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THE DEMAND FOR LIGHT DUTY TRUCKS THE WHARTON EFA MOTOR VEHICLE DEMAND MODEL (MARK II)

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16. Abstract

A preliminary model of U.S. light-duty vehicle demand is presented which contains an integrated analysis of automobiles and light trucks (under 10,000 lbs. GVW). The model has been estimated using both cross-section and time-series data, and is a development of previous Wharton models. It is a long-run, annual, econometric model providing both forecasts and policy analyses. Light trucks are divided into personal-use and commercial-use categories. The latter are quite distinct in behavior, while personal-use truck demand is combined with automobile demand, and shows many similarities in its determinants. The model includes relationships and estimates for: vehicles in operation, sales, new registrations, scrappage, purchase prices, fuel economy, vehicle miles travelled, gasoline consumption, other operating costs, taxes, and the influence of demographics.

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PREFACE

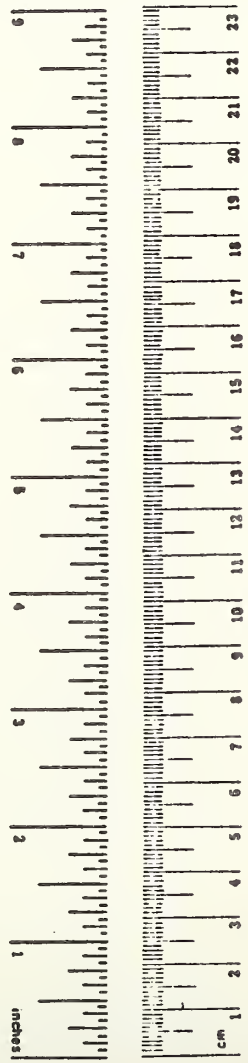
This study is a continuation of a program undertaken by Wharton Econometric Forecasting Associates on behalf of the Transportation Systems Center of the Department of Transportation. This research has provided technical information for rule-making support of the Automobile Fuel Economy Regulation program. The authors would like to acknowledge the help provided by other members of the Wharton staff, and the advice and critical comments of the TSC technical monitors Ron Mauri and Stewart Butler.

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

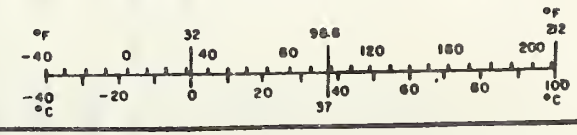
Symbol	When You Know	Multiply by	To Find	Symbol
	LENGTH			
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
	AREA			
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
	MASS (weight)			
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
	VOLUME			
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
	TEMPERATURE (exact)			
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
	LENGTH			
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
	AREA			
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
	MASS (weight)			
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
	VOLUME			
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
	TEMPERATURE (exact)			
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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1. INTRODUCTION

1.1 BACKGROUND

This study, a continuation of a program undertaken by Wharton Econometric Forecasting Associates (WEFA) on behalf of the Transportation Systems Center (TSC) of the Department of Transportation (DOT), has provided technical information for rule-making support of the Automobile Fuel Economy Regulation (AFER) program.

Wharton's research program began with the development of the Automobile Demand Model[1/], extensively used for forecasting and policy analysis during 1977, and for examining a wide range of alternative issues and scenarios. The Wharton Motor Vehicle Demand Model (Mark I)[2/] was a revised, re-estimated and improved version of the original. This report documents the results, to date, of the development of the Mark II version of the model.

1.2 RESEARCH OBJECTIVES

The objective of this phase of the research was to extend the model to incorporate projections of the demand for light duty trucks (LDTs). The LDT analysis is integrated with the automobile demand analysis in a consistent manner. The model permits the assessment of the joint impacts of changes in

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1/ George R. Schink and Colin J. Loxley, An Analysis of the Automobile Market: Modeling the Long-Run Determinants of the Demand for Automobiles, DOT-TSC-NHTSA-79-49, final report to the Department of Transportation, Transportation Systems Center, December 1979.

2/ Colin Loxley, Tim Osiecki, Kate Rodenrys, and Sheela Thanawala, Revisions to the Wharton EFA Automobile Demand Model: The Wharton EFA Motor Vehicle Demand Model (Mark I), DOT-TSC-NHTSA-80-23, final report to the Department of Transportation, Transportation Systems Center, June 1980.

government policies on both cars and trucks. It also permits an assessment of the economic environment for the purposes of forecasting and scenario analysis with respect to the AFER program.

1.3 REPORT OUTLINE

Section 2, Model Outline, presents the overall structure and philosophy of the model in order to provide a broad, non-technical overview of the research. The detailed discussion of the model equations grouped by type of variable is contained in Section 3. The results of a preliminary forecast with the new model are presented in Section 4. Simulation and multiplier results are discussed in Section 5. Appendix A contains details of LDT classification by type and by nameplate; Appendix B includes detailed forecast tables; and Appendix C includes the simulation analysis tables.

2. MODEL OUTLINE

2.1 STRUCTURAL TAXONOMY

In the Mark II version of the Motor Vehicle Demand Model, the market is analyzed as the sum of (1) personal vehicles--comprising automobiles plus personal-use LDTs, and (2) commercial-use LDTs. The personal vehicles group is then divided into its two components. The disaggregation of automobiles into eight classes is maintained from the Mark I version. Figure 2-1 illustrates the structural taxonomy.

All LDTs under 10,000 lbs GVW are categorized as either personal-use or commercial-use vehicles. The specific classification scheme by nameplate is shown in Appendix A. In general terms, personal-use LDTs are the lighter vans and pickups, as well as all sport utility vehicles. This classification was determined primarily by the ready availability of both cross-sectional and time-series data. The remaining LDTs are considered commercial-use. This classification is not necessarily the ideal scheme and should be considered subject to revision.

2.2 OVERVIEW OF APPROACH

In the cross-sectional analysis using 1976 state data, relationships were estimated for the desired stock of all personal vehicles, the desired stock of automobiles, and the desired stock of commercial-use LDTs. The state data comprised estimates of the stock of vehicles in operation of each type, numerous demographic and economic variables, and estimates of prices, costs of operation, and taxes.

With the long-run equilibrium desired stock relationships established, the "realized" values, new registrations, scrappage, and, hence, actual stocks, are determined by the "gap" between the desired and actual stocks, and transitory income and cost fluctuations, using annual time-series data over the period 1958-76. The general approach parallels that utilized in the original Automobile Demand Model.

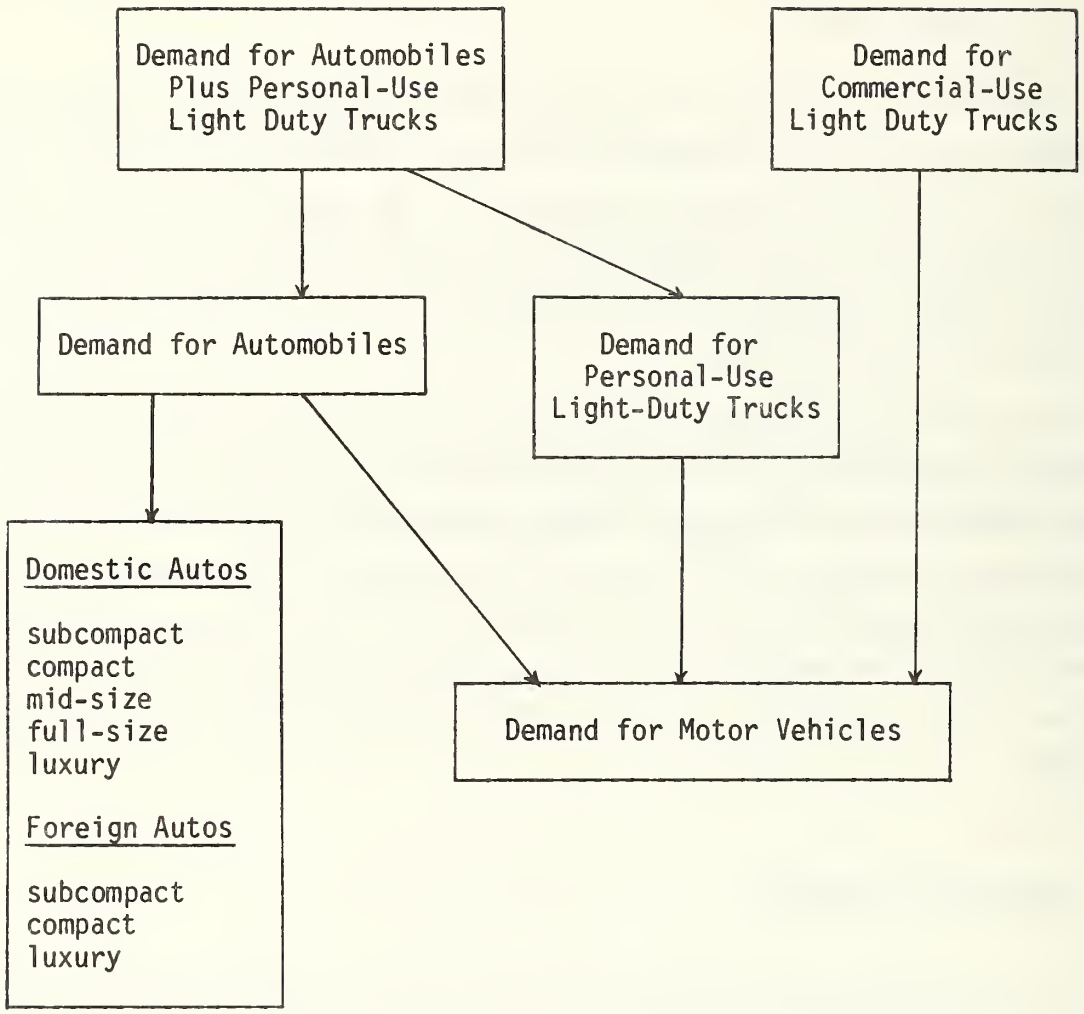

FIGURE 2-1. MOTOR VEHICLE DEMAND ANALYSIS

3. ESTIMATION RESULTS

3.1 DESIRED STOCKS

The Mark II also utilizes cross-sectional estimation of vehicles in operation equations to capture long-run relationships, as did the Mark I. The estimation of automobiles by class is unchanged from the Mark I version. The key relationships reported here, based upon the wholly new 1976 cross-sectional data, are therefore (1) the desired stock of personal vehicles, (2) the desired stock of automobiles, and (3) the desired stock of commercial-use LDTs.

To summarize the major findings:

a. The personal vehicles and the automobile relationships are found to be strongly linked to the same determinants: real permanent disposable income (+), income distribution (-), real capitalized cost per mile (-), and the degree of suburbanization (+).

b. The impacts of each variable on stocks of total personal vehicles and on automobiles are of the same sign and order of magnitude.

c. The stock of commercial LDTs was found to be affected by a very different set of determinants: the proportion of income earned in agriculture, construction, wholesale and retail trade, and services (+), relative to real capitalized cost per mile (-), the rural proportion of road mileage (+), the degree of suburbanization (-), and the proportion of population over 65 (-).

The statistical results are presented in Table 3-1. The equations presented there are those currently used in the model. Many variations were experimented with, such as estimating total cars and all LDTs, total LDTs, and personal LDTs on their own. The personal LDTs consistently had the weakest statistical results throughout, with a great deal of unexplained variation. The commercial LDTs were generally unrelated to the other categories' variation and explanatory variables.

The present structure implies that the personal LDTs desired stock must be derived as a residual, which is clearly less desirable than the ratio split function which was sought. Attempts to estimate an equation for the ratio of personal LDTs to automobiles were unsuccessful because of the difficulty in analyzing both trucks and cars on a more disaggregated basis with the same data set. There is a significant negative correlation, for instance, between full-size cars and personal LDTs. This will be pursued in future research.

Following the estimation, the desired stock values were then translated into time-series estimates, as in Mark I, where time-series were substituted for the cross-sectional values of the right-hand side independent variables. The personal vehicles desired stock and the commercial LDT desired stock were aligned with their actual stock values for 1976. The automobile desired and actual stocks were again assumed to be in equilibrium in 1972. Once again, income distribution was constrained to its 1968 and pre-1968 value in order to prevent this saturation variable from having a positive effect on desired stock. The resulting values of desired (and actual) stocks are shown in Figures 3-1 and 3-2.

Figure 3-1 shows the automobile desired stock (AUTOSD) to be greater than the actual (AUTOSA) during the 1960s. It then becomes coincident from 1971-1973, falling below the actual with the 1974-75 recession. A similar cyclical pattern follows for the personal vehicles desired stock (PERSD), which coincides (by assumption) with the actual (PERSA) in 1976.

TABLE 3-1. DESIRED STOCK EQUATIONS

1. Personal Vehicles

$$\ln(KENDPV*A/NPTLD) = - 3.47081 \underset{(-5.01546)}{} + 0.565735 \ln(RDIP4/NPTLD) \underset{(5.43852)}{} - 0.419372 \ln(CPMPVCAP/PC) \underset{(-1.91571)}{} + 0.224497 (NCHOC/NCH) \underset{(3.16087)}{} - 0.312691 \ln(PER15 +) \underset{(-3.34128)}{}$$

$\bar{R}^2 = 0.495$ DW = 2.004 SEE = 0.068347

2. Automobiles

$$\ln(KEND*A/NPTLD) = - 3.7628 \underset{(-5.00215)}{} + 0.646989 \ln(RDIP4/NPTLD) \underset{(5.69864)}{} - 0.385023 \ln(CPMTTCAP + TX/PC) \underset{(-1.64943)}{} + 0.281795 (NCHOC/NCH) \underset{(3.68915)}{} - 0.382618 \ln(PER15 +) \underset{(-3.72906)}{}$$

$\bar{R}^2 = 0.526$ DW = 1.835 SEE = 0.073471

TABLE 3-1. DESIRED STOCK EQUATIONS
(Continued)

3. Commercial-Use LDTs

$$\ln(KEND*CT/NPTLD) = -3.42604 + 0.633354 \ln\left(\frac{YAC/YP\$}{CPMCVCAP/PC}\right) + 0.628733 \ln(RWMMVR/RWMMV) - 0.644535 \ln(NPR65 + /NPR) - 1.29221 (NCHOC/NCH)$$

(-5.01546) (2.12316) (-5.59545) (-3.04774) (-5.59545)

$\bar{R}^2 = 0.764$ DW = 1.646 SEE = 0.24024

(All equations estimated over data for all states, excluding Oklahoma, Alaska, Hawaii, and Washington, DC)

TABLE 3-1. DESIRED STOCK EQUATIONS
(Continued)

Definitions

KENDPV*A = Stock of Personal Vehicles
= KEND*PT + KEND*A
KEND*PT = Stock of Personal-Use LDTs
KEND*A = Stock of Automobiles
KEND*CT = Stock of Commercial-Use LDTs
= KEND*C1 + KEND*C2, where 1, 2 denote GVW Class
NPTLD = Number of Licensed Drivers
RDIP4 = (.4Y + .37 + .27 + .1Y) /PC
where Y = YP$ - TXCP$ - TRTOP$
YP$ = Total Personal Income
TXCP$ = Personal Taxes
TRTOP$ = Personal Transfer Payments
PC = State Cost of Living Index, 1976 U.S. Average = 1.0
CPMPVCAP = Capitalized Cost per Mile, Personal Vehicles
= (KEND*A * CPMTTCAP + TX + KEND*PT * CPMPTCAP)
/KENDPV*A
CPMTTCAP * TX = Capitalized Cost per Mile, Automobiles
(distinguished from the Mark I version by the + TX, indicating that registration fees and personal property tax costs are included)
CPMPTCAP = Capitalized Cost per Mile, Personal-Use Trucks
CPMCVCAP = Capitalized Cost per Mile, Commercial-Use Trucks
= (CPMC1CAP * KEND*C1 + CPMC2CAP * KEND*C2) /
KEND * CT
CPMC1CAP = Capitalized Cost per mile, GVW Class 1 Commercial LDTs
CPMC1CAP = Capitalized Cost per mile, GVW Class 2 Commercial LDTs
NCH = Number of Households, Total
NCHOC = Number of Households, Outside Central City, in SMSA (Suburbs)
PER15+ = % of Families with Income $15,000 or More, in 1975
YAC = Personal Income Earned in Agriculture, Construction, Wholesale and Retail Trade, and Services
RWMMVR = Road and Street Mileage, Rural, in 1975
RWMMV = Road and Street Mileage, Total, in 1975
NPR65+ = Population Aged 65 and Over
NPR = Total Resident Population

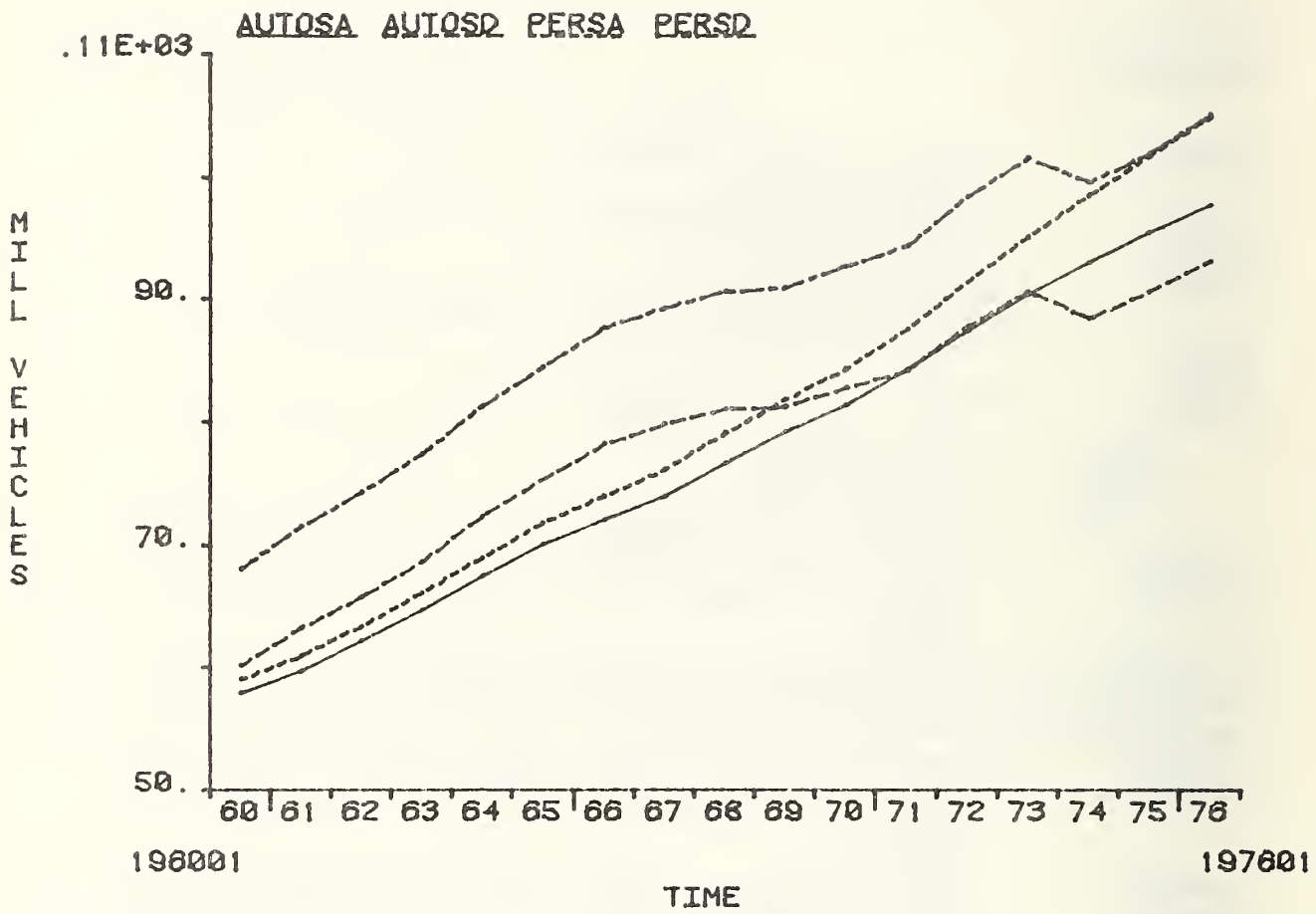

FIGURE 3-1. DESIRED VS. ACTUAL STOCKS (Automobiles and Personal Values)

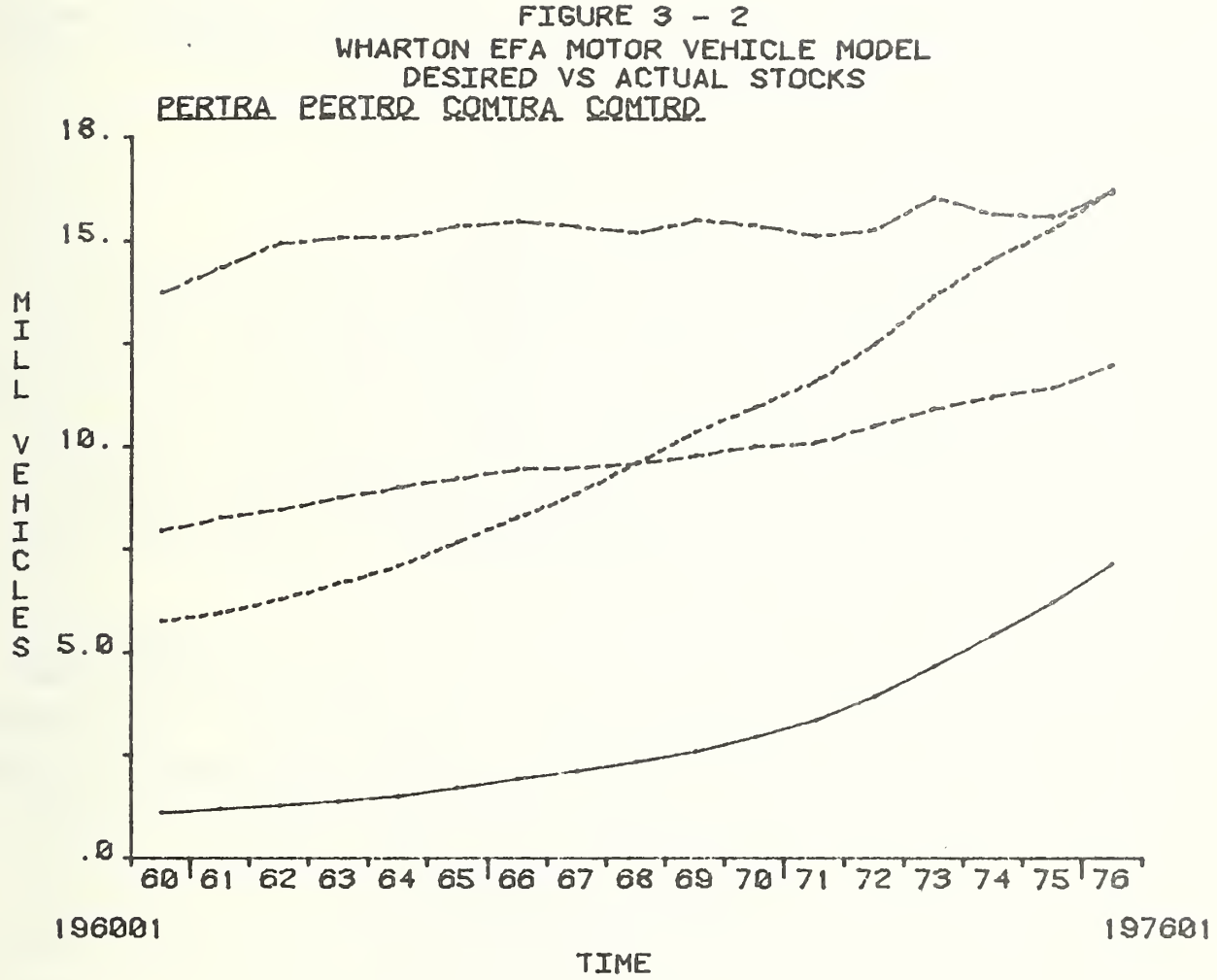

FIGURE 3-2. DESIRED VS. ACTUAL STOCKS (Personal and Commercial LDTs)

Figure 3-2 shows that the personal LDT desired stock (PERTRD) is well above the actual (PERTRA), and, despite the very rapid stock increase during the 1970s, the proportional difference is still very large. The commercial desired and actual stocks, COMTRD and COMTRA, respectively, are proportionately closer, with slower growth rates during the 1970s.

3.2 NEW REGISTRATIONS

The new registrations equations use the same approach as adopted in Mark I. The rate of new registrations, relative to last period's stock less current scrappage, is related to the ratio of desired to actual stock, the rate of change in real disposable family income, the rate of change in prices, and an auto strike dummy. For the commercial LDTs, the income term is defined in terms of the same economic activity variable (agricultural income, etc.) found significant in the cross-sectional analysis.

