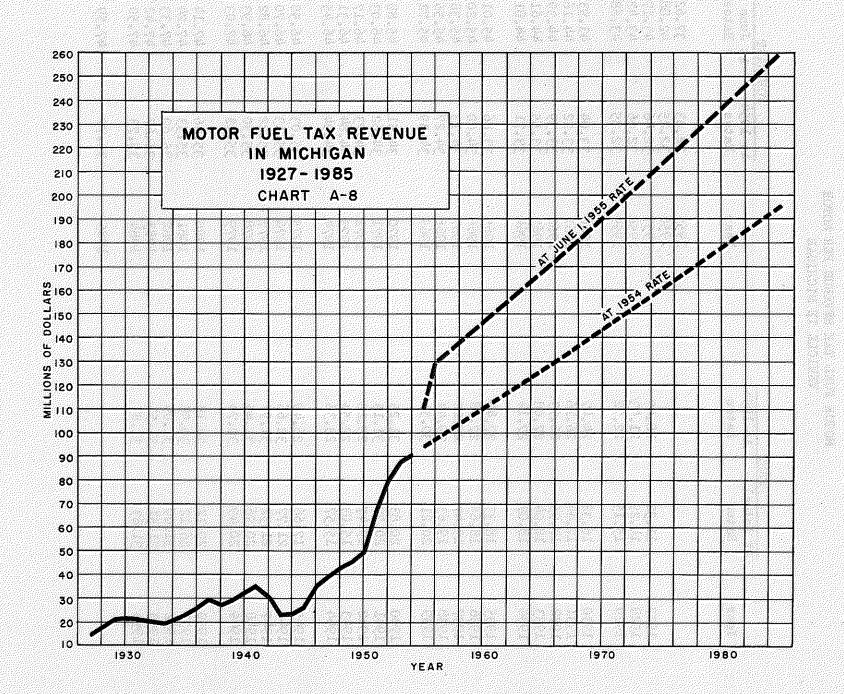


Table A-9

MOTOR FUEL TAX REVENUE PER MOTOR
VEHICLE IN MICHIGAN

	PAST			FORECAST		
	At Actual	At 1954		At 1954	At June 1955	
Year	Rates	Rates	Year	Rates	Rates	
			1000	99 99	2n 62	
			1955	32.03	37.62 42.88	
3.000	10 00	10 10	1956	32.25	43.17	
1927	12.32	18.47	1957	32.46	43.42	
1928	14.29	21.43	1958	32.66	43.68	
1929	15.15	22.72	1959	32.85	49 <b>.</b> 00	
1930	16.32	24.47	1960	33.04	43.93	
1931	17.44	26.16	1961	33.22	44.16	
1932	17.95	26.93	1962	33.39	44.39	
1933	18.04	27.08	1963	<b>33.5</b> 5	44.61	
1934	18.09	27.14	1964	33.71	44.81	
1935	18.33	27.49	1965	33.86	45.01	
1936	18.65	27.98	1966	34.00	45.20	
1937	19.47	29.20	1967	34.13	45.38	
1938	19.63	29.44	1968	34.27	45.56	
1939	20.21	30.31	1969	34.39	45.72	
1940	20.83	31.25	1970	34.51	45.88	
1941	20.77	31.15	1971	34.62	46.03	
1942	19.47	29.20	1972	34.73	46.17	
1943	15.03	22.54	1973	34.84	46.31	
1944	15.57	23.36	1974	34.94	46.45	
1945	17.66	26.49	1975	35.03	46.58	
1946	21.77	32.66	1976	35.13	46.70	
1947	21.32	31.97	1977	35.22	46.82	
1948	20.96	31 <b>.4</b> 4	1978	35.30	46.93	
1949	20.49	30.74	1979	35.38	47.03	
1950	20.12	30.18	1980	35.46	47.14	
1951	26.12	30.98	1981	35.53	47.24	
1952	31.09	31.09	1982	35.60	47.33	
1953	31.51	31.51	1983	35.67	47.42	
1954	31.83	31.83	1984	35.73	47.50	
			1985	35.79	47.59	

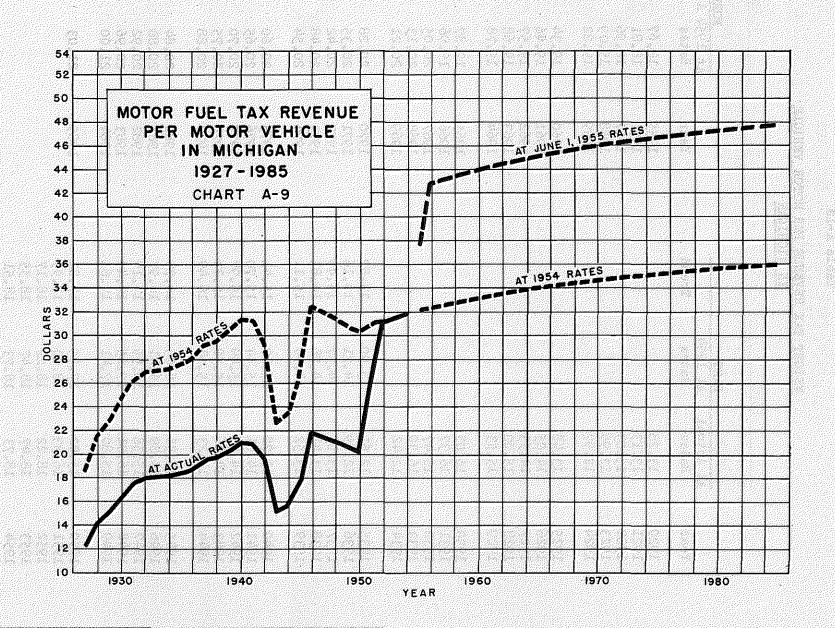


Table A-10

WEIGHT TAX REVENUE PER MOTOR VEHICLE
IN MICHIGAN

	PAST				FORECAST	
	At Actual	At 1954			At 1954 A	t June 1955
Year	Rates	Rates	Trend	Year	Rates	Rates
1920	13.28			1955	18.67	18.76
1921	13.13			1956	18.81	19.72
1922	13.03			1957	18.96	19.88
1923	12.96			1958	19.09	20.01
1924	12.97			1959	19.22	20.15
1925	13.48			1960	19.34	20.27
1926	14.05			1961	19.46	20.40
1927	14.59			1962	19.57	20.51
1928	15.00			1963	19.68	20.63
1929	15.53			1964	19.78	20.73
1930	16.03			1965	19.87	20.83
1931	16.37			1966	19.96	20.92
1932	16.47			1967	20.05	21.02
1933	16.30			1968	20.13	21.10
1934	12.42			1969	20.21	21.19
1935	12.61	13.90	13.82	1970	20.28	21.26
1936	12.89	14.21	14.16	1971	20.35	21.33
1937	13.05	14.37	14.49	1972	20.42	21.41
1938	13.41	14.78	14.81	1973	20.48	21.47
1939	13.52	14.90	15.11	1974	20.54	21.53
1940	13.78	15.19	15.41	1975	20.60	21.59
1941	14.01	15.44	15.70	1976	20.65	21.65
1942	14.05	15.49	15.97	1977	20.70	21.70
1943	14.06	15.50	16.23	1978	20.75	21.75
1944	14.23	15,68	16.49	1979	20.88	21.80
1945	14.56	16.05	16.73	1980	20.84	21.85
1946	14.89	16,41	16.97	1981	20.88	21.88
1947	15.38	16.95	17.19	1982	20.92	21.93
1948	16.01	17.65	17.40	1983	20.96	21.97
1949	15.80	17.41	17.61	1984	21.00	22.01
1950	15.92	17.55	17.81	1985	21.03	22.04
1951	16.33	18.00	17.99			
1952	18.22	18.22	18.17			
1953	18.47	18.47	18.35			
1954	18.73	18.73	18.51			