The equation results are given in Table 3-2. From a behavioral viewpoint, the major result is the weaker impact of the desired stock terms compared to previous results. Also, personal vehicles and commercial LDT equations have notably stronger income effects. Attempts to estimate a separate personal LDT equation were unsuccessful despite the reasonable values estimated for the desired stock. An equation was, therefore, estimated relating new registrations for cars relative to personal LDTs as a function of the relative desired stocks, rates of income change, and their relative capitalized costs per mile. Statistically, the results are strong, but the elasticities are unreasonably high. We are continuing to experiment with this approach.

The cyclical nature of new registrations by category (automobiles: AUTONR; personal LDTs: PERSNR; commercial LDTs: COMMNR) can be seen in Figure 3-3. With few exceptions, autos have the lowest growth rates, while personal LDTs have the highest. The surge in personal LDTs sales resulting from the introduction of several new models in the mid-1960s can clearly be seen.

TABLE 3-2. NEW REGISTRATIONS EQUATIONS

1. Personal Vehicles

ln (OMVUPVNROK / (OPMVEPVYEND (-1) - SCMVUPV)) =

- 2.62026
  (-26.8354)

+ 1.09826 ln (KEND*PV / (OPMVUPVYEND (-1) - SCMVUPV))
  (3.94988)

+ 5.55047 ln (RDI / FM RDIP4 / FM)
  (6.10452)

- 1.30338 ln (PUTOTPVNRL / PUTOTPVNR (-1))
  (-2.91235)

- 0.369289 DUMAUTOS
  (-3.57047)

$\bar{R}^2$ = 0.846 DW = 1.562 SEE = 0.047235
Period 1960 - 1976

2. Automobiles

ln (OMVUANR (OPMVUAYEND (-1) - SCMVUA)) =

- 2.54817
  (-32.8001)

+ 1.57795 ln (KEND*AY / (OPMVUAYEND (-1) - SCMVUA))
  (4.94024)

+ 4.46552 ln (RDI / FM / RDIP4 / FM)
  (4.87402)

- 1.21568 ln (PUTOTNRL / PUTOTNR (-1))
  (-2.81217)

- 0.35741 DUMAUTOS
  (-3.3948)

$\bar{R}^2$ = 0.866 DW = 1.566 SEE = 0.048115
Period 1960 - 1976

TABLE 3-2. NEW REGISTRATIONS EQUATIONS
(Continued)

3. Commercial LDTs

ln (OMVUCTNBOK / (OPMVUCTYEND (-1) - SCMVUCT)) =

- 2.70262
  (-13.7336)

+ 0.167762 ln (KEND*CT / (OPMVUCTYEND (-1) - SCMVUCT)
  (1.28219)

+ 7.32444 ln (YAC / YP$ / YACP4 / YP$)
  (4.38457)

- 1.19021 ln (PRCTPUTOT / PRCTPUTOT (-1))
  (-1.60062)

$\bar{R}^2$ = 0.567 DW = 1.195 SEE = 0.10164
Period 1959 - 1976

4. Autos / Personal Trucks

ln (OMVUANR / OMVUPTNROK) =

- 13.8977
  (-3.0621)

+ 8.06846 ln (KEND * AY / KEND * PT)
  (3.7527)

- 24.7582 ln (RDI / FM / RDIP4 / FM)
  (-4.9248)

- 17.7954 ln (CPMTTCAP + TX / CPMPTCAP)
  (-5.02622)

$\bar{R}^2$ = 0.824 DW = 1.86 SEE = 0.25527
Period 1960 - 1976

TABLE 3-2. NEW REGISTRATIONS EQUATIONS
(Continued)

Definitions

OMVUPVNROK	=	New Registrations, All Personal Vehicles
OMVUANR	=	New Registrations, Automobiles
OMVUCTNR	=	New Registrations, Commercial LDTs
OMVUPTNR	=	New Registrations, Personal LDTs
OPMVUPVYEND	=	Year End Stock of Vehicles in Operation, All Personal
OPMVUAYEND	=	Year End Stock of Vehicles in Operation, Automobiles
OPMVUCTYEND	=	Year End Stock of Vehicles in Operation, Commercial LDTs
SCMVUPV	=	Scrappage, Personal Vehicles
SCMVUA	=	Scrappage, Automobiles
SCMVUCT	=	Scrappage, Commercial LDTs
KEND * PV	=	Desired Stock, Personal Vehicles
KEND * AY	=	Desired Stock, Automobiles
KEND * CT	=	Desired Stock, Commercial LDTs
KEND * PT	=	Desired Stock, Personal LDTs
RDI / FM	=	Real Disposable Income per Family
RDIP4 / FM	=	Real Disposable Permanent Income per Family (.4RDI + .3 RDI_{-1} + .2RDI_{-2} + .1RDI_{-3} / FM)
PUTOTPVNRL	=	Total Purchase Price, Personal Vehicles, Weighted by Last Year's Vehicle Mix
PUTOTNRL	=	Total Purchase Price, Autos, Weighted by Last Year's Vehicle Mix
PUTOTPVNR	=	Total Purchase Price, Personal Vehicles
PUTOTNR	=	Total Purchase Price, Automobiles
PRCTPUTOT	=	Total Purchase Price, Commercial LDTs
DUMAUTOS	=	Motor Vehicle Industry Strike Dummy
YAC	=	Sum of Personal Income from Agriculture, Construction, Wholesale and Retail Trade, and Services
YACP4	=	Four Year Weighted Sum of Income from Agriculture, etc.
YP$	=	Total Personal Income
CPMTTCAP + TX	=	Capitalized Cost per Mile, Automobiles
CPMPTCAP	=	Capitalized Cost per Mile, Personal LDTs

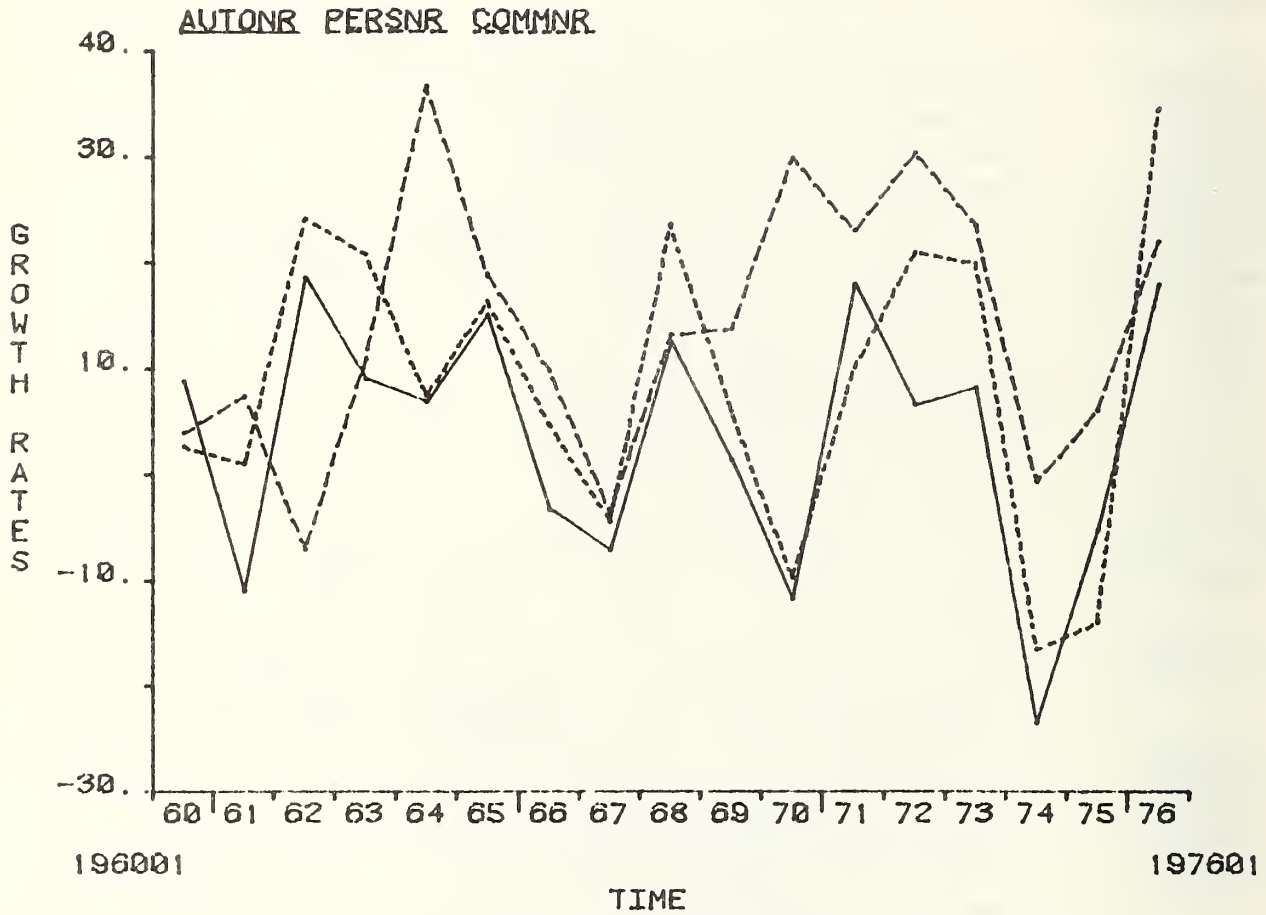

FIGURE 3-3. NEW REGISTRATIONS--GROWTH RATES

3.3 SCRAPPAGE

The scrappage functions again parallel the approach used in Mark I. A notable difference lies in the sensitivities with respect to desired stocks being lower (in absolute terms). A dummy variable for 1973 was experimented with when scrappage was at an unusually high rate. The estimation results are presented in Table 3-3. The extremely cyclical nature of the historical data is clearly illustrated in Figure 3-4, where the overall scale runs between -30 percent to +50 percent for annual growth rates.

3.4 VEHICLE MILES

After extensive experimentation, the vehicle miles relationships shown in Table 3-4 are currently being used. These estimate urban miles of automobile travel per family, auto rural (non-urban) miles per family, personal LDT miles traveled per vehicle, and miles traveled per commercial LDT. Each equation contains a real fuel cost variable (in 1972$ per mile.) The elasticities are:

-.226 for rural auto mileage,
-.261 for urban auto mileage,
-.276 for personal LDT travel, and
-.590 for commercial LDT travel.

Although the last is rather high, the ranking and orders of magnitude are clearly appropriate.

For urban auto miles driven, income per capita, weighted over three periods, and the stock of vehicles per family, weighted by the proportion of the population living in metropolitan areas, are included. A dummy for 1973-74 was also included; its effect is quite small (-1.5 percent) and it is relatively insignificant.

TABLE 3-3. SCRAPPAGE EQUATIONS

1. Personal Vehicles

ln ((SCMVUPV - SCMVPVGIV) / (OPMVUPVYEND(-1) + OMVUPVNROK)) =

- 7.38438
  (-5.67406)

- 0.869979 ln (KEND*PV /
  (OPMVUPVYEND(-1) + OMVUPVNROK))
  (-2.47045)

- 0.168516 ln (PUOLD / PSCRAPAV)
  (-2.95811)

+ 3.38872 ln (AVAGEPV)
  (4.15645)

- 0.402411 ln (NRUT)
  (-5.08192)

- 0.264277 DUMAUTOS
  (-3.17074)

+ 0.116095 DUM73
  (2.5919)

+ 3.342789 ln (VMPV / K / VMPV / K(-1))
  (5.08436)

+ 3.65272 ln (VMPV / K (-1) / VMPV / K (-2))
  (4.90658)

+ 2.51009 ln (VMPV / K (-2) VMPV / K (-3))
  (3.45988)

$\bar{R}^2$ = 0.916 DW = 2.336 SEE = 0.0038617
Period 1960 - 1976

TABLE 3-3. SCRAPPAGE EQUATIONS
(Continued)

2. Automobiles

ln ((SCMVUA - SCMVAGIV) / (OPMVUAIEND (-1) + OMVUANR)) =

- 7.20088
  (-5.5168)

- 1.09537
  (-2.4753) ln (KEND*AY / (OPMVUAYEND(-1 + OMVUANR))

+ 3.25543 ln (AVAGEO-20)
  (4.04197)

- 0.165658 ln (PUOLD / PSCRAPAV)
  (-2.83204)

- 0.423886 ln (NRUT)
  (-5.01446)

- 0.256622 DUMAUTOS
  (-2.98241)

+ 0.119072 DUM73
  (2.60484)

+ 3.55192 ln (VMT / K / VMT / K (-1))
  (5.1658)

+ 3.66214 ln (VMT / K (-1) / VMT / K (-2))
  (4.68848)

+ 2.47816 ln (VMT / K (-2) / VMT / K (-3)
  (3.28273)

R^2 = 0.909 DW = 2.261 SEE = 0.039662
Period 1960 - 1976

TABLE 3-3. SCRAPPAGE EQUATIONS
(Continued)

3. Commercial LDTs

ln (SCMVUCT - SCMVCTGIV) / (OPMVUCTYEND (-1) + OMVUCTNROK)) =

- 8.76217
  (-6.24947)

- 0.340035 ln (KEND*CT / (OPMVUCTYEND (-1) + OMVUCTNROK))
  (-2.54033)

+ 3.08657 ln (AVAGECT)
  (3.99875)

+ 0.239848 ln (VMCT /K / VMCT / K (-1))
  (0.432125)

+ 1.32409 ln (VMCT / K (-1) / VMCT / K (-2))
  (3.38861)

+ 1.24414 ln (VMCT K (-2) VMCT / K (-3))
  (2.72287)

$\bar{R}^2$ = 0.663 DW = 1.34 SEE = 0.050878
Period 1959 - 1976

TABLE 3-3. SCRAPPAGE EQUATIONS
(Continued)

Definitions:

(See also tables 3-1, and 3-2)

SCMVPVGIF	=	"Given" Scrappage of Personal Vehicles, i.e., Stock Over 20 Years Old
SCMVAGIV	=	"Given" Scrappage of Autos, i.e., Stock Over 20 Years Old
SCMVCTGIV	=	"Given" Scrappage of Commercial LDTs, i.e., Stock Over 30 Years Old
SCMVUPV	=	Total Scrappage, Personal Vehicles
SCMVUA	=	Total Scrappage, Automobiles
SCMVUCT	=	Total Scrappage, Commercial LDTs
PUOLD	=	Weighted Average Old Used Car Price
PSCRAPAV	=	Scrap Metal Price Index
AVAGEPV	=	Weighted Average Age of Stock, Personal Vehicles
AVAGEO-20	=	Weighted Average Age of Stock, Automobiles
AVAGECT	=	Weighted Average Age of Stock, Commercial LDTs
NRUT	=	National Unemployment Rate
VMPV / K	=	Total Miles Traveled per Vehicle, Personal Vehicles
VMT / K	=	Total Miles Traveled per Vehicle, Automobiles
VMCT / K	=	Total Miles Traveled per Vehicle, Commercial LDTs

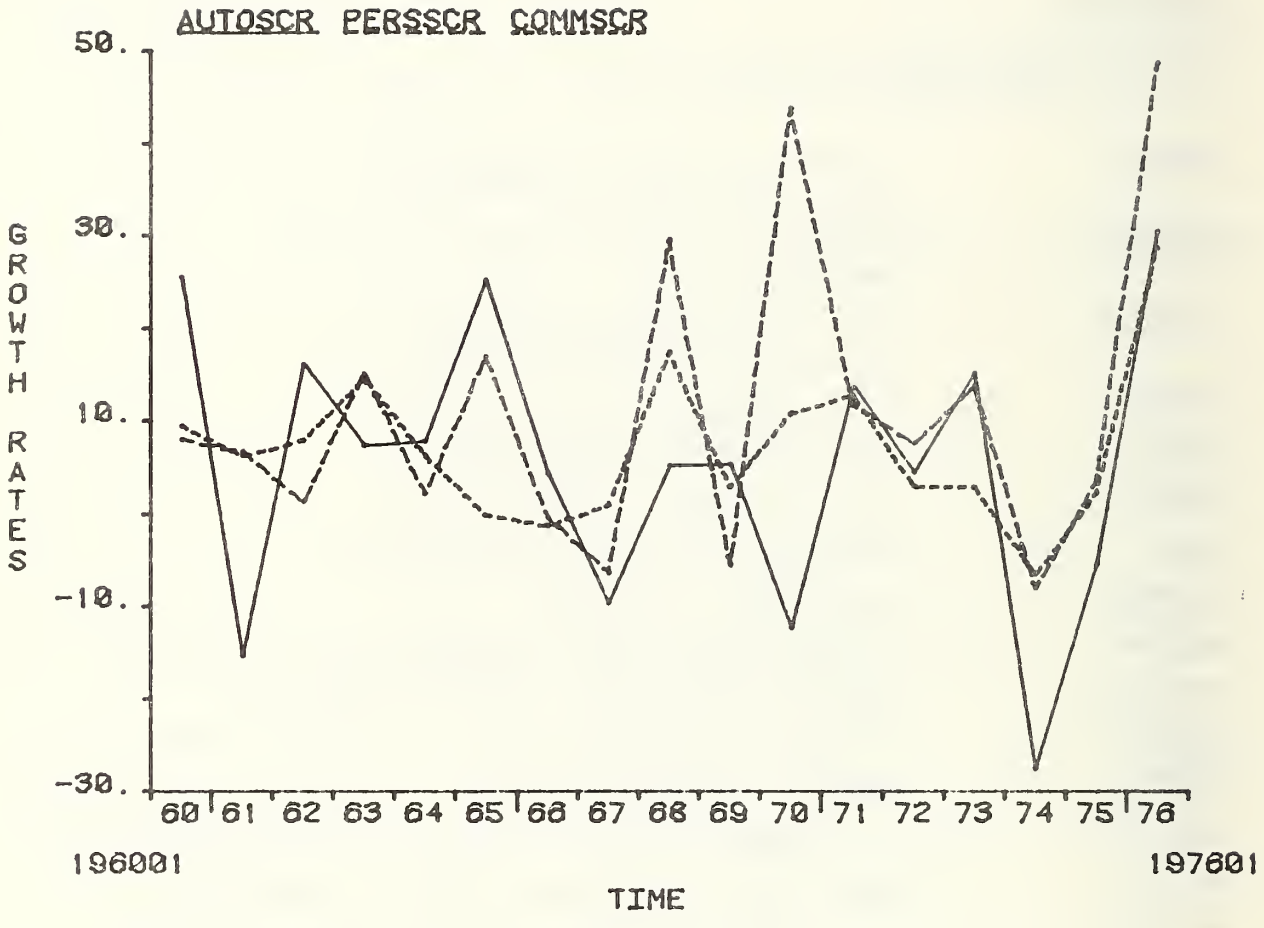

FIGURE 3-4. SCRAPPAGE--GROWTH RATES

TABLE 3-4. VEHICLE MILES TRAVELED EQUATIONS

1. Urban Auto

ln (VMTU* / FM) =

- 3.12253
  (-6.92959)

- 0.26090 ln (PURG / 100 / AVMPGCVINT / (PC / 125.3))
  (-4.59022)

+ 0.826974 ln (NPMET* KMID / FM)
  (6.0586)

+ 0.513113 ln (.25*RDI / NPT +.5*RDI/NPT(-1) + .25*RDI / NPT (-2))
  (3.44776)

- 0.0152489 DUM73.74
  (-1.43686)

$\bar{R}^2$ = 0.994 DW = 2.416 SEE = 0.012536
Period 1960 - 1976

2. Rural Auto

ln (VMTR* / FM) =

- 3.08461
  (1.86447)

- 0.225772 ln (PURG / 100 / AVMPGHVINT / (PC / 125.3))
  (-2.58194)

+ 0.113014 ln (PER15+)
  (7.73549)

+ (0.56761 ln (RWMMVI / RWMMV)
  (1.67354)

- 0.0339641 DUM74
  (-1.82574)

$\bar{R}^2$ = 0.903 DW = 2.552 SEE = 0.014698
Period 1960 - 1976

TABLE 3-4. VEHICLE MILES TRAVELED EQUATIONS
(Continued)

3. Personal LDTs

ln (VMPT / K) =

- 1.63987
  (-4.34141)

- 0.275636 ln (PURG 100) / AVPTMPGVINT (PC 125.3))
  (-9.27533)

+ 0.0602594 ln (PER15+)
  (3.07526)

+ 0.673735 ln (NPMET)
  (7.21443)

- 0.0179361 DUM 73.74
  (-2.98287)

$\bar{R}^2$ = 0.984 DW = 2.048 SEE = 0.0067661
Period 1963 - 1976

4. Commercial LDTs

ln (VMCT / K) =

- 3.80197
  (-7.44286)

- 0.58952 ln (PURG / 100 / AVCTMPGVINT / (PC / 125.3))
  (-5.49224)

+ 2.67362 ln (.25*YAC / YP$ +.5*YAC / YP$ (-1) + .25*YAC / YP$(-2))
  (9.04371)

- 0.056751 DUM 73.74
  (-2.14489)

$\bar{R}^2$ = 0.889 DW = 0.92 SEE = 0.028103
Period 1960 - 1976

TABLE 3-4. VEHICLE MILES TRAVELED EQUATIONS
(Continued)

Definitions:

(See previous Tables)

VMTU*	=	Auto Vehicle Miles, Urban Travel
VMTR*	=	Auto Vehicle Miles, Rural Travel
VMPT	=	Total Vehicle Miles, Personal LDTs
VMCT	=	Total Vehicle Miles, Commercial LDTs
PURG	=	Retail Price of Regular Gasoline, ¢/gallon
AVMPGHVINT	=	Fleet Average Fuel Economy, Automobiles, City
AVMPGCVINT	=	Fleet Average Fuel Economy, Automobiles, Highway
AVPTMPGVINT	=	Fleet Average Fuel Economy, Personal LDTs
AVCTMPGVINT	=	Fleet Average Fuel Economy, Commercial LDTs
FM	=	Number of Family Units
NPMET	=	% Population Living in Metropolitan Areas
KMID	=	Mid-Year Stock of Automobiles
PC	=	Consumer Price Index, 1967=100
RWMMVI	=	Roadway Mileage, Interstates
RWMMV	=	Roadway Mileage, Total
PER15+	=	% of Families with Income Over $15,000 in 1970$

For non-urban auto driving, income distribution was found to be the appropriate variable, possibly reflecting leisure and recreational usage. Also, interstate highway roadway mileage relative to the total has a positive impact. A more significant dummy variable effect was found for 1974. These parameter estimates suggest that non-urban driving will continue its past decline relative to total travel.

For personal LDTs, the expected positive impact from income distribution was found, as well as a very significant positive effect from urban population. This may reflect their increasing purchase for recreational/leisure purposes by people in urban areas.

The commercial LDTs usage is strongly linked to the economic activity variable (agriculture, trade, etc.) found to be a significant factor affecting desired stock and sales. Again, this is expressed as a weighted sum of the last three years values.

3.5 PURCHASE PRICES

New base purchase price equations were estimated for automobiles, personal LDTs, and commercial LDTs. Each is linked to our index of input costs, an I/O coefficient weighted combination of all industry inputs. In performing the estimation for automobiles, a significant shift in behavior was discovered when estimating over 1964-76 (the estimation period for LDT prices). A significantly higher elasticity than in the 1959-76 period was also found. These elasticities range from 1.15 to 1.19; i.e., base prices increase from 15 percent to 19 percent more rapidly than input costs. (See Table 3-5.)