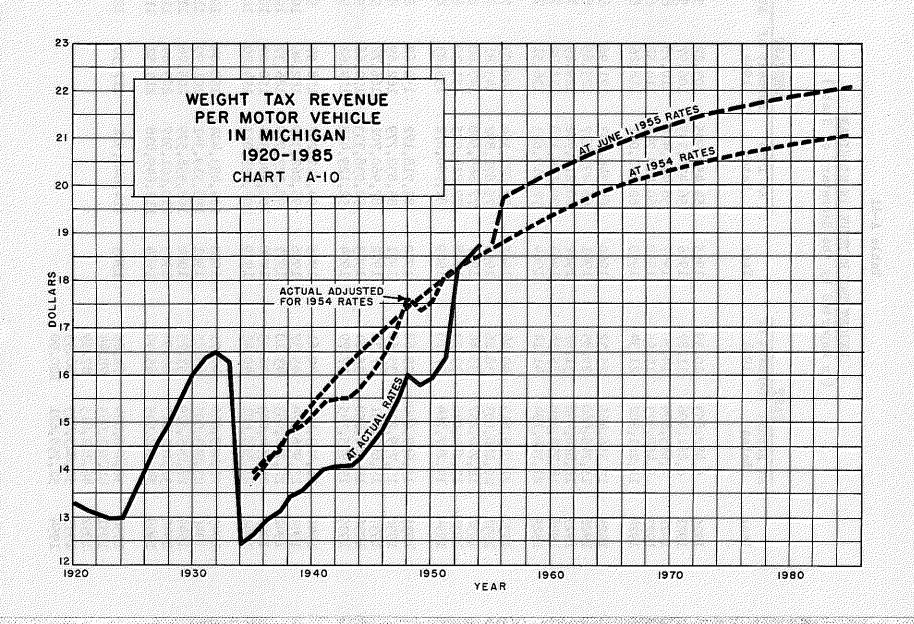


Table A-11

WEIGHT TAX REVENUE IN MICHIGAN

(As Reported by the Secretary of State)

•	PAST			FORECAST			
	At Actual	Percent of		At 1954	Percent of	At June 1955	
Year	Rates	1954	Year	Rates	1954	Rates	
1920	5,482,853	10.39	1955	54,459,905	103.22	54,719,703	
1921	6,261,496	11.87	1956	56,436,395	106.97	59,160,173	
1922	7,545,884	14.30	1957	58,448,428	110.78	61,269,313	
1923	9,468,373	17.95	1958	60,418,743	114.52	63,334,721	
1924	11,261,282	21.34	1959	62,391,041	118.26	65,402,207	
- /	11,201,202	<b>64.</b> 97	+///	02,071,072		0,402,201	
1925	13,356,466	25.32	1960	64,346,443	121.96	67,451,983	
1926	15,745,860	29.85	1961	66,293,117	125.65	69,492,608	
1927	16,866,996	31.97	1962	68,210,902	129.29	71,502,951	
1928	18,773,358	35.58	1963	70,126,118	132.92	73,510,601	
	21,704,194	41.14	1964	72,019,613	136.51	75,495,481	
1929	21,704,174		+704	72,017,017	1,000,71	17,477,404	
1930	21,335,617	40.44	1965	73,877,554	140.03	77,443,092	
1931	20,188,003	38.26	1966	75,871,892	143.81	79,533,682	
1932	18,710,257	35.46	1967	77,869,548	147.60	81,627,750	
1933	17,584,046	33•33	1968	79,824,025	151.30	83,676,556	
하다 중요합하면 무너무 뭐 없었다.	14,297,764	27 <b>.</b> 10	1969				
1934	14,67/,/04	E(.10	1707	81,790,072	155.03	85,737,490	
1935	15,659,640	29.68	1970	83,718,172	158.68	87,758,645	
1936	17,759,230	33.66	1971	85,832,779	162.69	89,975,309	
1937	19,690,631	37.32	1972	87,960,702	166.72	92,205,932	
1938	18,909,858	35.84	1973	90,038,333	170.66	94,383,835	
1939	19,935,345	37.79	1974	92,129,418	174.62	96,575,842	
1010	or han son	1.0 (3	1007	oli ozo oga	100 50	00 570 00/	
1940	21,423,893	40.61	1975	94,212,287	178.57	98,759,236	
1941	23,936,574	45.37	1976	96,262,329	182.46	100,908,219	
1942	22,736,983	43.10	1977	98,323,779	186.37	103,069,160	
1943	21,594,023	40.93	1978	100,386,384	190.27	105,231,312	
1944	21,325,681	40.42	1979	102,459,011	194.20	107,403,970	
1945	21,479,666	40.71	1980	104,483,424	198.04	109,526,087	
1946	23,873,005	45.25	1981	106,519,341	201.90	111,660,263	
1947	28,095,579	53.25	1982	108,556,579	205.76	113,795,823	
1948	32,161,827	60.96	1983	110,601,917	209.64	115,939,875	
1949	34,502,545	65.40	1984	112,649,838	213.52	118,086,635	
			- J	<b>,</b> 0-7,000	~~	110,000,000	
1950	38,436,094	72.85	1985	114,642,921	217.30	120,175,909	
1951	41,383,965	78.44					
1952	46,212,815	87.59					
1953	50,823,823	96.33					
1954	52,758,621	100.00					