TABLE 3-5. PURCHASE PRICE EQUATIONS

1. Autos

ln (USTDPUBASEFW) =

2.65967
(17.1025)

+ 1.18584 ln (PINPUTA)
(35.0005)

$\bar{R}^2$ = 0.990 DW = 1.714 SEE = 0.0191
Period 1964 - 1976

2. Personal LDTs

ln (PRPTPUBASE) =

2.76606
(10.4177)

+ 1.14779 ln (PINPUTA)
(19.8420)

$\bar{R}^2$ = 0.971 DW = 2.013 SEE = 0.027470
Period 1964 - 1976

3. Commercial GVW Class 1 LDTs

ln (PRC1PUBASE) =

2.71698
(10.7623)

+ 1.15223 ln (PINPUTA)
(20.9495)

$\bar{R}^2$ = 0.973 DW = 2.331 SEE = 0.026119
Period 1964 - 1976

TABLE 3-5. PURCHASE PRICE EQUATIONS
(Continued)

4. Commercial GVW Class II LDTs

ln (PRC2PUBASE) =

2.79335
(11.0091)

+ 1.16446 Ln (PINPUTA)
(21.0652)

$\bar{R}^2$ = 0.974 DW = 2.291 SEE = 0.026251

Definitions:

USTDPUBASEFW	=	Fixed-Weighted (1972) Average Domestic Auto Base Purchase Price
PINPUTA	=	Index of Input Prices, Weighted by 1972 Industry I/O (Column) Coefficients, 1972=100
PRPTPUBASE	=	Personal LDT Base Purchase Price
PRC1PUBASE	=	Commercial GVW 1 LDT Base Purchase Price
PRC2PUBASE	=	Commercial GVW 2 LDT Base Purchase Price

4. FORECAST RESULTS

4.1 ASSUMPTIONS

The economic inputs utilized for this forecast come from the Wharton Annual Model Control Forecast of September, 1978. Important macroeconomic assumptions are:

(1) Demographic

Higher population growth projections, as estimated in Current Population Report P-20, Series B-II, Bureau of the Census, July 1978. The Annual Model and the Motor Vehicle Model are consistent in utilizing these projections for total population, family formation, and age distribution.[1/]

(2) Fiscal and Monetary Policy

An income tax cut of $16 billion is assumed, effective January 1, 1979, with a further cut of $16 billion in 1980. The federal deficit was projected at $26 billion in 1979 and $40 billion in 1980, with defense expenditures rising only slightly in real terms, while non-defense expenditures (in 1972$) increase by over 7 percent per year in 1979-80. Monetary policy is relatively restrictive, with negative free reserves through 1980 and a discount rate assumed to rise to 7.45 percent by 1981.

[1/] Details are shown in Table 17 of the Forecast Tables, Appendix B.

(3) Energy Trends

The final energy bill was assumed to include the tax credits for conservation measures, and for investment in co-generation and energy conserving equipment, plus the increase in the interstate natural gas ceiling price and "new gas" deregulation. Crude oil imports prices were assumed to rise by 6.5 percent and 7.4 percent in 1979-80, and 5.5 percent thereafter. Alaskan production is assumed to rise to 1.2 million bbls/day in 1979 and 2.0 million bbls/day in 1980.

Since these assumptions were made, national economic policy has pursued greater fiscal and monetary restraint, and OPEC prices have been increased extremely rapidly in 1979. Hence the cyclical and long-term pattern of the forecast can be expected to shift significantly.

Key assumptions specific to the Motor Vehicle Model are:

(1) Autos Fuel Economy

The annual CAFE requirements through 1985 are met without substantial market distortions. In order to accomplish this, a "downsizing" program by class of car through 1985, along with assumed technical efficiency gains in fuel economy due to electronics, dieselization, transmission improvements, varying displacement engines, etc. has been projected. The 1985 curb weights for domestics are about 20 percent below their 1978 levels, engine displacements are reduced 30-40 percent, while the efficiency gains increase "on the road" mpg's by 18 percent compared to 1978.[1/] No further mpg improvements are projected after 1985.

[1/] These assumptions are shown in detail in Tables 20, 21, and 22 of the Forecast Tables, Appendix B.

(2) LDT Fuel Economy

Compliance with the recently announced LDT CAFE standards through 1982 is assumed, with no change projected thereafter. The new vehicle "on the road" mpg projections for 1982 are:

Personal LDT (MPGPT)	15.48	(+ 41% over 1977 level)
Commercial GVW1 (MPGC1)	16.20	(+ 41% over 1977 level)
Commercial GVW2 (MPGC2)	12.71	(+ 19% over 1977 level)[1/]

(3) Imports

To account for Volkswagen of America production and loss of "captives," imports subcompacts will be reduced some 250,000 units below what they would otherwise have been. Domestic sales are correspondingly increased.

(4) Air Bags

It has been assumed that air bags will be required to meet the passive restraint safety standards coming into effect in the 1982-84. This has a significant impact since this adds about 3.5 percent to base purchase prices for each vehicle class. This is a pessimistic assumption insofar as automatic safety belts, etc., may be found to be an effective and cheaper alternative.

1/ Assuming that over half the commercial GVW2 LDTs are unaffected by the standards, due to being over 8,500 lbs. Annual values are given in Table 32.10 of Appendix B.

4.2 SUMMARY OF RESULTS

General economic trends of importance are the lack of growth in real disposable family income and the surge in inflation in the 1979-81 period. After 1981 real income per family averages 1 percent per annum growth, while the consumer price index grows by over 5.8 percent on average (Figures 4-1 and 4-2).[1/]

1978 is a record year for total new registrations of cars and light trucks, with 14.7 million vehicles, 11 million of these being autos and vans registered as autos. This is very close to our 1976 forecast. The 1979-81 period shows weak demand, with 1981 sales being only 1.6 percent above 1978. Recent events will undoubtedly lead to a much more significant sales decline in 1979-80. There is a strong recovery cycle in 1982-84, followed by a downturn in 1985-86, with sales recovering moderately thereafter. The overall average annual rate of growth, 1978 to 1988, is 2.1 percent.

The growth rates in Figure 4-3 show that personal LDT sales continue to lead the market, although at somewhat slower rates than in the past. The 1988 peak of nearly 3 million new registrations represents an annual average growth rate of 6.2 percent. In contrast, automobile sales register sharper declines in 1979 (down 2.6 percent) and 1985 (2.2 percent), averaging only 1 percent per annum growth over the next decade. The outlook for commercial LDTs parallels the personal truck pattern but is weaker, especially during periods of economic weakness. The overall growth averages 3.3 percent per year.

The growth of vehicles in operation, year-end (Figure 4-4) parallels the new registrations trends. The 1978 total is estimated to be 129.3 million, with 101.3 million cars (78 percent), 18.6 million commercial LDTs (14 percent), and 9.5 million personal LDTs (7 percent). By 1988 total vehicles are projected to reach 172.2 million, an average annual growth rate of 2.9 percent, slightly below the 1968-78 rate of 3.8 percent. Of this total, 69 percent will be cars (1.6 percent annual growth), 13 percent will be personal LDTs (9.2 percent per annum), with commercial LDTs accounting for 18 percent (5.2 percent per annum).

[1/] See Table 18, Appendix B, for details of economic trends.

FIGURE 4-1. FORECAST, REAL DISPOSABLE INCOME PER FAMILY

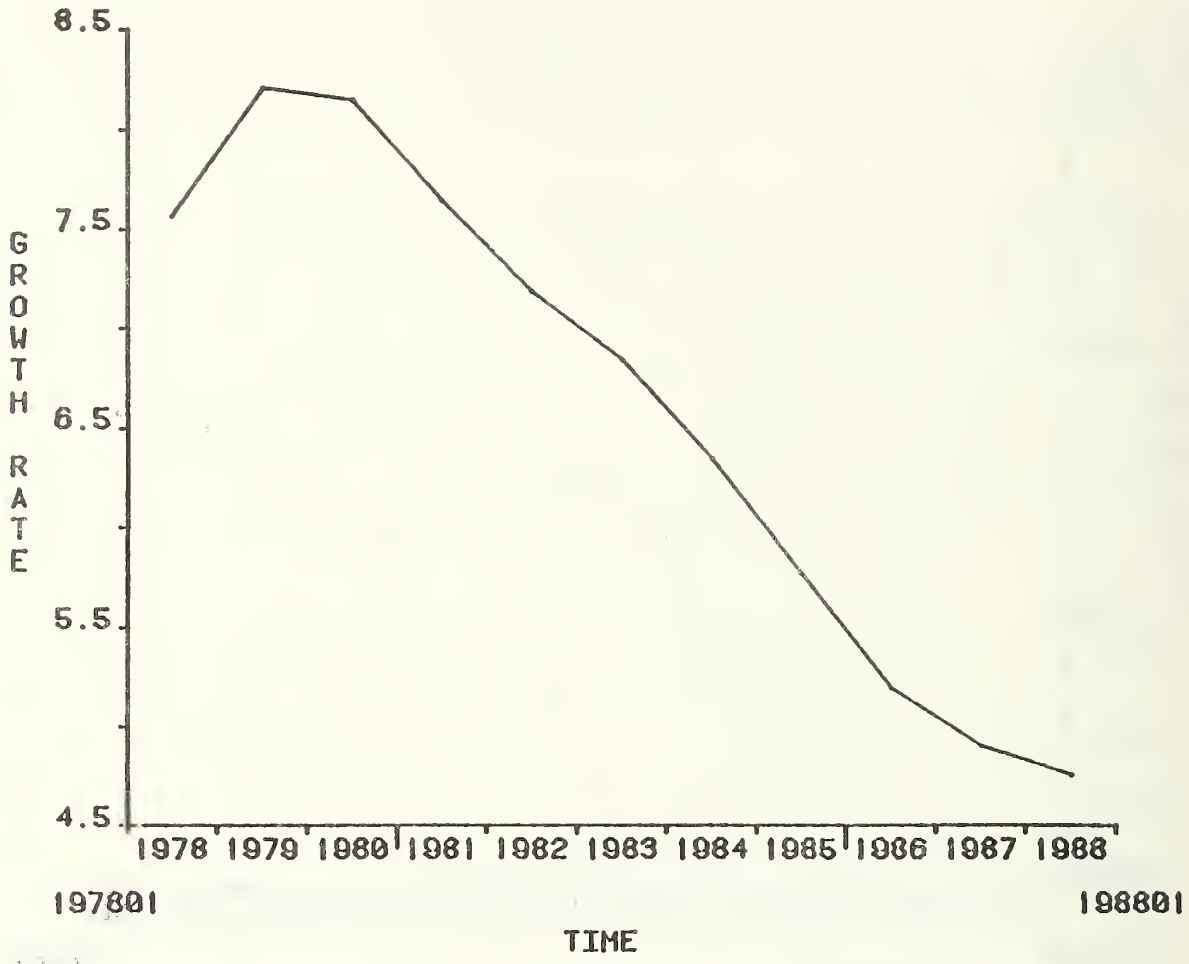

FIGURE 4-2. FORECAST, CONSUMER PRICE INDEX

FIGURE 4-3. FORECAST, NEW REGISTRATIONS

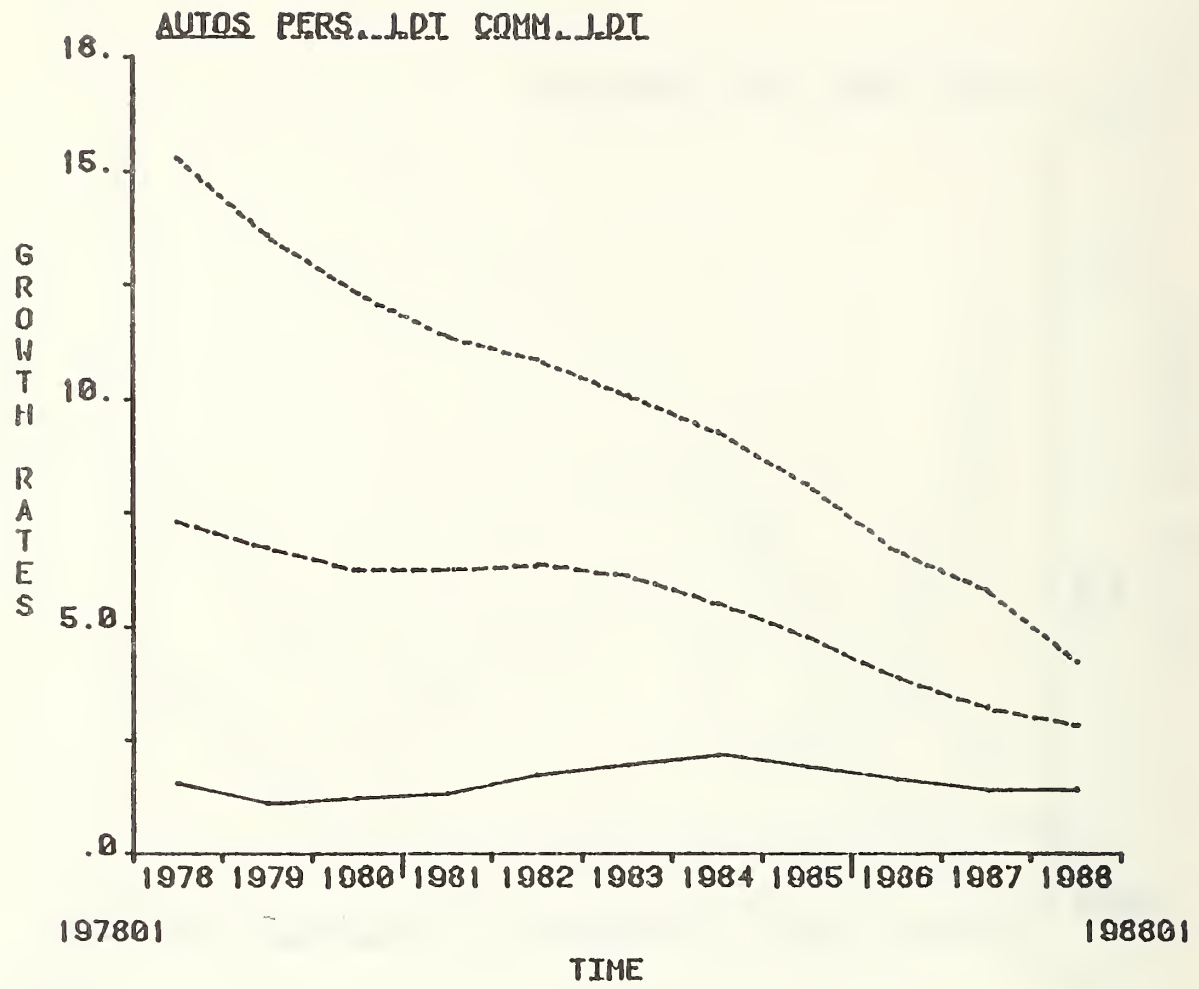

FIGURE 4-4. FORECAST, VEHICLE STOCKS

A major factor acting to slow growth below historical trends is the high growth of purchase prices. Figure 4-5 shows that prices increase annually 9 percent or more through 1982. While growth rates thereafter trend downwards, the increases continue to exceed the general inflation rate.

From the viewpoint of assessing current and future policy the key question is the projection of fuel consumption. There are three components: the change in the vehicle stock, the change in miles driven per vehicle, and the change in fleet average fuel economy. Miles driven per vehicle (Figure 4-6) by personal LDTs grow most rapidly at just under 0.7 percent per year with autos a close second, averaging over 0.5 percent. Commercial LDTs are the slowest, with miles per vehicle growing by just over 0.3 percent per year.

Combining the above trends with the vehicle stock projections, total miles driven by all cars and light trucks grow from an estimated 1.4 billion miles in 1978 to over 2 billion by 1988, a 3.5 percent growth-rate. In forecasting average fuel economy for each vehicle, mpg is estimated for each vintage, and hence changes in the fleet average will depend upon the new vehicle mpg, the sales rate, and the scrappage rate. We have projected design parameters for automobiles that imply compliance with the CAFE standards for the industry as a whole. Hence, the autos fleet average grows rapidly, especially from 1982 onward, averaging 3.5 percent per year for the 1978-88 period. The current standards for LDTs have been incorporated without any extensions beyond 1982. On this basis, the personal LDT fleet average grows by 2.5 percent per year, while commercial LDTs register a 1.5 percent rate (Figure 4-7).

As a result of these trends total fuel consumption by all cars and light trucks continues to grow throughout the forecast period (Figure 4-8). The average growth rate is 0.8 percent; however by 1988 the annual increase is only 0.3 percent. The trends by vehicle type are, of course, quite divergent. Fuel consumption by automobiles begins to decline significantly in 1981. By 1988 consumption is down 10 billion gallons from the 1978 estimate, an average annual decline of 1.2 percent. Fuel consumed by LDTs, on the other hand, increases by 19 billion gallons over the decade, increasing at a 5.4 percent rate. A general summary of key results is given in Table 4-1.

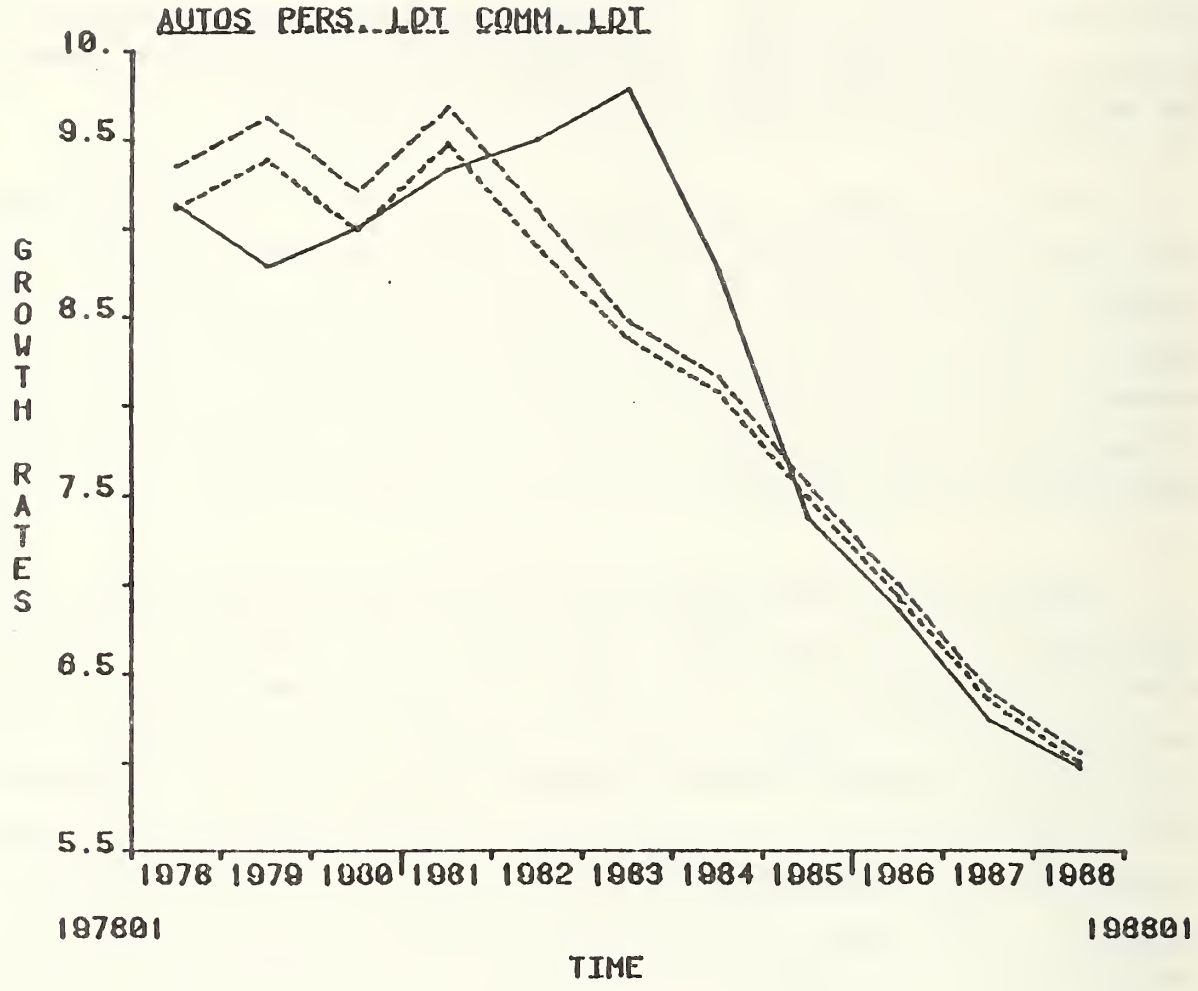

FIGURE 4-5. FORECAST, PURCHASE PRICES

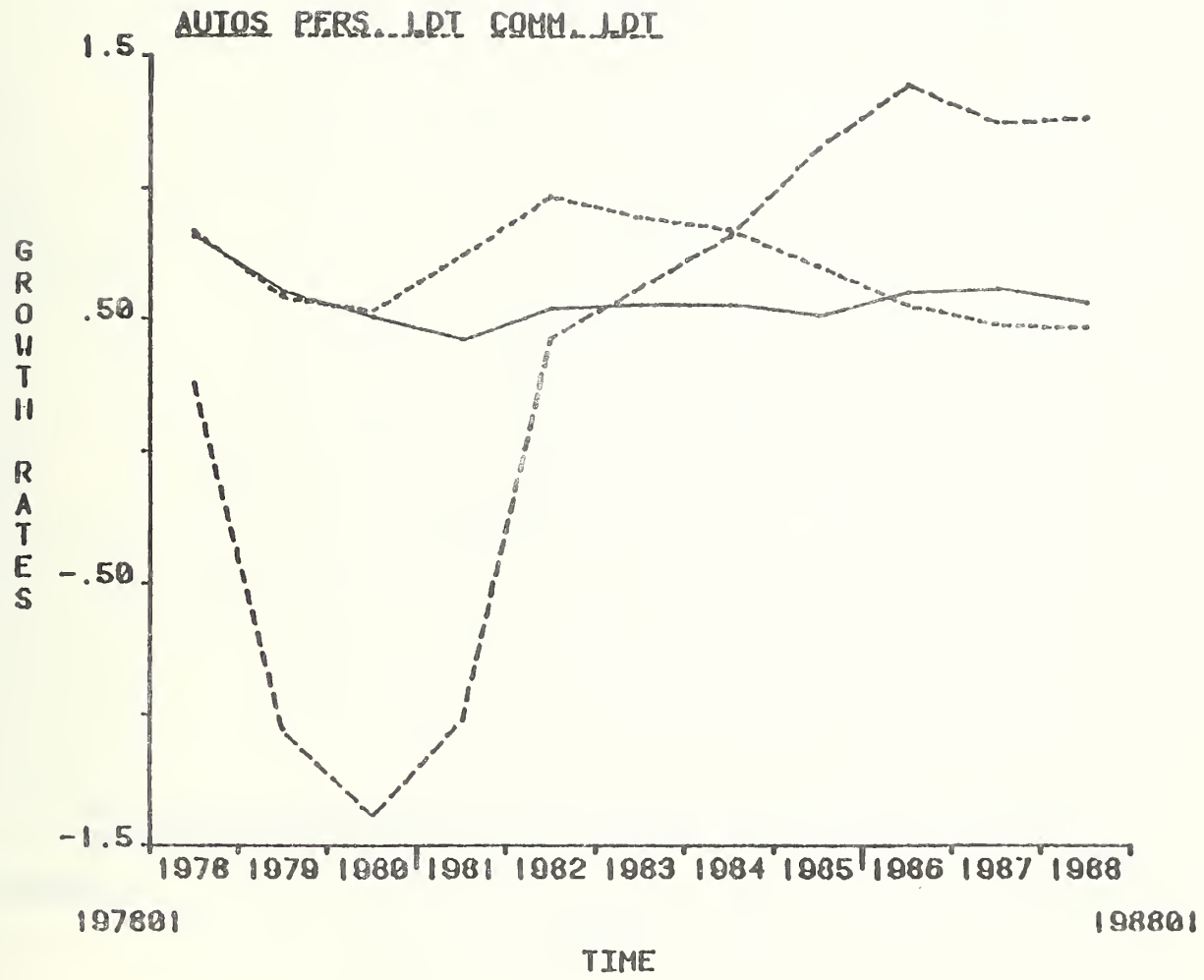

FIGURE 4-6. FORECAST, MILES PER VEHICLE

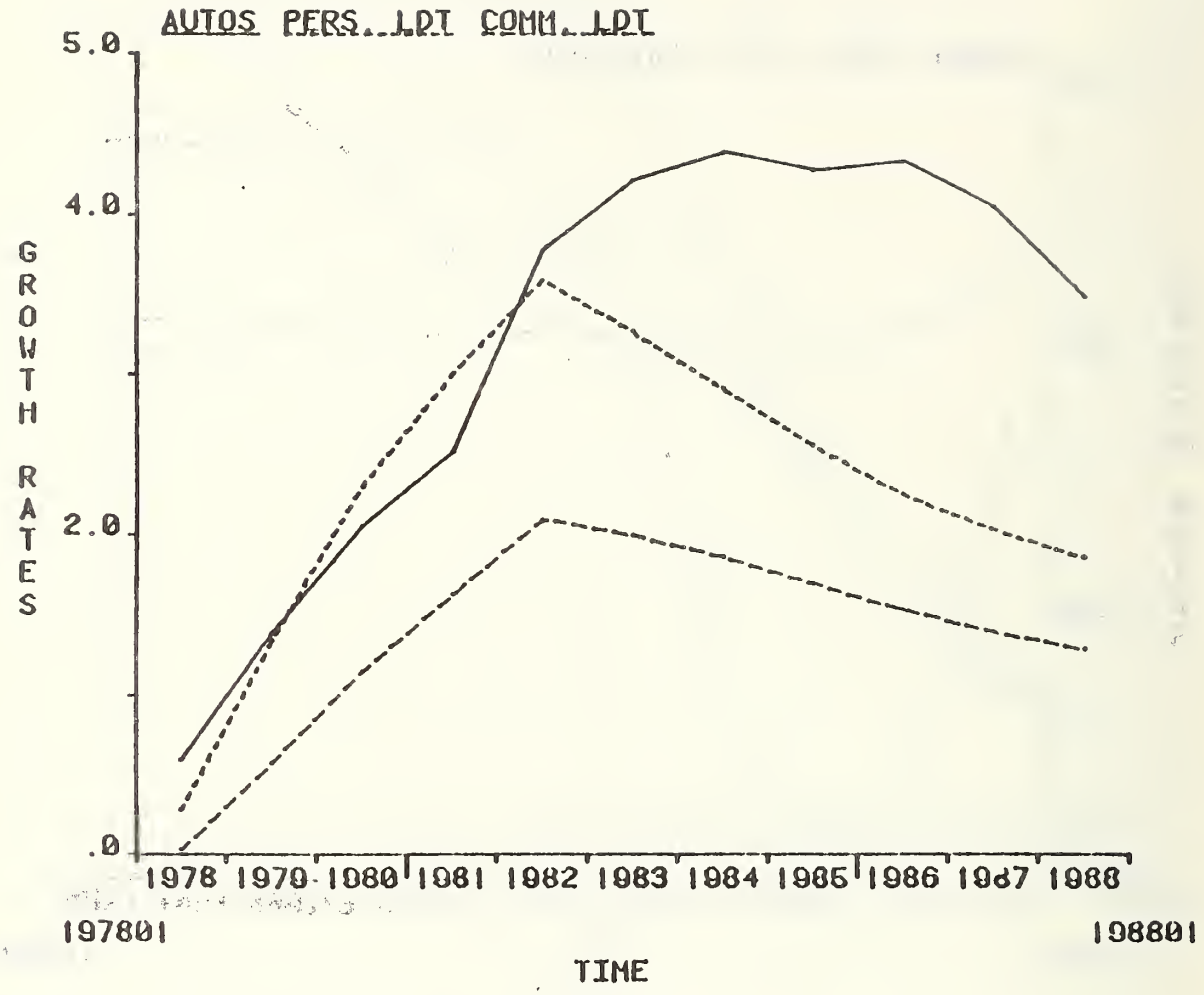

FIGURE 4-7. FORECAST, AVERAGE FLEET MPG

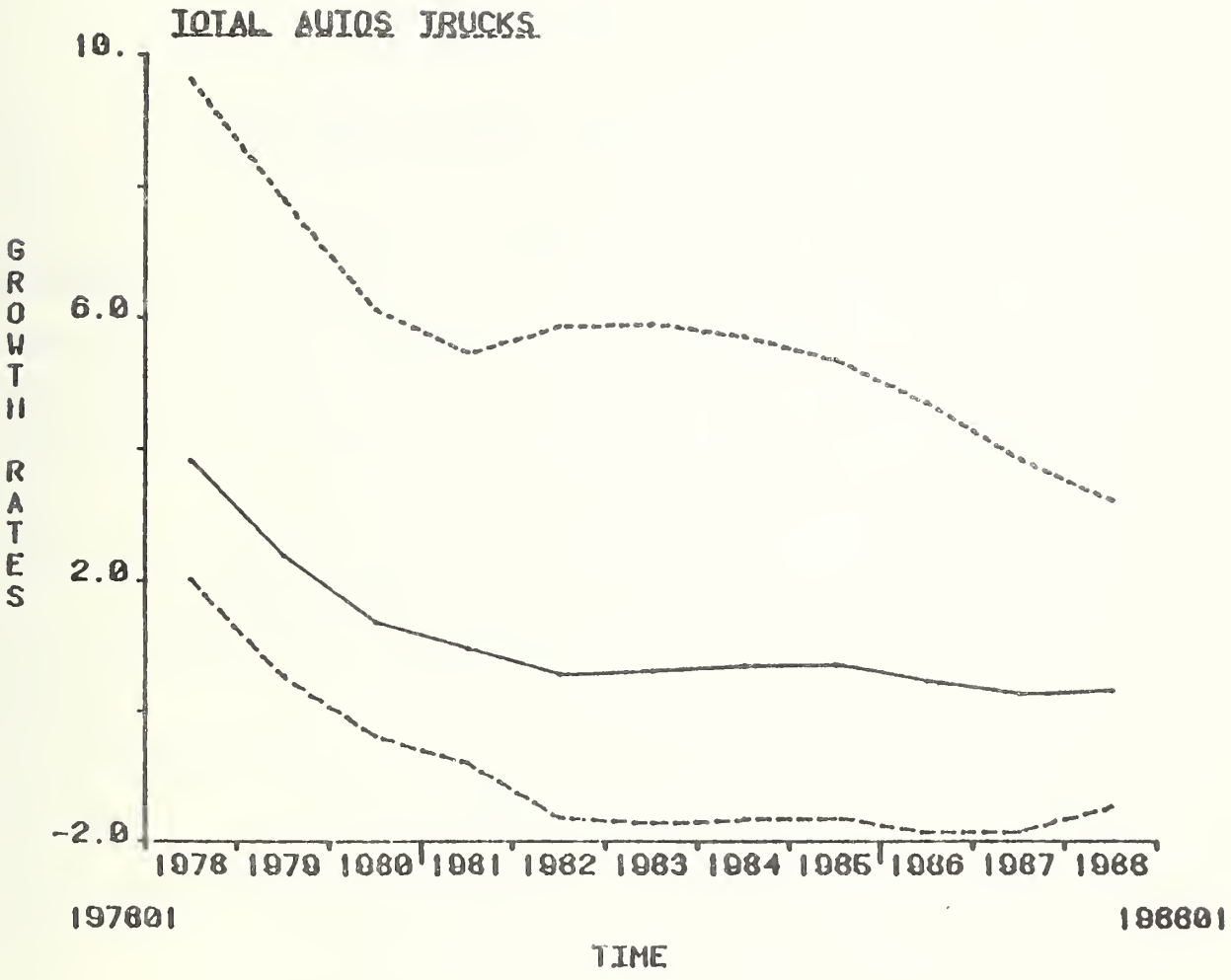

FIGURE 4-8. FORECAST, FUEL CONSUMPTION

TABLE 4-1

FORECAST RESULTS SUMMARY

Note: Annual average growth rates for 1978-1988, vs. historical values, 1968-1978, given in %

	Automobiles	Personal LDTs	Commercial LDTs	All Vehicles
Mid-Year Stock	1.6 (2.9)	9.7 (14.7)	5.4 (6.9)	3.0 (3.9)
Miles per Vehicle	0.5 (0.5)	0.7 (0.7)	0.3 (0.9)	0.5 (0.5)
Fuel Economy	3.5 (-0.1)	2.5 (0.0)	1.5 (-0.1)	2.7 (-0.1)
Fuel Consumed	-1.3 (3.5)	7.7 (15.4)	4.2 (7.9)	0.8 (4.7)
Purchase Prices	8.1 (6.4)	8.0 (6.4)	8.1 (6.8)	- -

For reference purposes:

Consumer Prices	6.5 (6.5)
Fuel Price	6.8 (6.8)

5. SIMULATION ANALYSIS

The simulations reported here are initial experiments with the current model. Therefore, some of the results summarized in the following sections and the detailed results contained in Appendix B are subject to change as anomalous results are identified and corrected. All of the input changes occur in 1980, except for the Extended Truck MPG Standards, and are a shift in the level of the value (as opposed to a continuing change in the rate of growth). Hence, short-term and long-term impacts are very different, and it is primarily the 5 year and 10 year changes that are reported here.

5.1 2% INCREASE IN PERSONAL INCOME

		% DIFFERENCE FROM CONTROL[1/]	
New Registrations:	Autos	8.36	(1980)
	Personal LDTs	15.60	
	Commercial LDTs	15.97	
Mid-Year Stock:	Autos	0.62	(1985)
	Personal LDTs	4.48	
	Commercial LDTs	3.02	
Miles per Vehicle:	Autos	0.58	(1985)
	Personal LDTs	0.60	
	Commercial LDTs	5.23	
Fleet Average MPG:	Autos	-0.12	(1985)
	Personal LDTs	0.32	
	Commercial LDTs	0.22	
Fuel Consumed:	Autos	1.31	(1985)
	Personal LDTs	4.77	
	Commercial LDTs	8.17	
	Total Fuel	3.24	

[1/] The Control Forecast used for these simulations is slightly different from the forecast described in Section 4. Hence the tables in Appendix B do not contain the same "Control" results as those in Appendix C.

The sales impacts are a short-run response with rapid decay; since scrappage also rises, the stock effects are less dramatic. In addition to increasing personal income by 2 percent, the ratio of income earned in agriculture, etc., relative to the total was also raised 2 percent; hence the large impacts for commercial LDTs.

5.2	5% INCREASE IN TRUCK PRICES		% DIFFERENCE FROM CONTROL	
	New Registrations:	Personal LDTs	-6.22	(1980)
		Commercial LDTs	-5.27	
	Mid-Year Stock:	Personal LDTs	-1.15	(1985)
		Commercial LDTs	-0.97	
	Cap. Cost per Mile:	Personal LDTs	2.27	(1985)
		Commercial GVW1	1.96	
		Commercial GVW2	1.78	
	Fuel Consumed:	Personal LDTs	-1.11	(1985)
		Commercial LDTs	-0.94	
		Total Fuel	-0.35	

The only deficiency in the current system is the lack of impact on autos, which 'a priori' might occur with a truck price change.

5.3 10% INCREASE IN GASOLINE PRICES

		% DIFFERENCE FROM CONTROL	
Mid-Year Stock:	Autos	-0.47	(1990)
	Personal LDTs	-0.40	
	Commercial LDTs	0.23	
Cap. Cost per Mile:	Autos	1.21	(1990)
	Personal LDTs	1.44	
	Commercial GVW1	1.73	
	Commercial GVW2	2.33	
Miles per Vehicle::	Autos	-2.27	(1990)
	Personal LDTs	-2.60	
	Commercial LDTs	-5.46	
Fuel Consumed:	Autos	-2.74	(1990)
	Personal LDTs	-2.97	
	Commercial LDTs	-5.24	
	Total Fuel	-3.40	

A problem with this simulation is that scrappage falls an unlikely amount in response to the VMT changes, which caused the perverse commercial stock response.

5.4 EXTENDED TRUCK MPG STANDARDS

		% DIFFERENCE FROM CONTROL	
Mid-Year Stock:	Personal LDTs	0.62	(1985)
	Commercial LDTs	0.23	
Mid-Year Stock:	Personal LDTs	-0.09	(1985)
	Commercial LDTs	0.04	
Cap. Cost per Mile:	Personal LDTs	-2.35	(1985)
	Commercial GVW1	-2.70	
	Commercial GVW2	-2.46	
Miles per Vehicle:	Personal LDTs	2.76	(1990)
	Commercial LDTs	4.14	
Fleet Average MPG:	Personal LDTs	10.37	(1990)
	Commercial LDTs	7.12	
Fuel Consumed:	Personal LDTs	-7.58	(1990)+
	Commercial LDTs	-2.92	
	Total Fuel	-1.98	

New truck mpgs were increased after 1982, as follows:

	1982	1983	1984	1985 on
Personal	15.48	16.48	17.48	18.48
Commercial GVW1	16.20	17.20	18.20	19.20
Commercial GVW2	12.71	13.21	13.71	14.21

The simulation does not incorporate the higher LDT prices that presumably would result from these mpg improvements. Again, the stock values may be too low if the impacts of VMT changes are overstated, since the capitalized cost per mile have relatively weak impacts.

APPENDIX A

LDT CLASSIFICATION BY TYPE

Personal-use LDTs comprise:

(1) Passenger vans included in automobile registrations: Voyager, Sportsman, Club Wagon, Sportvan, VW Bus.

(2) The following GVW Class 1 and 2 truck models (1977):

Chevrolet Vans, El Camino, LUV, Suburban, Blazer
Dodge Vans, Trail Duster, Ramcharger
Ford Econoline, Ranchero, Bronco, Courier
GMC Vandura, Suburban, Jimmy, Sprint
International Scout
Jeep CJ5, CJ7, Commando
All imports

Commercial use LDTs comprise all other GVW1 and 2 trucks, almost all of these being pick-ups, with a few panel vans and multi-stops.

APPENDIX B

FORECAST RESULTS TABLES

THE WHARTON EFA MOTOR VEHICLE DEMAND MODEL

CONTROL SOLUTION, NOVEMBER, 1978

INDEX OF TABLES

TABLE 1.00 SELECTED MARKET INDICATORS

LINE	ITEM		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	CARS IN OPERATION, YR-END	MILL AUTOS	101.314	102.428	103.686	105.056	106.893	109.004	111.404	113.538	115.404	117.019	118.672
2		%GROWTH	1.6	1.1	1.2	1.3	1.7	2.0	2.2	1.9	1.6	1.4	1.4
3													
4	NEW CAR RETAIL SALES	MILL AUTOS	11.153	10.866	10.884	10.911	11.600	12.028	12.364	12.100	11.925	12.147	12.372
5		%GROWTH	1.3	-2.6	0.2	0.2	6.3	3.7	2.8	-2.1	-1.4	1.9	1.9
6													
7	TOTAL NEW CAR REGISTRATIONS	MILL AUTOS	10.855	10.574	10.590	10.612	11.290	11.708	12.039	11.778	11.608	11.823	12.042
8		%GROWTH	1.3	-2.6	0.1	0.2	6.4	3.7	2.8	-2.2	-1.4	1.9	1.9
9													
10	DOMESTIC	MILL AUTOS	8.904	8.692	8.675	8.621	9.187	9.516	9.805	9.563	9.441	9.576	9.728
11		%GROWTH	2.1	-2.4	-0.2	-0.6	6.6	3.6	3.0	-2.5	-1.3	1.4	1.6
12	FOREIGN	MILL AUTOS	1.952	1.882	1.914	1.991	2.102	2.192	2.234	2.215	2.167	2.247	2.314
13		%GROWTH	-2.0	-3.6	1.7	4.0	5.6	4.2	1.9	-0.8	-2.2	3.7	3.0
14													
15	% FOREIGN		17.98	17.80	18.08	18.77	18.62	18.72	18.56	18.81	18.67	19.00	19.21
16		%GROWTH	-3.3	-1.0	1.6	3.8	-0.8	0.5	-0.9	1.4	-0.8	1.8	1.1
17	% SMALL CARS (SUB + COMP)		48.15	48.14	48.23	48.36	48.37	47.91	47.29	47.89	48.04	48.38	48.70
18		%GROWTH	3.9	-0.0	0.2	0.3	0.0	-1.0	-1.3	1.3	0.3	0.7	0.7
19													
20	TOTAL AUTOS SCRAPPED	MILL AUTOS	9.303	9.461	9.331	9.242	9.452	9.597	9.639	9.644	9.742	10.208	10.390
21		%GROWTH	6.4	1.7	-1.4	-1.0	2.3	1.5	0.4	0.1	1.0	4.8	1.8
22													
23	VEHICLE MILES TRAVELLED	MILL MILES	1127.84	1149.68	1168.91	1188.78	1213.57	1243.04	1276.08	1308.99	1340.35	1369.16	1396.32
24		%GROWTH	2.6	1.9	1.7	1.7	2.1	2.4	2.7	2.6	2.4	2.1	2.0
25													
26	TOTAL FLEET MPG (WEFA EST.)		13.73	13.92	14.21	14.57	15.12	15.75	16.44	17.14	17.89	18.61	19.26
27		%GROWTH	0.6	1.4	2.1	2.5	3.8	4.2	4.4	4.3	4.3	4.0	3.5
28													
29	AUTO MOTOR FUEL CONSUMPTION	BILL GAL	82.14	82.58	82.27	81.61	80.29	78.92	77.61	76.35	74.94	73.57	72.51
30		%GROWTH	2.0	0.5	-0.4	-0.8	-1.6	-1.7	-1.7	-1.6	-1.8	-1.8	-1.4
31	AUTO MOTOR FUEL EXPENDITURES	BILL 72 $	26.98	27.76	28.32	28.09	27.64	27.16	26.71	26.28	25.79	25.32	24.96
32		%GROWTH	3.0	2.9	2.0	-0.8	-1.6	-1.7	-1.7	-1.6	-1.8	-1.8	-1.4
33													
34	NEW CAR FLEET MPG (EPA EST.)		19.43	20.33	21.17	23.24	25.23	27.30	28.32	28.86	28.87	28.90	29.04
35		%GROWTH	3.8	4.6	4.1	9.8	8.6	8.2	3.7	1.9	0.0	0.1	0.5
36													
37	DOMESTIC		18.37	19.32	20.12	22.07	24.05	26.10	27.10	27.63	27.64	27.65	27.77
38		%GROWTH	4.4	5.1	4.1	9.7	9.0	8.5	3.9	1.9	0.1	0.0	0.4
39	FOREIGN		26.32	26.79	27.71	30.18	32.12	34.13	35.29	35.79	35.78	35.78	35.94
40		%GROWTH	1.7	1.8	3.4	8.9	6.4	6.2	3.4	1.4	-0.0	0.0	0.4
41													
42	AVERAGE NEW CAR PURCHASE COST	DOLLARS	6896.	7502.	8177.	8940.	9790.	10748.	11689.	12550.	13410.	14246.	15096.
43		%GROWTH	9.1	8.8	9.0	9.3	9.5	9.8	8.8	7.4	6.8	6.2	6.0
44	NEW CAR EXPENDITURES	BILL 72 $	35.57	34.76	35.18	36.68	40.70	43.99	46.85	47.07	47.56	49.61	51.68
45		%GROWTH	0.2	-2.3	1.2	4.3	10.9	8.1	6.5	0.5	1.1	4.3	4.2
46													
47	AVG CAP. COST PER MILE	CENTS/MILE	24.90	26.94	29.23	31.56	34.15	36.83	39.52	42.24	45.09	47.92	50.84
48		%GROWTH	8.0	8.2	8.5	8.0	8.2	7.8	7.3	6.9	6.7	6.3	6.1
49													
50	AVG USED CAR WHOLESALE PRICE	DOLLARS	3047.	3416.	3788.	4199.	4626.	5173.	5677.	6172.	6648.	7104.	7569.
51		%GROWTH	13.3	12.1	10.9	10.9	10.2	11.8	9.7	8.7	7.7	6.9	6.5
52	TOTAL USED CAR PURCHASES	MILL AUTOS	16.402	17.465	18.476	18.628	18.947	18.644	18.960	19.362	20.227	20.773	20.654
53		%GROWTH	-1.7	6.5	5.8	0.8	1.7	-1.6	1.7	2.1	4.5	2.7	-0.6

TABLE 2.00 NEW REGISTRATIONS (MILL AUTOS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL NEW REGISTRATIONS	10.855	10.574	10.590	10.612	11.290	11.708	12.039	11.778	11.608	11.823	12.042
2												
3	SUBCOMPACT	2.857	2.763	2.788	2.807	2.955	3.083	3.077	3.058	3.009	3.090	3.173
4	%SHARE	26.32	26.13	26.33	26.45	26.18	26.33	25.56	25.97	25.92	26.14	26.35
5	COMPACT	2.369	2.327	2.320	2.325	2.506	2.527	2.616	2.582	2.567	2.630	2.692
6	%SHARE	21.83	22.01	21.91	21.91	22.20	21.58	21.73	21.92	22.12	22.24	22.36
7	MID-SIZE	2.800	2.750	2.741	2.737	2.985	3.011	3.113	3.045	3.013	3.085	3.156
8	%SHARE	25.79	26.01	25.88	25.79	26.44	25.71	25.86	25.85	25.95	26.09	26.21
9	FULL SIZE	1.794	1.743	1.753	1.749	1.803	1.982	2.071	1.932	1.868	1.834	1.800
10	%SHARE	16.53	16.49	16.56	16.48	15.97	16.93	17.21	16.40	16.09	15.51	14.95
11	LUXURY	1.035	0.991	0.988	0.994	1.040	1.106	1.161	1.161	1.151	1.184	1.222
12	%SHARE	9.54	9.37	9.33	9.37	9.22	9.44	9.65	9.86	9.92	10.01	10.14

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TABLE 2.10 TOTAL DOMESTIC NEW REGISTRATIONS (MILL AUTOS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL DOMESTIC NEW REGISTRATIONS	8.904	8.692	8.675	8.621	9.187	9.516	9.805	9.563	9.441	9.576	9.728
2												
3	SUBCOMPACTS	1.116	1.055	1.058	1.007	1.062	1.112	1.080	1.086	1.082	1.091	1.109
4	%SHARE	12.54	12.14	12.19	11.68	11.56	11.68	11.02	11.35	11.46	11.39	11.40
5	COMPACT	2.271	2.234	2.231	2.241	2.426	2.450	2.544	2.513	2.502	2.568	2.634
6	%SHARE	25.51	25.70	25.72	25.99	26.40	25.75	25.94	26.28	26.50	26.81	27.07
7	MID-SIZE	2.800	2.750	2.741	2.737	2.985	3.011	3.113	3.045	3.013	3.085	3.156
8	%SHARE	31.44	31.64	31.59	31.74	32.49	31.64	31.75	31.84	31.91	32.21	32.44
9	FULL SIZE	1.794	1.743	1.753	1.749	1.803	1.982	2.071	1.932	1.868	1.834	1.800
10	%SHARE	20.15	20.06	20.21	20.29	19.62	20.83	21.13	20.20	19.78	19.15	18.50
11	LUXURY	0.923	0.909	0.892	0.887	0.911	0.962	0.997	0.987	0.976	0.999	1.031
12	%SHARE	10.36	10.46	10.29	10.29	9.92	10.11	10.17	10.32	10.34	10.43	10.59

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TABLE 2.20 FOREIGN NEW REGISTRATIONS (MILL AUTOS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL FOREIGN NEW REGISTRATIONS	1.952	1.882	1.914	1.991	2.102	2.192	2.234	2.215	2.167	2.247	2.314
2												
3	SUBCOMPACT	1.741	1.708	1.730	1.800	1.893	1.972	1.997	1.973	1.927	2.000	2.064
4	%SHARE	89.18	90.72	90.38	90.38	90.05	89.96	89.40	89.04	88.91	89.00	89.20
5	COMPACT	0.098	0.093	0.089	0.084	0.080	0.076	0.072	0.069	0.065	0.062	0.059
6	%SHARE	5.04	4.97	4.64	4.24	3.81	3.47	3.24	3.10	3.01	2.76	2.55
7	LUXURY	0.113	0.081	0.095	0.107	0.129	0.144	0.165	0.174	0.175	0.185	0.191
8	%SHARE	5.78	4.32	4.98	5.38	6.14	6.57	7.36	7.86	8.08	8.24	8.26
9												
10	FOREIGN MARKET SHARES: % OF TOTAL	17.98	17.80	18.08	18.77	18.62	18.72	18.56	18.81	18.67	19.00	19.21
11	% OF SUBCOMPACT	60.93	61.80	62.06	64.13	64.07	63.95	64.90	64.50	64.03	64.70	65.05
12	% OF COMPACT	4.15	4.02	3.83	3.63	3.20	3.01	2.76	2.66	2.54	2.36	2.19
13	% OF LUXURY	10.89	8.20	9.66	10.78	12.40	13.01	14.17	15.00	15.21	15.64	15.64

TABLE 3.00 GROWTH RATES, NEW REGISTRATIONS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL NEW REGISTRATIONS	1.3	-2.6	0.1	0.2	6.4	3.7	2.8	-2.2	-1.4	1.9	1.9
2												
3	SUBCOMPACT	3.6	-3.3	0.9	0.7	5.3	4.3	-0.2	-0.6	-1.6	2.7	2.7
4												
5	COMPACT	7.3	-1.8	-0.3	0.2	7.8	0.8	3.5	-1.3	-0.6	2.4	2.4
6												
7	MID-SIZE	-2.8	-1.8	-0.3	-0.2	9.1	0.9	3.4	-2.2	-1.1	2.4	2.3
8												
9	FULL SIZE	-0.6	-2.8	0.6	-0.2	3.1	9.9	4.5	-6.7	-3.3	-1.8	-1.9
10												
11	LUXURY	-2.4	-4.3	-0.3	0.6	4.6	6.3	5.0	-0.1	-0.8	2.8	3.2

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TABLE 3.10 GROWTH RATES, DOMESTIC NEW REGISTRATIONS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL DOMESTIC NEW REGISTRATIONS	2.1	-2.4	-0.2	-0.6	6.6	3.6	3.0	-2.5	-1.3	1.4	1.6
2												
3	SUBCOMPACTS	12.4	-5.5	0.2	-4.8	5.5	4.7	-2.8	0.5	-0.3	0.8	1.6
4												
5	COMPACT	7.9	-1.6	-0.1	0.4	8.2	1.0	3.8	-1.2	-0.8	2.6	2.6
6												
7	MID-SIZE	-2.8	-1.8	-0.3	-0.2	9.1	0.9	3.4	-2.2	-1.1	2.4	2.3
8												
9	FULL SIZE	-0.6	-2.8	0.6	-0.2	3.1	9.9	4.5	-6.7	-3.3	-1.8	-1.9
10												
11	LUXURY	-1.5	-1.5	-1.9	-0.6	2.7	5.5	3.6	-1.0	-1.1	2.3	3.2

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TABLE 3.20 GROWTH RATES, FOREIGN NEW REGISTRATIONS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL FOREIGN NEW REGISTRATIONS	-2.0	-3.6	1.7	4.0	5.6	4.2	1.9	-0.8	-2.2	3.7	3.0
2												
3	SUBCOMPACT	-1.3	-1.9	1.3	4.0	5.2	4.1	1.3	-1.2	-2.3	3.8	3.2
4												
5	COMPACT	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
6												
7	LUXURY	-8.5	-27.9	17.4	12.3	20.4	11.5	14.3	5.8	0.6	5.7	3.2

TABLE 4.00 PASSENGER CARS IN OPERATION: YEAR-END (MILL AUTOS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL CARS IN OPERATION YEAR-END	101.314	102.428	103.686	105.056	106.893	109.004	111.404	113.558	115.404	117.019	118.672
2												
3	SUBCOMPACT	20.870	22.330	23.662	24.851	25.985	27.081	28.033	28.868	29.555	30.153	30.735
4	%SHARE	20.60	21.80	22.82	23.65	24.31	24.84	25.16	25.42	25.61	25.77	25.90
5	COMPACT	19.783	20.461	21.105	21.730	22.461	23.134	23.841	24.454	24.995	25.472	25.947
6	%SHARE	19.53	19.98	20.36	20.68	21.01	21.22	21.40	21.54	21.66	21.77	21.86
7	MID-SIZE	24.359	24.880	25.450	26.057	26.858	27.615	28.420	29.110	29.699	30.202	30.711
8	%SHARE	24.04	24.29	24.54	24.80	25.13	25.33	25.51	25.64	25.73	25.81	25.88
9	FULL SIZE	26.959	25.248	23.797	22.582	21.577	20.940	20.608	20.345	20.155	19.973	19.820
10	%SHARE	26.61	24.65	22.95	21.50	20.19	19.21	18.50	17.92	17.46	17.07	16.70
11	LUXURY	9.343	9.509	9.672	9.836	10.012	10.233	10.502	10.763	11.000	11.220	11.458
12	%SHARE	9.22	9.28	9.33	9.36	9.37	9.39	9.43	9.48	9.53	9.59	9.65

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TABLE 4.10 DOMESTIC CARS IN OPERATION: YEAR-END (MILL AUTOS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	DOMESTIC CARS IN OPERATION	86.593	86.890	87.377	87.965	89.007	90.314	91.937	93.371	94.647	95.723	96.848
2												
3	SUBCOMPACTS	7.993	8.685	9.291	9.742	10.128	10.465	10.694	10.880	11.030	11.137	11.241
4	%SHARE	9.23	9.99	10.63	11.07	11.38	11.59	11.63	11.65	11.66	11.63	11.61
5	COMPACTS	18.804	19.456	20.088	20.709	21.448	22.140	22.872	23.516	24.089	24.603	25.116
6	%SHARE	21.71	22.39	22.99	23.54	24.10	24.51	24.88	25.19	25.45	25.70	25.93
7	MID-SIZE	24.359	24.880	25.450	26.057	26.858	27.615	28.420	29.110	29.699	30.202	30.711
8	%SHARE	28.13	28.63	29.13	29.62	30.17	30.58	30.91	31.18	31.38	31.55	31.71
9	FULL SIZE	26.959	25.248	23.797	22.582	21.577	20.940	20.608	20.345	20.155	19.973	19.820
10	%SHARE	31.13	29.06	27.24	25.67	24.24	23.19	22.42	21.79	21.29	20.86	20.46
11	LUXURY	8.478	8.621	8.751	8.874	8.996	9.153	9.342	9.519	9.673	9.809	9.960
12	%SHARE	9.79	9.92	10.01	10.09	10.11	10.13	10.16	10.19	10.22	10.25	10.28

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TABLE 4.20 FOREIGN CARS IN OPERATION: YEAR-END (MILL AUTOS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	FOREIGN CARS IN OPERATION	14.722	15.538	16.309	17.092	17.886	18.690	19.467	20.187	20.757	21.296	21.823
2												
3	SUBCOMPACTS	12.877	13.645	14.370	15.109	15.857	16.616	17.339	17.985	18.525	19.016	19.495
4	%SHARE	87.47	87.82	88.11	88.40	88.66	88.90	89.07	89.18	89.25	89.29	89.33
5	COMPACTS	0.980	1.004	1.018	1.021	1.013	0.994	0.968	0.938	0.906	0.869	0.831
6	%SHARE	6.66	6.46	6.24	5.97	5.66	5.32	4.97	4.65	4.36	4.08	3.81
7	LUXURY	0.865	0.888	0.921	0.961	1.016	1.080	1.160	1.245	1.327	1.411	1.497
8	%SHARE	5.87	5.72	5.65	5.63	5.68	5.78	5.96	6.17	6.39	6.63	6.86
9												
10	FOREIGN SHARES: % OF TOTAL	14.53	15.17	15.73	16.27	16.73	17.15	17.47	17.76	17.99	18.20	18.39
11	% OF SUBCOMPACT	61.70	61.11	60.73	60.80	61.02	61.36	61.85	62.31	62.68	63.06	63.43
12	% OF COMPACT	4.95	4.91	4.82	4.70	4.51	4.30	4.06	3.84	3.62	3.41	3.20
13	% OF LUXURY	9.25	9.34	9.53	9.77	10.15	10.56	11.04	11.56	12.06	12.58	13.07

TABLE 5.00 GROWTH RATES, CARS IN OPERATION: YEAR=END

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL CARS IN OPERATION YEAR=END	1.6	1.1	1.2	1.3	1.7	2.0	2.2	1.9	1.6	1.4	1.4
2												
3	SUBCOMPACT	9.0	7.0	6.0	5.0	4.6	4.2	3.5	3.0	2.4	2.0	1.9
4												
5	COMPACT	4.2	3.4	3.2	3.0	3.4	3.0	3.1	2.6	2.2	1.9	1.9
6												
7	MID=SIZE	2.3	2.1	2.3	2.4	3.1	2.8	2.9	2.4	2.0	1.7	1.7
8												
9	FULL SIZE	=6.2	=6.3	=5.7	=5.1	=4.5	=3.0	=1.6	=1.3	=0.9	=0.9	=0.8
10												
11	LUXURY	2.7	1.8	1.7	1.7	1.8	2.2	2.6	2.5	2.2	2.0	2.1

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TABLE 5.10 GROWTH RATES, DOMESTIC CARS IN OPERATION: YEAR=END

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	DOMESTIC CARS IN OPERATION	0.6	0.3	0.6	0.7	1.2	1.5	1.8	1.6	1.4	1.1	1.2
2												
3	SUBCOMPACTS	11.4	8.6	7.0	4.8	4.0	3.3	2.2	1.7	1.4	1.0	0.9
4												
5	COMPACTS	4.2	3.5	3.2	3.1	3.6	3.2	3.3	2.8	2.4	2.1	2.1
6												
7	MID=SIZE	2.3	2.1	2.3	2.4	3.1	2.8	2.9	2.4	2.0	1.7	1.7
8												
9	FULL SIZE	=6.2	=6.3	=5.7	=5.1	=4.5	=3.0	=1.6	=1.3	=0.9	=0.9	=0.8
10												
11	LUXURY	2.2	1.7	1.5	1.4	1.4	1.7	2.1	1.9	1.6	1.4	1.5

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TABLE 5.20 GROWTH RATES, FOREIGN CARS IN OPERATION: YEAR=END

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	FOREIGN CARS IN OPERATION	7.3	5.5	5.0	4.8	4.6	4.5	4.2	3.6	2.9	2.6	2.5
2												
3	SUBCOMPACTS	7.5	6.0	5.3	5.1	5.0	4.8	4.4	3.7	3.0	2.6	2.5
4												
5	COMPACTS	3.9	2.5	1.3	0.3	=0.8	=1.8	=2.6	=3.1	=3.5	=4.1	=4.3
6												
7	LUXURY	7.7	2.8	3.7	4.3	5.7	6.3	7.3	7.5	6.6	6.4	6.1

TABLE 6.00 CARS IN OPERATION BY AGE: MID YEAR (MILL AUTOS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	CARS IN OPERATION: ALL VINTAGES	100.483	101.827	102.999	104.306	105.914	107.874	110.119	112.377	114.362	116.107	117.750
2												
3	LESS THAN 1 YEAR OLD	5.418	5.277	5.285	5.297	5.635	5.844	6.009	5.879	5.794	5.901	6.011
4	AGE: 1 YEAR OLD	10.662	10.805	10.525	10.542	10.565	11.239	11.656	11.986	11.727	11.557	11.770
5	AGE: 2 YEARS OLD	9.590	10.576	10.719	10.444	10.461	10.483	11.153	11.567	11.895	11.637	11.468
6	AGE: 3 YEARS OLD	8.030	9.461	10.436	10.580	10.310	10.327	10.350	11.012	11.422	11.744	11.488
7	AGE: 4 YEARS OLD	8.309	7.864	9.268	10.228	10.371	10.106	10.124	10.147	10.799	11.199	11.512
8	AGE: 5 YEARS OLD	10.565	8.053	7.624	8.992	9.927	10.066	9.810	9.829	9.855	10.484	10.869
9	AGE: 6 YEARS OLD	9.350	10.082	7.689	7.289	8.600	9.495	9.629	9.387	9.409	9.429	10.027
10	AGE: 7 YEARS OLD	8.202	8.699	9.389	7.174	6.804	8.029	8.866	8.995	8.775	8.789	8.802
11	AGE: 8 YEARS OLD	6.335	7.417	7.875	8.522	6.518	6.182	7.297	8.063	8.188	7.981	7.986
12	AGE: 9 YEARS OLD	6.310	5.505	6.456	6.881	7.455	5.703	5.411	6.393	7.073	7.174	6.982
13	AGE: 10 YEARS OLD	5.132	5.118	4.477	5.280	5.639	6.110	4.677	4.444	5.261	5.810	5.879
14	AGE: 11 YEARS OLD	3.531	3.893	3.893	3.432	4.062	4.338	4.705	3.608	3.438	4.062	4.470
15	AGE: 12 YEARS OLD	2.869	2.589	2.861	2.887	2.557	3.026	3.238	3.515	2.704	2.572	3.026
16	AGE: 13 YEARS OLD	2.232	2.081	1.882	2.100	2.130	1.885	2.234	2.393	2.609	2.004	1.897
17	AGE: 14 YEARS OLD	1.427	1.619	1.513	1.382	1.549	1.371	1.392	1.652	1.776	1.933	1.478
18	AGE: 15 YEARS OLD	0.953	1.035	1.177	1.111	1.019	1.142	1.159	1.030	1.226	1.316	1.426
19	AGE: 16 YEARS OLD	0.616	0.691	0.752	0.864	0.819	0.751	0.843	0.858	0.764	0.909	0.971
20	AGE: 17 YEARS OLD	0.367	0.447	0.503	0.552	0.637	0.604	0.555	0.624	0.636	0.566	0.670
21	AGE: 18 YEARS OLD	0.293	0.266	0.325	0.369	0.407	0.470	0.446	0.410	0.463	0.472	0.418
22	AGE: 19 YEARS OLD	0.190	0.213	0.194	0.239	0.272	0.300	0.347	0.330	0.305	0.343	0.348
23	AGE: 20 YEARS OLD	0.103	0.138	0.155	0.142	0.176	0.201	0.222	0.257	0.248	0.226	0.253

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TABLE 6.10 CARS IN OPERATION: SHARES BY AGE (PERCENT)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	LESS THAN 1 YEAR OLD	5.39	5.18	5.13	5.08	5.32	5.42	5.46	5.23	5.07	5.08	5.10
2	AGE: 1 YEAR OLD	10.61	10.61	10.22	10.11	9.97	10.42	10.58	10.67	10.25	9.95	10.00
3	AGE: 2 YEARS OLD	9.54	10.39	10.41	10.01	9.88	9.72	10.13	10.29	10.40	10.02	9.74
4	AGE: 3 YEARS OLD	7.99	9.29	10.13	10.14	9.73	9.57	9.40	9.80	9.99	10.11	9.76
5	AGE: 4 YEARS OLD	8.27	7.72	9.00	9.81	9.79	9.37	9.19	9.03	9.44	9.65	9.78
6	AGE: 5 YEARS OLD	10.51	7.91	7.40	8.62	9.37	9.33	8.91	8.75	8.62	9.03	9.23
7	AGE: 6 YEARS OLD	9.31	9.90	7.47	6.99	8.12	8.80	8.74	8.35	8.23	8.12	8.52
8	AGE: 7 YEARS OLD	8.16	8.54	9.12	6.88	6.42	7.44	8.05	8.00	7.67	7.57	7.48
9	AGE: 8 YEARS OLD	6.30	7.28	7.65	8.17	6.15	5.73	6.63	7.17	7.16	6.87	6.78
10	AGE: 9 YEARS OLD	6.28	5.41	6.27	6.60	7.04	5.20	4.91	5.69	6.18	6.18	5.93
11	AGE: 10 YEARS OLD	5.11	5.03	4.35	5.06	5.32	5.66	4.25	3.95	4.60	5.00	4.99
12	AGE: 11 YEARS OLD	3.51	3.82	3.78	3.29	3.84	4.02	4.27	3.21	3.01	3.50	3.80
13	AGE: 12 YEARS OLD	2.86	2.54	2.78	2.77	2.41	2.81	2.94	3.13	2.36	2.22	2.57
14	AGE: 13 YEARS OLD	2.22	2.04	1.83	2.01	2.01	1.75	2.03	2.13	2.28	1.73	1.61
15	AGE: 14 YEARS OLD	1.42	1.59	1.47	1.32	1.46	1.46	1.26	1.47	1.55	1.67	1.25
16	AGE: 15 YEARS OLD	0.95	1.02	1.14	1.06	0.96	1.06	1.05	0.92	1.07	1.13	1.21
17	AGE: 16 YEARS OLD	0.61	0.68	0.73	0.83	0.77	0.70	0.77	0.76	0.67	0.78	0.82
18	AGE: 17 YEARS OLD	0.37	0.44	0.49	0.53	0.60	0.56	0.50	0.56	0.56	0.49	0.57
19	AGE: 18 YEARS OLD	0.29	0.26	0.32	0.35	0.38	0.44	0.40	0.37	0.40	0.41	0.35
20	AGE: 19 YEARS OLD	0.19	0.21	0.19	0.23	0.26	0.28	0.32	0.29	0.27	0.30	0.30
21	AGE: 20 YEARS OLD	0.10	0.14	0.15	0.14	0.17	0.19	0.20	0.23	0.21	0.19	0.21

TABLE 7.00 GROWTH RATES, CARS IN OPERATION, MID-YEAR

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	CARS IN OPERATION, ALL VINTAGES	1.8	1.3	1.2	1.3	1.5	1.9	2.1	2.1	1.8	1.5	1.4
2												
3	LESS THAN 1 YEAR OLD	1.3	-2.6	0.2	0.2	6.4	3.7	2.8	-2.2	-1.4	1.8	1.9
4	AGE: 1 YEAR OLD	10.3	1.3	-2.6	0.2	0.2	6.4	3.7	2.8	-2.2	-1.4	1.8
5	AGE: 2 YEARS OLD	17.9	10.3	1.3	-2.6	0.2	0.2	6.4	3.7	2.8	-2.2	-1.5
6	AGE: 3 YEARS OLD	-5.3	17.8	10.3	1.4	-2.6	0.2	0.2	6.4	3.7	2.8	-2.2
7	AGE: 4 YEARS OLD	-23.7	-5.4	17.9	10.4	1.4	-2.6	0.2	0.2	6.4	3.7	2.8
8	AGE: 5 YEARS OLD	7.9	-23.8	-5.3	17.9	10.4	1.4	-2.5	0.2	0.3	6.4	3.7
9	AGE: 6 YEARS OLD	6.2	7.8	-23.7	-5.2	18.0	10.4	1.4	-2.5	0.2	0.2	6.3
10	AGE: 7 YEARS OLD	17.3	6.1	7.9	-23.6	-5.2	18.0	10.4	1.5	-2.4	0.2	0.1
11	AGE: 8 YEARS OLD	-12.5	17.1	6.2	8.2	-23.5	-5.2	18.0	10.5	1.6	-2.5	0.1
12	AGE: 9 YEARS OLD	0.2	-12.8	17.3	6.6	8.4	-23.5	-5.1	18.1	10.6	1.4	-2.7
13	AGE: 10 YEARS OLD	11.0	-0.3	-12.5	17.9	6.8	8.4	-23.5	-5.0	18.4	10.4	1.2
14	AGE: 11 YEARS OLD	-9.0	10.2	0.0	-11.8	18.4	6.8	8.5	-23.3	-4.7	18.2	10.0
15	AGE: 12 YEARS OLD	-5.9	-9.8	10.5	0.9	-11.4	18.4	6.9	8.7	-23.1	-4.9	17.6
16	AGE: 13 YEARS OLD	14.5	-6.8	-9.5	11.6	1.4	-11.5	18.5	7.1	9.0	-23.2	-5.3
17	AGE: 14 YEARS OLD	9.5	13.5	-6.5	-8.7	12.1	1.4	-11.4	18.7	7.5	8.9	-23.6
18	AGE: 15 YEARS OLD	13.2	8.6	13.8	-5.6	-8.3	12.1	1.5	-11.2	19.1	7.3	8.3
19	AGE: 16 YEARS OLD	22.7	12.2	8.8	14.8	-5.2	-8.3	12.2	1.7	-10.9	18.9	6.8
20	AGE: 17 YEARS OLD	-8.2	21.6	12.5	9.9	15.4	-5.2	-8.2	12.5	2.0	-11.0	18.4
21	AGE: 18 YEARS OLD	13.0	-9.1	22.0	13.5	10.4	15.4	-5.1	-8.0	12.8	1.9	-11.5
22	AGE: 19 YEARS OLD	34.3	12.0	-8.8	23.1	14.1	10.4	15.5	-4.9	-7.7	12.7	1.4
23	AGE: 20 YEARS OLD	-20.2	33.1	12.3	-8.0	23.7	14.1	10.5	15.7	-4.6	-7.8	12.1

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TABLE 7.10 GROWTH RATES, CARS IN OPERATION, SHARES BY AGE

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	LESS THAN 1 YEAR OLD	-0.4	-3.9	-1.0	-1.0	4.8	1.8	0.7	-4.1	-3.2	0.3	0.4
2	AGE: 1 YEAR OLD	8.4	-0.0	-3.7	-1.1	-1.3	4.5	1.6	0.8	-3.9	-2.9	0.4
3	AGE: 2 YEARS OLD	15.8	8.8	0.2	-3.8	-1.4	-1.6	4.2	1.6	1.0	-3.6	-2.8
4	AGE: 3 YEARS OLD	-7.0	16.3	9.1	0.1	-4.0	-1.7	-1.8	4.3	1.9	1.3	-3.5
5	AGE: 4 YEARS OLD	-25.1	-6.6	16.5	9.0	-0.1	-4.3	-1.9	-1.8	4.6	2.1	1.4
6	AGE: 5 YEARS OLD	6.0	-24.8	-6.4	16.5	8.7	-0.4	-4.5	-1.8	-1.5	4.8	2.2
7	AGE: 6 YEARS OLD	4.4	6.4	-24.6	-6.4	16.2	8.4	-0.7	-4.5	-1.5	-1.3	4.9
8	AGE: 7 YEARS OLD	15.3	4.7	6.7	-24.6	-6.6	15.9	8.2	-0.6	-4.1	-1.3	-1.2
9	AGE: 8 YEARS OLD	-14.0	15.5	5.0	6.9	-24.7	-6.9	15.6	8.3	-0.2	-4.0	-1.3
10	AGE: 9 YEARS OLD	-1.6	-13.9	15.9	5.2	6.7	-24.9	-7.0	15.8	8.7	-0.1	-4.0
11	AGE: 10 YEARS OLD	9.1	-1.6	-13.5	16.5	5.2	6.4	-25.0	-6.9	16.3	8.8	-0.2
12	AGE: 11 YEARS OLD	-10.6	8.8	-1.1	-13.0	16.6	4.9	6.2	-24.9	-6.4	16.4	8.5
13	AGE: 12 YEARS OLD	-7.6	-11.0	9.3	-0.4	-12.8	16.2	4.7	6.5	-24.4	-6.3	16.0
14	AGE: 13 YEARS OLD	12.5	-8.0	-10.6	10.2	-0.1	-13.1	16.1	5.0	7.1	-24.4	-6.6
15	AGE: 14 YEARS OLD	7.6	12.0	-7.6	-9.8	10.4	-0.3	-13.2	16.3	5.6	7.2	-24.6
16	AGE: 15 YEARS OLD	11.2	7.1	12.5	-6.8	-9.6	10.1	-0.6	-13.0	17.0	5.7	6.8
17	AGE: 16 YEARS OLD	20.6	10.7	7.6	13.4	-6.6	-9.9	9.9	-0.4	-12.4	17.1	5.3
18	AGE: 17 YEARS OLD	-9.8	20.0	11.2	8.5	13.6	-6.9	-10.0	10.2	0.3	-12.4	16.7
19	AGE: 18 YEARS OLD	11.0	-10.3	20.6	12.1	8.7	13.3	-7.0	-9.8	10.9	0.3	-12.7
20	AGE: 19 YEARS OLD	31.9	10.5	-9.9	21.6	12.4	8.4	13.1	-6.8	-9.3	11.0	-0.0
21	AGE: 20 YEARS OLD	-21.6	31.3	11.0	-9.1	21.8	12.0	8.2	13.4	-6.2	-9.2	10.6

TABLE 8.00 SCRAPPAGE (MILL AUTOS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL SCRAPPAGE DOMESTIC AND FOREIGN	9.303	9.461	9.331	9.242	9.452	9.597	9.639	9.644	9.742	10.208	10.390
2												
3	SUBCOMPACT DOMESTIC	0.296	0.364	0.451	0.556	0.676	0.775	0.851	0.900	0.932	0.984	1.005
4	SUBCOMPACT FOREIGN	0.842	0.939	1.005	1.061	1.145	1.213	1.274	1.327	1.387	1.509	1.585
5	SUBCOMPACT TOTAL	1.138	1.304	1.456	1.618	1.821	1.988	2.124	2.227	2.319	2.493	2.590
6												
7	COMPACT DOMESTIC	1.509	1.581	1.600	1.620	1.687	1.758	1.811	1.869	1.929	2.054	2.121
8	COMPACT FOREIGN	0.061	0.069	0.075	0.081	0.089	0.094	0.098	0.099	0.098	0.099	0.096
9	COMPACT TOTAL	1.570	1.650	1.675	1.701	1.775	1.853	1.910	1.969	2.027	2.153	2.217
10												
11	MID-SIZE	2.241	2.229	2.171	2.129	2.184	2.253	2.308	2.355	2.424	2.582	2.646
12												
13	FULL SIZE	3.561	3.454	3.204	2.964	2.808	2.619	2.403	2.195	2.058	2.016	1.953
14												
15	LUXURY DOMESTIC	0.742	0.767	0.763	0.763	0.790	0.805	0.808	0.810	0.821	0.863	0.879
16	LUXURY FOREIGN	0.051	0.057	0.062	0.067	0.074	0.080	0.085	0.089	0.093	0.101	0.105
17	LUXURY TOTAL	0.793	0.824	0.825	0.830	0.864	0.885	0.893	0.899	0.914	0.964	0.984

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TABLE 8.10 GROWTH RATES, SCRAPPAGE

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL SCRAPPAGE DOMESTIC AND FOREIGN	6.4	1.7	-1.4	-1.0	2.3	1.5	0.4	0.1	1.0	4.8	1.8
2												
3	SUBCOMPACT DOMESTIC	22.0	23.1	23.8	23.4	21.4	14.7	9.8	5.8	3.6	5.6	2.1
4	SUBCOMPACT FOREIGN	17.1	11.6	7.0	5.6	7.9	5.9	5.0	4.2	4.5	8.8	5.1
5	SUBCOMPACT TOTAL	18.3	14.6	11.7	11.1	12.6	9.2	6.9	4.8	4.1	7.5	3.9
6												
7	COMPACT DOMESTIC	9.0	4.8	1.2	1.3	4.1	4.3	3.0	3.2	3.2	6.5	3.3
8	COMPACT FOREIGN	17.8	12.5	8.9	7.4	9.5	6.6	4.1	0.9	-1.5	1.1	-2.5
9	COMPACT TOTAL	9.3	5.1	1.5	1.5	4.4	4.4	3.1	3.1	3.0	6.2	3.0
10												
11	MID-SIZE	3.8	-0.6	-2.6	-1.9	2.6	3.2	2.4	2.0	2.9	6.5	2.5
12												
13	FULL SIZE	2.9	-3.0	-7.2	-7.5	-5.3	-6.8	-8.2	-8.7	-6.3	-2.0	-3.2
14												
15	LUXURY DOMESTIC	8.7	3.3	-0.5	0.1	3.5	1.9	0.4	0.2	1.4	5.1	1.9
16	LUXURY FOREIGN	18.0	13.3	8.5	7.8	10.2	8.0	6.5	4.8	4.3	8.2	4.1
17	LUXURY TOTAL	9.3	3.9	0.1	0.7	4.0	2.4	1.0	0.7	1.7	5.4	2.1

TABLE 9.00 MISCELLANEOUS MARKET VARIABLES

LINE	ITEM		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	LONG-RUN EQUILIBRIUM (DESIRED) VALUES												
2	DESIRED STOCK	MILL AUTOS	97,830	100,367	102,697	104,335	106,491	108,947	111,599	112,707	113,843	115,924	117,975
3	DESIRED STOCK PER DRIVER	AUTOS	0,693	0,696	0,698	0,696	0,698	0,703	0,710	0,707	0,704	0,706	0,710
4													
5	DESIRED SHARE BY SIZE-CLASS (PERCENT)												
6	TOTAL DOMESTIC		86,06	86,21	85,85	85,23	85,18	84,95	84,93	84,69	84,71	84,43	84,25
7	SUBCOMPACT		11,00	10,82	11,00	10,94	11,04	11,19	10,91	11,05	11,10	11,02	10,98
8	COMPACT		18,60	18,87	18,97	19,11	19,50	19,26	19,51	19,71	19,92	20,07	20,22
9	MID-SIZE		24,21	24,46	24,56	24,67	25,17	25,02	25,23	25,29	25,41	25,51	25,60
10	FULL SIZE		23,67	23,41	22,74	21,96	21,06	21,00	20,75	20,06	19,68	19,20	18,75
11	LUXURY		8,57	8,65	8,58	8,55	8,40	8,49	8,53	8,58	8,61	8,63	8,69
12													
13	TOTAL FOREIGN		13,94	13,79	14,15	14,77	14,82	15,05	15,07	15,31	15,29	15,57	15,77
14	SUBCOMPACT		12,22	12,26	12,55	13,12	13,14	13,34	13,29	13,47	13,44	13,70	13,91
15	COMPACT AND LUXURY		1,72	1,53	1,60	1,65	1,68	1,71	1,77	1,84	1,85	1,87	1,86
16													
17	AVG AGE OF AUTO STOCK	YEARS	5,731	5,724	5,727	5,741	5,744	5,721	5,691	5,680	5,696	5,719	5,734
18													
19	YEAR-END STOCK PER FAMILY	AUTOS	1,269	1,258	1,250	1,243	1,242	1,244	1,250	1,253	1,254	1,253	1,253
20	VEHICLE MILES PER AUTO: TOTAL	MILES	11,22	11,29	11,34	11,39	11,45	11,52	11,58	11,64	11,71	11,78	11,85
21	URBAN	MILES	6,467	6,513	6,552	6,582	6,620	6,664	6,711	6,755	6,800	6,845	6,888
22	RURAL	MILES	4,751	4,773	4,791	4,807	4,832	4,851	4,868	4,884	4,909	4,936	4,961
23	NEW REGIS. TO BEGINNING STOCK	RATIO	0,109	0,104	0,103	0,102	0,107	0,110	0,110	0,106	0,102	0,102	0,103
24	SCRAPPAGE TO BEGINNING STOCK	RATIO	0,093	0,093	0,091	0,089	0,090	0,090	0,088	0,087	0,086	0,088	0,089

TABLE 9.10 GROWTH RATES, MISCELLANEOUS MARKET VARIABLES

LINE	ITEM		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	LONG-RUN EQUILIBRIUM (DESIRED) VALUES												
2	DESIRED STOCK	MILL AUTOS	2,3	2,6	2,3	1,6	2,1	2,3	2,4	1,0	1,0	1,8	1,8
3	DESIRED STOCK PER DRIVER	AUTOS	-0,1	0,4	0,3	-0,2	0,3	0,7	0,9	-0,4	-0,5	0,4	0,5
4													
5	DESIRED SHARE BY SIZE-CLASS (PERCENT)												
6	TOTAL DOMESTIC		1,2	0,2	-0,4	-0,7	-0,1	-0,3	-0,0	-0,3	0,0	-0,3	-0,2
7	SUBCOMPACT		7,2	-1,7	1,7	-0,6	0,9	1,4	-2,5	1,2	0,5	-0,7	-0,3
8	COMPACT		2,2	1,5	0,5	0,8	2,0	-1,3	1,3	1,0	1,1	0,8	0,7
9	MID-SIZE		3,6	1,0	0,4	0,5	2,0	-0,6	0,8	0,3	0,5	0,4	0,3
10	FULL SIZE		-3,2	-1,1	-2,9	-3,4	-4,1	-0,3	-1,2	-3,3	-1,9	-2,4	-2,4
11	LUXURY		-2,3	0,9	-0,8	-0,3	-1,8	1,0	0,6	0,6	0,3	0,2	0,7
12													
13	TOTAL FOREIGN		-6,6	-1,1	2,6	4,4	0,4	1,5	0,1	1,6	-0,2	1,9	1,3
14	SUBCOMPACT		-6,3	0,3	2,4	4,5	0,1	1,5	-0,4	1,3	-0,3	2,0	1,5
15	COMPACT AND LUXURY		-8,9	-11,0	4,3	3,1	2,3	1,5	3,8	3,6	0,6	0,9	-0,3
16													
17	AVG AGE OF AUTO STOCK	YEARS	-0,2	-0,1	0,0	0,2	0,1	-0,4	-0,5	-0,2	0,3	0,4	0,3
18													
19	YEAR-END STOCK PER FAMILY	AUTOS	-0,4	-0,8	-0,7	-0,6	-0,1	0,2	0,5	0,3	0,1	-0,1	-0,0
20	VEHICLE MILES PER AUTO: TOTAL	MILES	0,8	0,6	0,5	0,4	0,5	0,6	0,6	0,5	0,6	0,6	0,6
21	URBAN	MILES	0,9	0,7	0,6	0,5	0,6	0,7	0,7	0,6	0,7	0,7	0,6
22	RURAL	MILES	0,7	0,5	0,4	0,3	0,5	0,4	0,4	0,3	0,5	0,5	0,5
23	NEW REGIS. TO BEGINNING STOCK	RATIO		-4,1	-0,9	-1,0	5,0	1,9	0,8	-4,3	-3,3	0,2	0,4
24	SCRAPPAGE TO BEGINNING STOCK	RATIO		0,1	-2,4	-2,2	0,9	-0,2	-1,5	-2,1	-0,9	3,1	0,4

TABLE 10.00 DOMESTIC AUTO PRICES (DOLLARS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL AUTO PRICES:											
2	SUBCOMPACT	4782.	5262.	5779.	6357.	6956.	7588.	8418.	9100.	9785.	10456.	11138.
3	COMPACT	5908.	6474.	7073.	7742.	8427.	9350.	10092.	10843.	11585.	12314.	13058.
4	MID-SIZE	6967.	7593.	8271.	9033.	9814.	10868.	11710.	12555.	13391.	14211.	15047.
5	FULL SIZE	7391.	8081.	8800.	9628.	10765.	11648.	12563.	13478.	14385.	15273.	16178.
6	LUXURY	11217.	12234.	13298.	14534.	16112.	17415.	18771.	20125.	21469.	22791.	24141.
7												
8	STATE AND LOCAL TAXES:											
9	SUBCOMPACT	212.	241.	272.	307.	345.	387.	440.	488.	537.	588.	644.
10	COMPACT	262.	295.	331.	373.	418.	477.	529.	583.	638.	696.	759.
11	MID-SIZE	310.	348.	390.	439.	490.	558.	618.	679.	743.	808.	881.
12	FULL SIZE	329.	371.	416.	469.	540.	600.	665.	731.	801.	871.	950.
13	LUXURY	507.	570.	638.	717.	818.	909.	1006.	1106.	1210.	1317.	1436.
14												
15	TRANSPORTATION CHARGES:											
16	SUBCOMPACT	204.	229.	256.	288.	325.	366.	410.	454.	500.	547.	590.
17	COMPACT	262.	299.	339.	373.	406.	441.	478.	514.	551.	587.	620.
18	MID-SIZE	273.	307.	343.	373.	406.	441.	478.	514.	551.	587.	620.
19	FULL SIZE	293.	317.	343.	373.	406.	441.	478.	514.	551.	587.	620.
20	LUXURY	293.	317.	343.	373.	406.	441.	478.	514.	551.	587.	620.
21												
22	BASE PRICE: FIXED WTD AVERAGE TOTAL	5372.	5878.	6404.	7021.	7651.	8292.	8960.	9632.	10298.	10945.	11603.
23	SUBCOMPACT	3876.	4235.	4609.	5049.	5498.	5956.	6593.	7088.	7578.	8050.	8535.
24	COMPACT	4476.	4892.	5325.	5835.	6354.	7089.	7651.	8223.	8789.	9339.	9900.
25	MID-SIZE	5242.	5691.	6180.	6754.	7339.	8175.	8807.	9445.	10076.	10691.	11318.
26	FULL SIZE	5499.	6019.	6561.	7195.	8116.	8789.	9488.	10189.	10883.	11559.	12248.
27	LUXURY	8970.	9794.	10657.	11669.	12999.	14064.	15172.	16279.	17376.	18452.	19547.
28												
29	MAX OPTIONS PRICE: FIXED WTD AVERAGE	1490.	1590.	1690.	1801.	1910.	2018.	2127.	2233.	2336.	2435.	2534.
30	SUBCOMPACT	1373.	1465.	1558.	1660.	1761.	1860.	1960.	2059.	2154.	2245.	2336.
31	COMPACT	1443.	1540.	1637.	1745.	1851.	1955.	2060.	2164.	2264.	2360.	2455.
32	MID-SIZE	1515.	1616.	1718.	1831.	1942.	2052.	2162.	2271.	2376.	2476.	2576.
33	FULL SIZE	1510.	1612.	1713.	1826.	1936.	2046.	2156.	2264.	2369.	2469.	2569.
34	LUXURY	1540.	1643.	1747.	1862.	1975.	2086.	2199.	2309.	2416.	2518.	2620.
35												
36	VALUE OF OPTIONS INSTALLED:											
37	SUBCOMPACT	489.	557.	642.	712.	787.	880.	975.	1070.	1169.	1272.	1369.
38	COMPACT	908.	988.	1077.	1161.	1249.	1342.	1434.	1523.	1607.	1692.	1779.
39	MID-SIZE	1142.	1246.	1357.	1467.	1579.	1694.	1807.	1917.	2021.	2125.	2229.
40	FULL SIZE	1269.	1373.	1481.	1591.	1703.	1817.	1932.	2044.	2151.	2256.	2361.
41	LUXURY	1448.	1553.	1660.	1775.	1888.	2001.	2115.	2225.	2332.	2435.	2538.

TABLE 11.00 GROWTH RATES, DOMESTIC AUTO PRICES

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL AUTO PRICES:											
2	SUBCOMPACT	9.0	10.0	9.8	10.0	9.4	9.1	10.9	8.1	7.3	6.9	6.5
3	COMPACT	9.1	9.6	9.3	9.5	8.9	10.9	7.9	7.4	6.8	6.3	6.0
4	MID-SIZE	9.3	9.0	8.9	9.2	8.6	10.7	7.7	7.2	6.7	6.1	5.9
5	FULL SIZE	9.3	9.3	8.9	9.4	11.8	8.2	7.9	7.3	6.7	6.2	5.9
6	LUXURY	9.0	9.1	8.7	9.3	10.9	8.1	7.8	7.2	6.7	6.2	5.9
7												
8	STATE AND LOCAL TAXES:											
9	SUBCOMPACT	12.1	13.3	13.0	13.1	12.3	11.9	13.9	10.8	10.1	9.4	9.5
10	COMPACT	12.1	12.7	12.3	12.6	11.9	14.1	10.9	10.2	9.6	8.9	9.1
11	MID-SIZE	12.5	12.2	12.1	12.4	11.7	13.9	10.7	10.0	9.4	8.7	9.0
12	FULL SIZE	12.7	12.7	12.2	12.6	15.1	11.2	10.8	10.0	9.5	8.8	9.0
13	LUXURY	12.4	12.4	12.0	12.5	14.1	11.1	10.7	10.0	9.4	8.8	9.0
14												
15	TRANSPORTATION CHARGES:											
16	SUBCOMPACT	16.1	12.0	11.6	12.8	12.9	12.5	12.0	10.8	10.0	9.4	7.9
17	COMPACT	18.8	13.9	13.5	9.9	8.9	8.7	8.3	7.6	7.0	6.6	5.6
18	MID-SIZE	16.7	12.5	11.6	8.8	8.9	8.7	8.3	7.6	7.0	6.6	5.6
19	FULL SIZE	10.8	8.2	8.0	8.8	8.9	8.7	8.3	7.6	7.0	6.6	5.6
20	LUXURY	10.8	8.2	8.0	8.8	8.9	8.7	8.3	7.6	7.0	6.6	5.6
21												
22	BASE PRICE: FIXED WTD AVERAGE TOTAL	9.0	9.4	9.0	9.6	9.0	8.4	8.1	7.5	6.9	6.3	6.0
23	SUBCOMPACT	8.5	9.3	8.8	9.6	8.9	8.3	10.7	7.5	6.9	6.2	6.0
24	COMPACT	8.7	9.3	8.9	9.6	8.9	11.6	7.9	7.5	6.9	6.3	6.0
25	MID-SIZE	9.0	8.6	8.6	9.3	8.7	11.4	7.7	7.2	6.7	6.1	5.9
26	FULL SIZE	9.4	9.5	9.0	9.7	12.8	8.3	8.0	7.4	6.8	6.2	6.0
27	LUXURY	9.1	9.2	8.8	9.5	11.4	8.2	7.9	7.3	6.7	6.2	5.9
28												
29	MAX OPTIONS PRICE: FIXED WTD AVERAGE	6.6	6.7	6.3	6.6	6.1	5.6	5.4	5.0	4.6	4.2	4.0
30	SUBCOMPACT	6.6	6.7	6.3	6.6	6.1	5.6	5.4	5.0	4.6	4.2	4.0
31	COMPACT	6.6	6.7	6.3	6.6	6.1	5.6	5.4	5.0	4.6	4.2	4.0
32	MID-SIZE	6.6	6.7	6.3	6.6	6.1	5.6	5.4	5.0	4.6	4.2	4.0
33	FULL SIZE	6.6	6.7	6.3	6.6	6.1	5.6	5.4	5.0	4.6	4.2	4.0
34	LUXURY	6.6	6.7	6.3	6.6	6.1	5.6	5.4	5.0	4.6	4.2	4.0
35												
36	VALUE OF OPTIONS INSTALLED:											
37	SUBCOMPACT	8.6	13.8	15.3	10.9	10.5	11.8	10.8	9.7	9.3	8.8	7.6
38	COMPACT	7.6	8.8	9.0	7.8	7.6	7.4	6.9	6.2	5.5	5.3	5.1
39	MID-SIZE	8.5	9.1	8.9	8.1	7.6	7.2	6.7	6.1	5.5	5.1	4.9
40	FULL SIZE	7.8	8.2	7.8	7.5	7.0	6.7	6.3	5.8	5.3	4.9	4.7
41	LUXURY	7.0	7.3	6.9	6.9	6.4	6.0	5.7	5.2	4.8	4.4	4.2

TABLE 12.00 FOREIGN AUTO PRICES (DOLLARS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL AUTO PRICES:											
2	SUBCOMPACT	5666.	6150.	6644.	7157.	7711.	8295.	9056.	9657.	10291.	10893.	11499.
3	COMPACT	9556.	10364.	11157.	12007.	12924.	14102.	15066.	16030.	17045.	17992.	18990.
4	LUXURY	19417.	21492.	23574.	25875.	28407.	31306.	34037.	36819.	39828.	42648.	45678.
5												
6	STATE AND LOCAL TAXES:											
7	SUBCOMPACT	253.	283.	314.	348.	385.	424.	475.	519.	566.	613.	666.
8	COMPACT	431.	481.	534.	591.	654.	733.	804.	877.	956.	1034.	1124.
9	LUXURY	888.	1013.	1145.	1293.	1460.	1654.	1847.	2050.	2275.	2497.	2752.
10												
11	TRANSPORTATION CHARGES:											
12	SUBCOMPACT	206.	230.	257.	290.	327.	368.	412.	457.	503.	550.	581.
13	COMPACT	259.	293.	317.	346.	378.	412.	447.	481.	515.	550.	581.
14	LUXURY	270.	293.	317.	346.	378.	412.	447.	481.	515.	550.	581.
15												
16	BASE PRICES:											
17	SUBCOMPACT	4718.	5080.	5431.	5808.	6213.	6622.	7194.	7611.	8053.	8457.	8882.
18	COMPACT	7958.	8601.	9229.	9909.	10643.	11616.	12381.	13148.	13966.	14715.	15506.
19	LUXURY	16811.	18632.	20451.	22461.	24681.	27239.	29628.	32062.	34705.	37166.	39807.

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TABLE 12.10 GROWTH RATES, FOREIGN AUTO PRICES

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL AUTO PRICES:											
2	SUBCOMPACT	13.4	8.5	8.0	7.7	7.7	7.6	9.2	6.6	6.6	5.8	5.6
3	COMPACT	13.7	8.5	7.7	7.6	7.6	9.1	6.8	6.4	6.3	5.6	5.6
4	LUXURY	17.1	10.7	9.7	9.8	9.8	10.2	8.7	8.2	8.2	7.1	7.1
5												
6	STATE AND LOCAL TAXES:											
7	SUBCOMPACT	16.9	11.8	11.1	10.7	10.6	10.3	12.0	9.2	9.1	8.3	8.6
8	COMPACT	17.2	11.7	10.9	10.7	10.6	12.1	9.7	9.1	9.0	8.2	8.6
9	LUXURY	20.9	14.1	13.0	13.0	12.9	13.3	11.7	11.0	11.0	9.8	10.2
10												
11	TRANSPORTATION CHARGES:											
12	SUBCOMPACT	16.1	12.0	11.6	12.8	12.9	12.5	12.0	10.8	10.0	9.4	5.8
13	COMPACT	18.2	13.2	8.2	9.1	9.2	8.9	8.5	7.7	7.2	6.7	5.7
14	LUXURY	11.2	8.5	8.2	9.1	9.2	8.9	8.5	7.7	7.2	6.7	5.7
15												
16	BASE PRICES:											
17	SUBCOMPACT	13.6	7.7	6.9	6.9	7.0	6.6	8.6	5.8	5.8	5.0	5.0
18	COMPACT	14.1	8.1	7.3	7.4	7.4	9.1	6.6	6.2	6.2	5.4	5.4
19	LUXURY	18.0	10.8	9.8	9.8	9.9	10.4	8.8	8.2	8.2	7.1	7.1

TABLE 13.00 CAPITALIZED COSTS PER MILE (DOLLARS PER MILE)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	AVG NOMINAL CAP. COST PER MILE	0.249	0.269	0.292	0.316	0.342	0.368	0.395	0.422	0.451	0.479	0.508
2												
3	AVG REAL CAP. COST PER MILE	0.160	0.160	0.160	0.161	0.162	0.164	0.165	0.167	0.170	0.172	0.174
4												
5	CAPITALIZED COST PER MILE BY SIZE:											
6	SUBCOMPACTS	0.200	0.219	0.238	0.258	0.279	0.301	0.325	0.348	0.372	0.395	0.420
7	COMPACTS	0.229	0.247	0.269	0.291	0.314	0.341	0.365	0.390	0.416	0.443	0.470
8	MID-SIZE	0.253	0.274	0.297	0.321	0.345	0.374	0.400	0.427	0.456	0.484	0.514
9	FULL SIZE	0.268	0.290	0.314	0.339	0.370	0.396	0.424	0.453	0.483	0.514	0.545
10	LUXURY	0.352	0.378	0.413	0.449	0.493	0.532	0.573	0.614	0.657	0.700	0.743
11												
12	CAP. COST PER MILE BY FOR/DOM:											
13	TOTAL DOMESTIC	0.251	0.272	0.295	0.320	0.346	0.373	0.401	0.428	0.457	0.486	0.515
14	SUBCOMPACT	0.195	0.213	0.232	0.252	0.274	0.296	0.321	0.344	0.369	0.394	0.419
15	COMPACT	0.227	0.245	0.267	0.289	0.312	0.338	0.362	0.388	0.414	0.441	0.468
16	LUXURY	0.339	0.367	0.398	0.431	0.470	0.505	0.540	0.576	0.614	0.652	0.692
17												
18	TOTAL FOREIGN	0.222	0.238	0.261	0.283	0.309	0.334	0.364	0.391	0.419	0.446	0.473
19	SUBCOMPACT	0.204	0.222	0.241	0.261	0.282	0.303	0.327	0.350	0.373	0.397	0.420
20	COMPACT	0.277	0.301	0.326	0.352	0.380	0.412	0.440	0.468	0.499	0.528	0.559
21	LUXURY	0.454	0.500	0.548	0.600	0.657	0.717	0.773	0.831	0.894	0.955	1.020

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TABLE 13.10 GROWTH RATES, CAPITALIZED COSTS PER MILE

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	AVG NOMINAL CAP. COST PER MILE	8.0	8.2	8.5	8.0	8.2	7.8	7.3	6.9	6.7	6.3	6.1
2												
3	AVG REAL CAP. COST PER MILE	0.4	-0.0	0.3	0.3	1.0	0.9	0.9	1.1	1.5	1.3	1.3
4												
5	CAPITALIZED COST PER MILE BY SIZE:											
6	SUBCOMPACTS	9.6	9.1	8.8	8.3	8.3	7.7	8.1	7.0	6.9	6.4	6.2
7	COMPACTS	8.0	7.8	8.9	8.2	7.8	8.5	7.0	7.0	6.8	6.3	6.2
8	MID-SIZE	6.8	8.3	8.3	8.0	7.6	8.2	7.0	6.9	6.7	6.3	6.1
9	FULL SIZE	8.2	8.0	8.5	7.9	9.1	7.0	6.9	6.9	6.7	6.3	6.1
10	LUXURY	9.1	7.4	9.2	8.8	9.9	7.9	7.6	7.3	6.9	6.5	6.2
11												
12	CAP. COST PER MILE BY FOR/DOM:											
13	TOTAL DOMESTIC	7.1	8.3	8.5	8.2	8.1	8.1	7.3	6.8	6.7	6.3	6.1
14	SUBCOMPACT	8.4	9.3	9.2	8.7	8.6	7.9	8.4	7.4	7.1	6.7	6.4
15	COMPACT	7.9	7.7	9.0	8.2	7.9	8.5	7.1	7.0	6.8	6.4	6.2
16	LUXURY	8.5	8.1	8.6	8.2	9.2	7.3	6.9	6.8	6.6	6.2	6.0
17												
18	TOTAL FOREIGN	10.5	7.2	9.4	8.6	9.1	8.3	8.9	7.5	7.1	6.4	6.1
19	SUBCOMPACT	10.5	8.9	8.6	8.0	8.1	7.6	7.9	6.8	6.7	6.2	6.0
20	COMPACT	11.4	8.8	8.3	8.0	8.0	8.3	6.7	6.5	6.5	5.9	5.9
21	LUXURY	14.5	10.3	9.5	9.5	9.4	9.2	7.8	7.5	7.6	6.8	6.8

TABLE 14.00 MILES PER GALLON (WEFA)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	OVERALL FLEET MILES PER GALLON	13.73	13.92	14.21	14.57	15.12	15.75	16.44	17.14	17.89	18.61	19.26
2												
3	NEW AUTO MILES PER GALLON:											
4	TOTAL DOMESTIC AND FOREIGN	13.78	14.47	15.02	16.34	17.58	18.82	19.64	19.99	19.98	20.01	20.02
5	SUBCOMPACT	19.44	19.78	20.33	21.86	22.99	24.19	25.18	25.46	25.45	25.46	25.46
6	COMPACT	14.02	15.16	15.56	16.84	18.09	19.34	20.20	20.53	20.53	20.52	20.52
7	MID-SIZE	12.50	13.04	13.69	14.93	16.28	17.63	18.45	18.71	18.71	18.70	18.70
8	FULL SIZE	11.57	12.27	12.77	13.98	15.13	16.39	17.22	17.55	17.55	17.54	17.54
9	LUXURY	11.13	11.72	12.17	13.34	14.36	15.31	16.08	16.43	16.43	16.45	16.44
10												
11	TOTAL DOMESTIC	12.89	13.61	14.15	15.38	16.64	17.87	18.69	19.03	19.04	19.04	19.04
12	SUBCOMPACT	17.89	18.26	18.78	20.23	21.40	22.74	23.78	24.11	24.11	24.10	24.10
13	COMPACT	13.90	15.07	15.47	16.76	18.03	19.29	20.16	20.50	20.49	20.49	20.49
14	LUXURY	10.75	11.45	11.84	12.96	13.92	14.84	15.56	15.88	15.87	15.87	15.87
15												
16	TOTAL FOREIGN	20.04	20.41	20.91	22.36	23.40	24.47	25.32	25.55	25.53	25.53	25.55
17	SUBCOMPACT	20.58	20.85	21.40	22.90	23.99	25.10	26.01	26.27	26.27	26.26	26.26
18	COMPACT	17.56	17.76	18.17	19.38	20.24	21.11	21.80	21.95	21.95	21.94	21.94
19	LUXURY	15.63	15.95	16.41	17.61	18.53	19.46	20.22	20.48	20.47	20.47	20.47

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TABLE 14.10 NEW AUTO MILES PER GALLON (EPA)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL DOMESTIC AND FOREIGN	19.43	20.33	21.17	23.24	25.23	27.30	28.32	28.86	28.87	28.90	29.04
2	SUBCOMPACT	25.71	26.12	27.08	29.64	31.69	33.84	35.17	35.71	35.69	35.71	35.86
3	COMPACT	19.52	20.92	21.65	23.70	25.70	27.84	28.99	29.55	29.55	29.54	29.66
4	MID-SIZE	18.09	18.76	19.63	21.47	23.48	25.66	26.68	27.17	27.17	27.17	27.27
5	FULL SIZE	16.75	17.76	18.50	20.41	22.26	24.26	25.19	25.63	25.63	25.63	25.73
6	LUXURY	16.07	16.95	17.69	19.67	21.43	23.05	23.98	24.41	24.42	24.44	24.54
7												
8	TOTAL DOMESTIC	18.37	19.32	20.12	22.07	24.05	26.10	27.10	27.63	27.64	27.65	27.77
9	SUBCOMPACT	23.90	24.32	25.23	27.64	29.71	31.97	33.37	33.91	33.91	33.91	34.05
10	COMPACT	19.40	20.84	21.57	23.62	25.64	27.80	28.96	29.52	29.52	29.52	29.64
11	LUXURY	15.65	16.66	17.33	19.25	20.94	22.52	23.37	23.75	23.75	23.75	23.84
12												
13	TOTAL FOREIGN	26.32	26.79	27.71	30.18	32.12	34.13	35.29	35.79	35.78	35.78	35.94
14	SUBCOMPACT	27.02	27.38	28.35	30.89	32.92	34.99	36.23	36.78	36.78	36.78	36.92
15	COMPACT	22.90	23.17	23.91	25.97	27.58	29.21	30.15	30.50	30.50	30.50	30.62
16	LUXURY	20.70	21.10	21.92	23.98	25.66	27.39	28.47	28.99	28.99	28.99	29.10

TABLE 15.00 GROWTH RATES, MILES PER GALLON (WEFA)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	OVERALL FLEET MILES PER GALLON	0.59	1.39	2.06	2.52	3.77	4.21	4.39	4.27	4.32	4.05	3.48
2												
3	NEW AUTO MILES PER GALLON:											
4	TOTAL DOMESTIC AND FOREIGN	4.2	5.0	3.8	8.8	7.6	7.0	4.3	1.8	-0.0	0.1	0.1
5	SUBCOMPACT	1.3	1.8	2.8	7.6	5.2	5.2	4.1	1.1	-0.1	0.0	0.0
6	COMPACT	2.8	8.1	2.6	8.2	7.4	6.9	4.5	1.6	-0.0	-0.0	-0.0
7	MID-SIZE	8.4	4.3	5.0	9.0	9.1	8.3	4.7	1.4	-0.0	-0.0	-0.0
8	FULL SIZE	1.7	6.1	4.1	9.4	8.3	8.3	5.0	1.9	-0.0	-0.0	-0.0
9	LUXURY	0.9	5.3	3.8	9.6	7.7	6.6	5.0	2.2	0.0	0.1	-0.0
10												
11	TOTAL DOMESTIC	4.8	5.6	3.9	8.7	8.2	7.4	4.6	1.8	0.0	0.0	0.0
12	SUBCOMPACT	1.7	2.0	2.9	7.7	5.8	6.3	4.6	1.4	-0.0	-0.0	-0.0
13	COMPACT	3.0	8.4	2.7	8.3	7.6	7.0	4.5	1.7	-0.0	-0.0	-0.0
14	LUXURY	1.0	6.5	3.4	9.4	7.4	6.6	4.8	2.1	-0.0	-0.0	-0.0
15												
16	TOTAL FOREIGN	1.9	1.8	2.5	6.9	4.6	4.6	3.4	0.9	-0.1	-0.0	0.0
17	SUBCOMPACT	1.7	1.3	2.6	7.0	4.8	4.6	3.6	1.0	-0.0	-0.0	-0.0
18	COMPACT	1.2	1.2	2.3	6.6	4.5	4.3	3.3	0.7	-0.0	-0.0	-0.0
19	LUXURY	2.1	2.0	2.9	7.3	5.2	5.0	3.9	1.3	-0.0	-0.0	-0.0

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TABLE 15.10 GROWTH RATES, NEW AUTO MILES PER GALLON (EPA)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL DOMESTIC AND FOREIGN	3.8	4.6	4.1	9.8	8.6	8.2	3.7	1.9	0.0	0.1	0.5
2	SUBCOMPACT	1.0	1.6	3.7	9.4	6.9	6.8	4.0	1.5	-0.0	0.1	0.4
3	COMPACT	2.2	7.2	3.5	9.5	8.5	8.3	4.1	1.9	-0.0	-0.0	0.4
4	MID-SIZE	8.4	3.7	4.6	9.4	9.4	9.3	4.0	1.8	0.0	0.0	0.4
5	FULL SIZE	1.4	6.0	4.2	10.3	9.1	9.0	3.9	1.7	0.0	0.0	0.4
6	LUXURY	0.9	5.5	4.4	11.2	9.0	7.6	4.0	1.8	0.0	0.1	0.4
7												
8	TOTAL DOMESTIC	4.4	5.1	4.1	9.7	9.0	8.5	3.9	1.9	0.1	0.0	0.4
9	SUBCOMPACT	1.0	1.8	3.8	9.5	7.5	7.6	4.4	1.6	0.0	0.0	0.4
10	COMPACT	2.4	7.4	3.5	9.5	8.6	8.4	4.2	1.9	0.0	0.0	0.4
11	LUXURY	1.0	6.5	4.0	11.0	8.8	7.5	3.8	1.6	0.0	0.0	0.4
12												
13	TOTAL FOREIGN	1.7	1.8	3.4	8.9	6.4	6.2	3.4	1.4	-0.0	0.0	0.4
14	SUBCOMPACT	1.6	1.3	3.6	9.0	6.6	6.3	3.6	1.5	0.0	0.0	0.4
15	COMPACT	1.2	1.2	3.2	8.6	6.2	5.9	3.2	1.1	0.0	0.0	0.4
16	LUXURY	1.9	1.9	3.9	9.4	7.0	6.7	3.9	1.8	0.0	0.0	0.4

TABLE 16.00 USED CAR MARKET

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	AVERAGE WHOLESALE PRICE DOLLARS	3047.	3416.	3788.	4199.	4626.	5173.	5677.	6172.	6648.	7104.	7569.
2												
3	PRICE OF 1 YR OLD CAR/NEW CAR (%)											
4	SUBCOMPACT	80.13	80.71	81.22	81.26	80.85	80.48	80.21	80.78	81.17	81.28	81.09
5	COMPACT	71.23	71.82	72.17	72.32	71.81	71.43	70.91	71.27	71.73	71.64	71.33
6	MID-SIZE	64.04	65.11	65.48	65.51	65.38	64.39	64.86	65.24	65.80	65.94	65.77
7	FULL SIZE	59.04	61.86	63.88	63.69	60.43	61.60	61.52	63.31	65.51	66.19	65.68
8	LUXURY	69.01	71.79	71.76	71.77	70.25	70.40	70.23	71.38	72.82	73.16	72.93
9												
10	TOTAL USED CARS PURCHASED MILL AUTOS	16.402	17.465	18.476	18.628	18.947	18.644	18.960	19.362	20.227	20.773	20.654

TABLE 16.10 GROWTH RATES, USED CAR MARKET

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	AVERAGE WHOLESALE PRICE DOLLARS	13.28	12.14	10.89	10.85	10.17	11.81	9.74	8.72	7.71	6.86	6.54
2												
3	PRICE OF 1 YR OLD CAR/NEW CAR (%)											
4	SUBCOMPACT	-0.66	0.73	0.63	0.04	-0.53	-0.43	-0.33	0.71	0.48	0.14	-0.24
5	COMPACT	2.14	0.82	0.50	0.21	-0.71	-0.53	-0.73	0.51	0.64	-0.12	-0.45
6	MID-SIZE	-0.15	1.67	0.57	0.03	-0.19	-1.52	0.73	0.58	0.86	0.22	-0.25
7	FULL SIZE	-3.38	4.77	3.28	-0.31	-5.12	1.94	-0.13	2.90	3.48	1.03	-0.77
8	LUXURY	-0.90	4.02	-0.04	0.01	-2.12	0.22	-0.25	1.64	2.02	0.47	-0.32
9												
10	TOTAL USED CARS PURCHASED MILL AUTOS	-1.71	6.48	5.79	0.82	1.72	-1.60	1.70	2.12	4.47	2.70	-0.57

TABLE 17.00 DEMOGRAPHIC VARIABLES

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	NUMBER OF FAMILIES MILL FAMILIES	58,259	59,268	60,260	61,275	62,312	63,316	64,287	65,201	66,099	66,970	67,817
2	NUMBER OF UNREL. INDIVIDUALS MILL PERS	21,569	22,122	22,682	23,244	23,782	24,323	24,861	25,404	25,901	26,391	26,876
3												
4	PERCENT OF FAMILIES WITH 3 OR 4 PERS.	30,81	30,94	31,18	31,32	31,47	31,61	31,65	31,79	31,79	31,83	31,87
5	PERCENT OF FAMILIES WITH 5+ PERSONS	13,57	13,01	12,24	11,68	11,12	10,56	10,21	9,65	9,37	9,02	8,67
6												
7	PERSONS 20 TO 29 PER FAMILY	0,479	0,478	0,477	0,475	0,471	0,466	0,459	0,450	0,439	0,426	0,411
8	NUMBER OF LICENSED DRIVERS MILL PERS	141,20	144,30	147,20	149,90	152,50	154,90	157,20	159,40	161,80	164,10	166,10
9												
10	PERCENT OF POPULATION:											
11	IN METROPOLITAN AREAS	73,27	73,27	73,27	73,27	73,27	73,27	73,27	73,27	73,27	73,27	73,27
12	IN NEW ENGLAND REGION	5,67	5,66	5,64	5,63	5,62	5,60	5,59	5,57	5,56	5,55	5,53
13	IN SOUTH ATLANTIC REGION	15,72	15,68	15,64	15,60	15,56	15,52	15,48	15,44	15,40	15,36	15,32
14	IN EAST NORTH CENTRAL REGION	19,22	19,28	19,34	19,41	19,47	19,53	19,59	19,66	19,72	19,78	19,84
15	IN EAST SOUTH CENTRAL REGION	6,15	6,08	6,01	5,94	5,87	5,81	5,74	5,67	5,61	5,54	5,48
16	IN MOUNTAIN REGION	4,79	4,88	4,98	5,08	5,18	5,28	5,39	5,50	5,61	5,72	5,83
17	IN PACIFIC REGION	13,60	13,70	13,81	13,91	14,01	14,12	14,23	14,33	14,44	14,55	14,66
18	IN WEST NORTH CENTRAL REGION	7,74	7,71	7,67	7,64	7,61	7,58	7,55	7,52	7,49	7,46	7,43
19	IN WEST SOUTH CENTRAL REGION	10,02	10,08	10,14	10,20	10,26	10,32	10,39	10,45	10,51	10,57	10,64
20												
21	GROWTH RATES:											
22	PASSENGERS / EMPLOYMENT	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97
23	PASS / PUBLIC TRANSIT M.T.W.	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99
24	OTHER M.T.W. / EMPLOYMENT	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94

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TABLE 17.10 GROWTH RATES, DEMOGRAPHIC VARIBLES

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	NUMBER OF FAMILIES MILL FAMILIES	1,7	1,7	1,7	1,7	1,7	1,6	1,5	1,4	1,4	1,3	1,3
2	NUMBER OF UNREL. INDIVIDUALS MILL PERS	2,6	2,6	2,5	2,5	2,3	2,3	2,2	2,2	2,0	1,9	1,8
3												
4	PERCENT OF FAMILIES WITH 3 OR 4 PERS.	0,8	0,4	0,8	0,4	0,5	0,4	0,1	0,4	0,0	0,1	0,1
5	PERCENT OF FAMILIES WITH 5+ PERSONS	-5,4	-4,1	-5,9	-4,6	-4,8	-5,0	-3,3	-5,5	-2,9	-3,7	-3,9
6												
7	PERSONS 20 TO 29 PER FAMILY	-0,2	-0,2	-0,2	-0,4	-0,8	-1,1	-1,4	-1,9	-2,5	-3,0	-3,6
8	NUMBER OF LICENSED DRIVERS MILL PERS	2,4	2,2	2,0	1,8	1,7	1,6	1,5	1,4	1,5	1,4	1,2
9												
10	PERCENT OF POPULATION:											
11	IN METROPOLITAN AREAS	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
12	IN NEW ENGLAND REGION	-0,3	-0,3	-0,2	-0,2	-0,3	-0,3	-0,2	-0,3	-0,3	-0,3	-0,3
13	IN SOUTH ATLANTIC REGION	-0,3	-0,3	-0,3	-0,3	-0,3	-0,3	-0,3	-0,3	-0,3	-0,3	-0,3
14	IN EAST NORTH CENTRAL REGION	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3
15	IN EAST SOUTH CENTRAL REGION	-1,2	-1,2	-1,2	-1,2	-1,2	-1,2	-1,2	-1,2	-1,2	-1,2	-1,2
16	IN MOUNTAIN REGION	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0
17	IN PACIFIC REGION	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7
18	IN WEST NORTH CENTRAL REGION	-0,4	-0,4	-0,4	-0,4	-0,4	-0,4	-0,4	-0,4	-0,4	-0,4	-0,4
19	IN WEST SOUTH CENTRAL REGION	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6

TABLE 18.00 ECONOMIC VARIABLES

LINE	ITEM		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	GENERAL:												
2	PERSONAL INCOME	BILL CURR $	1709.41	1900.75	2096.59	2307.04	2547.96	2808.40	3080.10	3340.21	3608.44	3895.69	4205.34
3	PERSONAL INCOME TAXES	BILL CURR $	256.46	287.78	315.15	349.10	390.28	435.57	481.96	524.23	568.11	616.36	673.06
4	TRANSFER PAYMENTS	BILL CURR $	227.55	253.23	284.85	315.66	349.40	385.25	422.53	461.32	501.42	542.69	586.94
5													
6	REAL DISP. INCOME/FAMILY	THOU 72 $	9.85	9.91	9.90	9.90	9.99	10.09	10.21	10.28	10.38	10.51	10.65
7	FAMILIES WITH INCOME OVER $15,000												
8	IN 1970 $	PERCENT	25.53	25.69	25.62	25.84	26.27	26.55	26.99	27.38	27.70	28.04	28.63
9													
10	EMPLOYMENT	MILL PERSONS	94.45	97.18	99.20	100.94	102.50	104.11	105.67	107.13	108.50	110.15	111.63
11	UNEMPLOYMENT RATE		6.04	5.88	6.04	5.84	5.75	5.62	5.43	5.32	5.32	5.12	4.94
12													
13	CONSUMER INSTALL. CREDIT RATE,												
14	NEW AUTOS	PERCENT	11.95	12.14	12.21	12.48	12.63	12.45	12.06	11.75	11.61	11.50	11.43
15													
16	CONSUMER PRICE INDICES (1967=100):												
17	TOTAL		198.2	211.3	228.5	245.9	263.6	281.6	299.5	316.7	333.2	349.5	366.1
18	AUTO REPAIRS		221.3	242.7	266.5	292.2	318.9	346.4	374.3	401.8	428.5	454.7	481.5
19	AUTO INSURANCE PREMIUMS		231.8	259.5	291.9	329.6	369.7	412.0	455.6	499.0	542.1	587.4	635.3
20	TIRES		146.0	154.7	164.0	173.8	184.3	195.3	207.0	219.5	232.6	246.6	261.4
21	MOTOR OIL		179.2	194.0	209.8	226.4	243.1	260.1	276.8	293.0	308.3	323.5	339.0
22	PARKING FEES		237.5	260.4	284.9	312.8	343.9	376.3	409.6	443.0	475.9	508.8	542.5
23													
24	OTHER COSTS AND PRICES:												
25	NEW AUTO UNIT PRICE	THOU 72 $	4.56	4.57	4.62	4.81	5.01	5.22	5.40	5.55	5.69	5.82	5.98
26	NEW AUTOS PRICE INDEX	1972=100	138.8	148.9	159.0	167.6	176.7	186.9	196.8	206.1	215.0	223.5	232.0
27	DOM. AUTO INPUT PRICE INDEX	1972=100	147.9	159.6	171.7	185.6	199.5	213.6	228.0	242.4	256.5	270.0	283.7
28	TRANSPORTATION PRICE INDEX	1972=100	146.9	155.7	164.6	175.1	186.3	197.8	209.6	220.8	231.8	242.7	252.3
29													
30	AVG RETAIL PRICE OF GASOLINE	CENTS	65.31	70.22	76.17	82.37	88.63	94.93	101.16	107.31	113.40	119.56	125.98
31	EXCUDING TAXES	CENTS	52.71	57.42	63.17	69.19	75.28	81.40	87.45	93.40	99.29	105.25	111.47
32	FEDERAL TAX	CENTS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
33	STATE AND LOCAL TAX	CENTS	8.60	8.80	9.00	9.18	9.35	9.53	9.71	9.91	10.11	10.31	10.51
34													
35	STEEL SCRAP PRICE	$/GROSS TON	85.08	91.46	98.32	105.69	113.09	120.44	127.66	134.69	141.42	148.49	155.91

TABLE 19.00 GROWTH RATES, ECONOMIC VARIABLES

LINE	ITEM		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	GENERAL:												
2	PERSONAL INCOME	BILL CURR $	11.8	11.2	10.3	10.0	10.4	10.2	9.7	8.4	8.0	8.0	7.9
3	PERSONAL INCOME TAXES	BILL CURR $	13.5	12.2	9.5	10.8	11.8	11.6	10.6	8.8	8.4	8.5	9.2
4	TRANSFER PAYMENTS	BILL CURR $	9.0	11.3	12.5	10.8	10.7	10.3	9.7	9.2	8.7	8.2	8.2
5													
6	REAL DISP. INCOME/FAMILY	THOU 72 $	2.1	0.6	-0.1	0.1	0.9	1.1	1.2	0.7	0.9	1.3	1.3
7	FAMILIES WITH INCOME OVER $15,000												
8	IN 1970 $	PERCENT	3.2	0.6	-0.3	0.9	1.7	1.1	1.7	1.4	1.1	1.2	2.1
9													
10	EMPLOYMENT	MILL PERSONS	4.3	2.9	2.1	1.8	1.6	1.6	1.5	1.4	1.3	1.5	1.3
11	UNEMPLOYMENT RATE		-13.7	-2.6	2.7	-3.2	-1.6	-2.3	-3.4	-1.9	-0.1	-3.7	-3.5
12													
13	CONSUMER INSTALL. CREDIT RATE,												
14	NEW AUTOS	PERCENT	3.7	1.6	0.6	2.2	1.2	-1.4	-3.1	-2.6	-1.2	-0.9	-0.6
15													
16	CONSUMER PRICE INDICES (1967=100):												
17	TOTAL		7.6	8.2	8.1	7.6	7.2	6.8	6.3	5.8	5.2	4.9	4.8
18	AUTO REPAIRS		8.6	9.7	9.8	9.6	9.2	8.6	8.0	7.4	6.6	6.1	5.9
19	AUTO INSURANCE PREMIUMS		10.1	12.0	12.5	12.9	12.2	11.4	10.6	9.5	8.6	8.4	8.1
20	TIRES		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
21	MOTOR OIL		7.8	8.2	8.1	7.9	7.4	7.0	6.4	5.8	5.2	4.9	4.8
22	PARKING FEES		12.4	9.6	9.4	9.8	9.9	9.4	8.9	8.2	7.4	6.9	6.6
23													
24	OTHER COSTS AND PRICES:												
25	NEW AUTO UNIT PRICE	THOU 72 $	0.1	0.4	1.1	4.0	4.1	4.1	3.8	2.7	2.6	2.4	2.2
26	NEW AUTOS PRICE INDEX	1972=100	7.9	7.3	6.8	5.4	5.5	5.7	5.3	4.7	4.3	4.0	3.8
27	DOM. AUTO INPUT PRICE INDEX	1972=100	7.6	7.9	7.5	8.1	7.5	7.0	6.8	6.3	5.8	5.3	5.1
28	TRANSPORTATION PRICE INDEX	1972=100	7.9	5.9	5.8	6.3	6.4	6.2	5.9	5.4	5.0	4.7	4.0
29													
30	AVG RETAIL PRICE OF GASOLINE	CENTS	3.6	7.5	8.5	8.1	7.6	7.1	6.6	6.1	5.7	5.4	5.4
31	EXCUDING TAXES	CENTS	4.0	8.9	10.0	9.5	8.8	8.1	7.4	6.8	6.3	6.0	5.9
32	FEDERAL TAX	CENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	STATE AND LOCAL TAX	CENTS	2.7	2.3	2.3	2.0	1.9	1.9	1.9	2.1	2.0	2.0	1.9
34													
35	STEEL SCRAP PRICE	$/GROSS TON	7.5	7.5	7.5	7.5	7.0	6.5	6.0	5.5	5.0	5.0	5.0

TABLE 20.00 AUTO CHARACTERISTICS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	CURB WEIGHT (POUNDS):											
2	DOMESTIC SUBCOMPACT	2650.	2600.	2550.	2500.	2440.	2380.	2330.	2300.	2300.	2300.	2300.
3	FOREIGN SUBCOMPACT	2328.	2293.	2258.	2224.	2191.	2158.	2126.	2094.	2094.	2094.	2094.
4	DOMESTIC COMPACT	3400.	3100.	3050.	3000.	2900.	2800.	2750.	2700.	2700.	2700.	2700.
5	FOREIGN COMPACT	2894.	2865.	2837.	2808.	2780.	2752.	2725.	2698.	2698.	2698.	2698.
6	MID-SIZE	3710.	3550.	3450.	3400.	3250.	3100.	3050.	3000.	3000.	3000.	3000.
7	FULL SIZE	4100.	3800.	3700.	3600.	3450.	3300.	3250.	3200.	3200.	3200.	3200.
8	DOMESTIC LUXURY	4450.	4100.	4000.	3850.	3700.	3600.	3550.	3500.	3500.	3500.	3500.
9	FOREIGN LUXURY	3234.	3169.	3106.	3044.	2983.	2923.	2865.	2808.	2808.	2808.	2808.
10												
11	ENGINE DISPLACEMENT (CUBIC INCHES):											
12	DOMESTIC SUBCOMPACT	152.0	143.0	135.0	130.0	125.0	115.0	110.0	105.0	105.0	105.0	105.0
13	FOREIGN SUBCOMPACT	95.8	93.9	92.1	90.2	88.4	86.6	84.9	83.2	83.2	83.2	83.2
14	DOMESTIC COMPACT	248.0	217.0	207.0	198.0	183.0	168.0	158.0	150.0	150.0	150.0	150.0
15	FOREIGN COMPACT	116.2	114.5	112.8	111.1	109.4	107.8	106.2	104.6	104.6	104.6	104.6
16	MID-SIZE	282.0	263.0	248.0	238.0	218.0	198.0	189.0	180.0	180.0	180.0	180.0
17	FULL SIZE	316.0	287.0	274.0	259.0	242.0	224.0	216.0	210.0	210.0	210.0	210.0
18	DOMESTIC LUXURY	387.0	351.0	336.0	318.0	298.0	283.0	272.0	265.0	265.0	265.0	265.0
19	FOREIGN LUXURY	173.6	171.0	168.4	165.9	163.4	160.9	158.5	156.1	156.1	156.1	156.1
20												
21	PERCENT WITH AUTOMATIC TRANSMISSION:											
22	DOMESTIC SUBCOMPACT	62.50	60.00	57.50	55.00	52.50	47.50	42.50	40.00	40.00	40.00	40.00
23	FOREIGN SUBCOMPACT	40.00	35.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
24	DOMESTIC COMPACT	90.00	87.50	85.00	80.00	75.00	70.00	67.50	67.50	67.50	67.50	67.50
25	FOREIGN COMPACT	65.00	55.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
26	MID-SIZE	95.00	90.00	85.00	80.00	77.50	75.00	72.50	72.50	72.50	72.50	72.50
27	FULL SIZE	99.00	98.00	97.00	95.00	92.50	90.00	87.50	85.00	85.00	85.00	85.00
28	DOMESTIC LUXURY	98.00	97.00	96.00	95.00	94.00	92.00	90.00	88.00	88.00	88.00	88.00
29	FOREIGN LUXURY	70.00	60.00	50.00	49.00	47.00	45.00	45.00	45.00	45.00	45.00	45.00
30												
31	PERCENT WITH 4 CYLINDERS:											
32	DOMESTIC SUBCOMPACT	72.50	75.00	77.50	80.00	82.50	85.00	87.50	90.00	90.00	90.00	90.00
33	FOREIGN SUBCOMPACT	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00
34	DOMESTIC COMPACT	10.00	15.00	20.00	30.00	40.00	45.00	50.00	55.00	55.00	55.00	55.00
35	FOREIGN COMPACT	90.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00
36	MID-SIZE	0.0	0.0	2.50	5.00	7.50	10.00	15.00	15.00	15.00	15.00	15.00
37	FULL SIZE	0.0	0.0	2.50	5.00	7.50	10.00	12.50	15.00	15.00	15.00	15.00
38	DOMESTIC LUXURY	0.0	0.10	0.50	1.00	2.00	5.00	10.00	15.00	15.00	15.00	15.00
39	FOREIGN LUXURY	55.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
40												
41	PERCENT WITH 6 CYLINDERS:											
42	DOMESTIC SUBCOMPACT	25.50	25.00	22.50	20.00	17.50	15.00	12.50	10.00	10.00	10.00	10.00
43	FOREIGN SUBCOMPACT	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
44	DOMESTIC COMPACT	50.00	60.00	55.00	50.00	45.00	40.00	35.00	30.00	30.00	30.00	30.00
45	FOREIGN COMPACT	10.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
46	MID-SIZE	11.50	20.00	35.00	50.00	65.00	70.00	70.00	70.00	70.00	70.00	70.00
47	FULL SIZE	5.00	10.00	20.00	30.00	40.00	50.00	60.00	65.00	65.00	65.00	65.00
48	DOMESTIC LUXURY	0.0	5.00	10.00	15.00	20.00	25.00	30.00	35.00	35.00	35.00	35.00
49	FOREIGN LUXURY	45.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00

TABLE 21.00 GROWTH RATES, AUTO CHARACTERISTICS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	CURB WEIGHT (POUNDS):											
2	DOMESTIC SUBCOMPACT	-0.9	-1.9	-1.9	-2.0	-2.4	-2.5	-2.1	-1.3	0.0	0.0	0.0
3	FOREIGN SUBCOMPACT	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	0.0	0.0	0.0
4	DOMESTIC COMPACT	-2.7	-8.8	-1.6	-1.6	-3.3	-3.4	-1.8	-1.8	0.0	0.0	0.0
5	FOREIGN COMPACT	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	0.0	0.0
6	MID-SIZE	-9.8	-4.3	-2.8	-1.4	-4.4	-4.6	-1.6	-1.6	0.0	0.0	0.0
7	FULL SIZE	-1.6	-7.3	-2.6	-2.7	-4.2	-4.3	-1.5	-1.5	0.0	0.0	0.0
8	DOMESTIC LUXURY	-1.2	-7.9	-2.4	-3.8	-3.9	-2.7	-1.4	-1.4	0.0	0.0	0.0
9	FOREIGN LUXURY	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	0.0	0.0
10												
11	ENGINE DISPLACEMENT (CUBIC INCHES):											
12	DOMESTIC SUBCOMPACT	-4.7	-5.9	-5.6	-3.7	-3.8	-8.0	-4.3	-4.5	0.0	0.0	0.0
13	FOREIGN SUBCOMPACT	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	0.0	0.0
14	DOMESTIC COMPACT	-4.9	-12.5	-4.6	-4.3	-7.6	-8.2	-6.0	-5.1	0.0	0.0	0.0
15	FOREIGN COMPACT	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	0.0	0.0	0.0
16	MID-SIZE	-12.4	-6.7	-5.7	-4.0	-8.4	-9.2	-4.5	-4.8	0.0	0.0	0.0
17	FULL SIZE	-3.9	-9.2	-4.5	-5.5	-6.6	-7.4	-3.6	-2.8	0.0	0.0	0.0
18	DOMESTIC LUXURY	-2.9	-9.3	-4.3	-5.4	-6.3	-5.0	-3.9	-2.6	0.0	0.0	0.0
19	FOREIGN LUXURY	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	0.0	0.0	0.0
20												
21	PERCENT WITH AUTOMATIC TRANSMISSION:											
22	DOMESTIC SUBCOMPACT	-4.04	-4.00	-4.17	-4.35	-4.55	-9.52	-10.53	-5.88	0.0	0.0	0.0
23	FOREIGN SUBCOMPACT	-20.00	-12.50	-28.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	DOMESTIC COMPACT	-4.07	-2.78	-2.86	-5.88	-6.25	-6.67	-3.57	0.0	0.0	0.0	0.0
25	FOREIGN COMPACT	-13.33	-15.38	-18.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	MID-SIZE	-4.78	-5.26	-5.56	-5.88	-3.13	-3.23	-3.33	0.0	0.0	0.0	0.0
27	FULL SIZE	-1.00	-1.01	-1.02	-2.06	-2.63	-2.70	-2.78	-2.86	0.0	0.0	0.0
28	DOMESTIC LUXURY	-1.29	-1.02	-1.03	-1.04	-1.05	-2.13	-2.17	-2.22	0.0	0.0	0.0
29	FOREIGN LUXURY	-12.50	-14.29	-16.67	-2.00	-4.08	-4.26	0.0	0.0	0.0	0.0	0.0
30												
31	PERCENT WITH 4 CYLINDERS:											
32	DOMESTIC SUBCOMPACT	4.06	3.45	3.33	3.23	3.13	3.03	2.94	2.86	0.0	0.0	0.0
33	FOREIGN SUBCOMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	DOMESTIC COMPACT	8233.33	50.00	33.33	50.00	33.33	12.50	11.11	10.00	0.0	0.0	0.0
35	FOREIGN COMPACT	-5.26	-5.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	MID-SIZE				100.00	50.00	33.33	50.00	0.0	0.0	0.0	0.0
37	FULL SIZE				100.00	50.00	33.33	25.00	20.00	0.0	0.0	0.0
38	DOMESTIC LUXURY			400.00	100.00	100.00	150.00	100.00	50.00	0.0	0.0	0.0
39	FOREIGN LUXURY	22.22	9.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40												
41	PERCENT WITH 6 CYLINDERS:											
42	DOMESTIC SUBCOMPACT	15.28	-1.96	-10.00	-11.11	-12.50	-14.29	-16.67	-20.00	0.0	0.0	0.0
43	FOREIGN SUBCOMPACT	42.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	DOMESTIC COMPACT	-8.04	20.00	-8.33	-9.09	-10.00	-11.11	-12.50	-14.29	0.0	0.0	0.0
45	FOREIGN COMPACT	100.00	50.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	MID-SIZE	79.41	73.91	75.00	42.86	30.00	7.69	0.0	0.0	0.0	0.0	0.0
47	FULL SIZE	254.61	100.00	100.00	50.00	33.33	25.00	20.00	8.33	0.0	0.0	0.0
48	DOMESTIC LUXURY			100.00	50.00	33.33	25.00	20.00	16.67	0.0	0.0	0.0
49	FOREIGN LUXURY	-18.18	-11.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

THE WHARTON EFA MOTOR VEHICLE DEMAND MODEL

TABLE 22.00 FUEL CONSUMPTION EFFICIENCY FACTORS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	CITY EFFICIENCY FACTOR: ALL CLASSES	1.00	1.00	2.00	8.00	12.00	16.00	19.00	19.00	19.00	19.00	19.00
2	DOMESTIC SUBCOMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	FOREIGN SUBCOMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	DOMESTIC COMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	FOREIGN COMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	MID-SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	FULL SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	DOMESTIC LUXURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	FOREIGN LUXURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10												
11	HIGHWAY EFFICIENCY FACTOR: ALL CLASSES	1.00	1.00	2.00	8.00	12.00	16.00	19.00	19.00	19.00	19.00	19.00
12	DOMESTIC SUBCOMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	FOREIGN SUBCOMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	DOMESTIC COMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	FOREIGN COMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	MID-SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	FULL SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	DOMESTIC LUXURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	FOREIGN LUXURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 23.00 MISCELLANEOUS ASSUMPTIONS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	DOMESTIC CLASS BASE PRICE/AVG (RATIO)											
2	SUBCOMPACT	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.729
3	COMPACT	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833
4	MID-SIZE	0.929	0.929	0.929	0.929	0.929	0.929	0.929	0.929	0.929	0.929	0.929
5	FULL SIZE	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019
6	LUXURY	1.621	1.621	1.621	1.621	1.621	1.621	1.621	1.621	1.621	1.621	1.621
7												
8	DOM CLASS MAX OPT PRICE/AVG (RATIO)											
9	SUBCOMPACT	0.922	0.922	0.922	0.922	0.922	0.922	0.922	0.922	0.922	0.922	0.922
10	COMPACT	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969
11	MID-SIZE	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017
12	FULL SIZE	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014
13	LUXURY	1.034	1.034	1.034	1.034	1.034	1.034	1.034	1.034	1.034	1.034	1.034
14												
15	CITY DRIVING, URBAN MILES / TOTAL	0.577	0.577	0.578	0.578	0.578	0.579	0.580	0.580	0.581	0.581	0.581
16												
17	EXPONENTIAL DECAY RATE, USED CAR PRICES											
18	SUBCOMPACT	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192
19	COMPACT	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163
20	MID-SIZE	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189
21	FULL SIZE	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265
22	LUXURY	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229

CONTROL SOLUTION - NOVEMBER 7, 1978

TABLE 23.10 GROWTH RATES, MISCELLANEOUS ASSUMPTIONS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	DOMESTIC CLASS BASE PRICE/AVG (RATIO)											
2	SUBCOMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	COMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	MID-SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	FULL SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	LUXURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7												
8	DOM CLASS MAX OPT PRICE/AVG (RATIO)											
9	SUBCOMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	COMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	MID-SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	FULL-SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	LUXURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14												
15	CITY DRIVING, URBAN MILES / TOTAL	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0
16												
17	EXPONENTIAL DECAY RATE, USED CAR PRICES											
18	SUBCOMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	COMPACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	MID-SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	FULL SIZE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	LUXURY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	EQUILIBRIUM ('DESIRED') STOCKS											
2	PERSONAL VEHICLES	110.247	113.038	115.579	117.409	119.767	122.393	125.291	126.662	128.025	130.351	132.670
3	AUTOMOBILES	97.830	100.367	102.697	104.335	106.491	108.947	111.599	112.707	113.843	115.924	117.975
4	MEMO TRUCKS AND VANS REG AS AUTOS	12.417	12.671	12.882	13.074	13.276	13.446	13.692	13.955	14.183	14.426	14.695
5	LIGHT TRUCKS	28.863	29.140	29.466	29.760	29.997	30.130	30.429	30.695	30.765	30.895	31.201
6	MEMO TRUCKS AND VANS REG AS AUTOS	12.417	12.671	12.882	13.074	13.276	13.446	13.692	13.955	14.183	14.426	14.695
7	NONMEMO TRUCKS	16.446	16.469	16.584	16.685	16.721	16.683	16.737	16.740	16.582	16.469	16.506
8												
9	NEW REGISTRATIONS											
10	PERSONAL VEHICLES	12.457	12.241	12.345	12.486	13.338	13.927	14.401	14.204	14.111	14.528	14.970
11	AUTOMOBILES	10.855	10.574	10.590	10.612	11.290	11.708	12.039	11.778	11.608	11.823	12.042
12	AUTOMOBILES AND VANS REG AS AUTOS	11.033	10.756	10.780	10.810	11.499	11.930	12.273	12.026	11.870	12.101	12.336
13	MEMO TRUCKS	1.424	1.485	1.565	1.676	1.839	1.996	2.128	2.178	2.241	2.427	2.634
14	LIGHT TRUCKS	3.842	3.935	4.041	4.322	4.708	5.051	5.285	5.380	5.447	5.693	6.013
15	MEMO TRUCKS AND VANS REG AS AUTOS	1.602	1.667	1.755	1.874	2.048	2.218	2.362	2.426	2.503	2.705	2.928
16	NONMEMO TRUCKS	2.241	2.268	2.285	2.447	2.659	2.832	2.923	2.954	2.944	2.987	3.086
17												
18	SCRAPPAGE											
19	PERSONAL VEHICLES	9.653	9.847	9.769	9.747	10.044	10.319	10.485	10.617	10.959	11.718	12.390
20	AUTOMOBILES	9.303	9.461	9.331	9.242	9.452	9.597	9.639	9.644	9.742	10.208	10.390
21	MEMO TRUCKS AND VANS REG AS AUTOS	0.350	0.386	0.438	0.505	0.592	0.721	0.847	0.973	1.216	1.510	2.001
22	LIGHT TRUCKS	1.330	1.410	1.490	1.636	1.832	2.103	2.380	2.652	3.074	3.563	4.242
23	MEMO TRUCKS AND VANS REG AS AUTOS	0.350	0.386	0.438	0.505	0.592	0.721	0.847	0.973	1.216	1.510	2.001
24	NONMEMO TRUCKS	0.981	1.023	1.052	1.131	1.240	1.382	1.534	1.680	1.858	2.053	2.242
25												
26	YEAR END STOCK											
27	PERSONAL VEHICLES	110.767	113.161	115.737	118.477	121.771	125.378	129.294	132.882	136.034	138.845	141.424
28	AUTOMOBILES	101.314	102.428	103.686	105.056	106.893	109.004	111.404	113.538	115.404	117.019	118.672
29	MEMO TRUCKS AND VANS REG AS AUTOS	9.453	10.733	12.051	13.420	14.877	16.374	17.890	19.344	20.630	21.826	22.752
30	LIGHT TRUCKS	28.018	30.543	33.094	35.780	38.656	41.604	44.508	47.236	49.609	51.738	53.509
31	MEMO TRUCKS AND VANS REG AS AUTOS	9.453	10.733	12.051	13.420	14.877	16.374	17.890	19.344	20.630	21.826	22.752
32	NONMEMO TRUCKS	18.565	19.810	21.044	22.360	23.779	25.230	26.618	27.892	28.978	29.912	30.756
33												
34	MID YEAR STOCK											
35	PERSONAL VEHICLES	109.310	111.921	114.391	117.042	120.063	123.500	127.251	130.994	134.349	137.335	140.039
36	AUTOMOBILES	100.485	101.827	102.999	104.306	105.914	107.874	110.119	112.377	114.362	116.107	117.750
37	MEMO TRUCKS AND VANS REG AS AUTOS	8.827	10.093	11.392	12.736	14.149	15.626	17.132	18.617	19.987	21.228	22.289
38	LIGHT TRUCKS	26.762	29.281	31.819	34.437	37.218	40.130	43.056	45.872	48.422	50.673	52.623
39	MEMO TRUCKS AND VANS REG AS AUTOS	8.827	10.093	11.392	12.736	14.149	15.626	17.132	18.617	19.987	21.228	22.289
40	NONMEMO TRUCKS	17.935	19.187	20.427	21.702	23.070	24.504	25.924	27.255	28.435	29.445	30.334

TABLE 25.00 GROWTH RATES, LIGHT TRUCK SECTOR

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	EQUILIBRIUM ('DESIRED') STOCKS											
2	PERSONAL VEHICLES	2.1	2.5	2.2	1.6	2.0	2.2	2.4	1.1	1.1	1.8	1.8
3	AUTOMOBILES	2.3	2.6	2.3	1.6	2.1	2.3	2.4	1.0	1.0	1.8	1.8
4	MEMO TRUCKS AND VANS REG AS AUTOS	1.2	2.0	1.7	1.5	1.5	1.3	1.8	1.9	1.6	1.7	1.9
5	LIGHT TRUCKS	0.8	1.0	1.1	1.0	0.8	0.4	1.0	0.9	0.2	0.4	1.0
6	MEMO TRUCKS AND VANS REG AS AUTOS	1.2	2.0	1.7	1.5	1.5	1.3	1.8	1.9	1.6	1.7	1.9
7	NONMEMO TRUCKS	0.5	0.1	0.7	0.6	0.2	-0.2	0.3	0.0	-0.9	-0.7	0.2
8												
9	NEW REGISTRATIONS											
10	PERSONAL VEHICLES	3.3	-1.7	0.8	1.1	6.8	4.4	3.4	-1.4	-0.7	3.0	3.0
11	AUTOMOBILES	1.3	-2.6	0.1	0.2	6.4	3.7	2.8	-2.2	-1.4	1.9	1.9
12	AUTOMOBILES AND VANS REG AS AUTOS	1.5	-2.5	0.2	0.3	6.4	3.8	2.9	-2.0	-1.3	1.9	1.9
13	MEMO TRUCKS	19.9	4.3	5.4	7.1	9.7	8.5	6.6	2.3	2.9	8.3	8.5
14	LIGHT TRUCKS	16.4	2.4	2.7	6.9	8.9	7.3	4.6	1.8	1.2	4.5	5.6
15	MEMO TRUCKS AND VANS REG AS AUTOS	19.0	4.1	5.3	6.8	9.3	8.3	6.5	2.7	3.2	8.1	8.2
16	NONMEMO TRUCKS	14.6	1.2	0.8	7.1	8.7	6.5	3.2	1.1	-0.3	1.5	3.3
17												
18	SCRAPPAGE											
19	PERSONAL VEHICLES	6.8	2.0	-0.8	-0.2	3.0	2.7	1.6	1.3	3.2	6.9	5.7
20	AUTOMOBILES	6.4	1.7	-1.4	-1.0	2.3	1.5	0.4	0.1	1.0	4.8	1.8
21	MEMO TRUCKS AND VANS REG AS AUTOS	18.7	10.6	13.4	15.2	17.3	21.9	17.4	14.9	25.0	24.1	32.5
22	LIGHT TRUCKS	12.0	5.9	5.7	9.8	12.0	14.8	13.2	11.4	15.9	15.9	19.1
23	MEMO TRUCKS AND VANS REG AS AUTOS	18.7	10.6	13.4	15.2	17.3	21.9	17.4	14.9	25.0	24.1	32.5
24	NONMEMO TRUCKS	9.8	4.3	2.8	7.5	9.6	11.5	11.0	9.5	10.6	10.5	9.2
25												
26	YEAR END STOCK											
27	PERSONAL VEHICLES	2.6	2.2	2.3	2.4	2.8	3.0	3.1	2.8	2.4	2.1	1.9
28	AUTOMOBILES	1.6	1.1	1.2	1.3	1.7	2.0	2.2	1.9	1.6	1.4	1.4
29	MEMO TRUCKS AND VANS REG AS AUTOS	15.3	13.5	12.3	11.4	10.9	10.1	9.3	8.1	6.7	5.8	4.2
30	LIGHT TRUCKS	9.8	9.0	8.4	8.1	8.0	7.6	7.0	6.1	5.0	4.3	3.4
31	MEMO TRUCKS AND VANS REG AS AUTOS	15.3	13.5	12.3	11.4	10.9	10.1	9.3	8.1	6.7	5.8	4.2
32	NONMEMO TRUCKS	7.3	6.7	6.2	6.3	6.3	6.1	5.5	4.8	3.9	3.2	2.8
33												
34	MID YEAR STOCK											
35	PERSONAL VEHICLES	2.7	2.4	2.2	2.3	2.6	2.9	3.0	2.9	2.6	2.2	2.0
36	AUTOMOBILES	1.8	1.3	1.2	1.3	1.5	1.9	2.1	2.1	1.8	1.5	1.4
37	MEMO TRUCKS AND VANS REG AS AUTOS	15.0	14.3	12.9	11.8	11.1	10.4	9.6	8.7	7.4	6.2	5.0
38	LIGHT TRUCKS	9.5	9.4	8.7	8.2	8.1	7.8	7.3	6.5	5.6	4.6	3.8
39	MEMO TRUCKS AND VANS REG AS AUTOS	15.0	14.3	12.9	11.8	11.1	10.4	9.6	8.7	7.4	6.2	5.0
40	NONMEMO TRUCKS	6.9	7.0	6.5	6.2	6.3	6.2	5.8	5.1	4.3	3.6	3.0

TABLE 26.00 TRUCKS IN OPERATION BY AGE: MID-YEAR (MILL TRUCKS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	PERSONAL TRUCKS: ALL VINTAGES	8.827	10.093	11.392	12.736	14.149	15.626	17.132	18.617	19.987	21.228	22.289
2	LESS THAN ONE YEAR OLD	1.346	1.486	1.554	1.644	1.774	1.921	2.047	2.119	2.150	2.228	2.341
3	AGE: 1 YEAR OLD	1.208	1.415	1.556	1.626	1.717	1.846	1.992	2.117	2.185	2.205	2.262
4	AGE: 2 YEARS OLD	1.023	1.191	1.395	1.534	1.602	1.688	1.811	1.951	2.067	2.119	2.117
5	AGE: 3 YEARS OLD	0.873	1.007	1.173	1.374	1.509	1.573	1.654	1.772	1.902	2.001	2.031
6	AGE: 4 YEARS OLD	0.834	0.858	0.990	1.153	1.349	1.478	1.537	1.614	1.723	1.838	1.914
7	AGE: 5 YEARS OLD	0.752	0.816	0.840	0.969	1.127	1.316	1.439	1.495	1.564	1.659	1.751
8	AGE: 6 YEARS OLD	0.578	0.733	0.795	0.818	0.943	1.095	1.276	1.393	1.442	1.499	1.573
9	AGE: 7 YEARS OLD	0.447	0.559	0.709	0.769	0.791	0.910	1.054	1.226	1.334	1.371	1.411
10	AGE: 8 YEARS OLD	0.360	0.428	0.536	0.679	0.736	0.755	0.867	1.002	1.162	1.256	1.278
11	AGE: 9 YEARS OLD	0.265	0.341	0.406	0.508	0.642	0.694	0.711	0.815	0.939	1.082	1.157
12	AGE: 10 YEARS OLD	0.222	0.248	0.320	0.381	0.475	0.600	0.647	0.661	0.756	0.865	0.985
13	AGE: 11 TO 15 YEARS OLD	0.666	0.745	0.828	0.942	1.091	1.311	1.612	1.910	2.139	2.381	2.624
14	AGE: 16 TO 20 YEARS OLD	0.191	0.203	0.224	0.266	0.314	0.354	0.397	0.442	0.506	0.584	0.687
15	AGE: 21 TO 25 YEARS OLD	0.049	0.051	0.054	0.061	0.067	0.072	0.075	0.083	0.102	0.123	0.138
16	AGE: 26 TO 30 YEARS OLD	0.013	0.013	0.013	0.013	0.013	0.014	0.014	0.015	0.017	0.018	0.019
17												
18	COMMERCIAL TRUCKS: ALL VINTAGES	17.935	19.187	20.427	21.702	23.070	24.504	25.924	27.255	28.435	29.445	30.334
19	LESS THAN ONE YEAR OLD	2.018	2.160	2.177	2.260	2.434	2.607	2.716	2.751	2.733	2.715	2.738
20	AGE: 1 YEAR OLD	1.766	1.988	2.132	2.151	2.231	2.398	2.563	2.665	2.694	2.670	2.645
21	AGE: 2 YEARS OLD	1.440	1.739	1.961	2.105	2.121	2.197	2.356	2.514	2.608	2.629	2.599
22	AGE: 3 YEARS OLD	1.310	1.416	1.713	1.934	2.073	2.086	2.155	2.307	2.456	2.542	2.556
23	AGE: 4 YEARS OLD	1.524	1.285	1.391	1.684	1.900	2.034	2.042	2.105	2.249	2.388	2.465
24	AGE: 5 YEARS OLD	1.494	1.489	1.258	1.363	1.649	1.856	1.983	1.987	2.044	2.178	2.307
25	AGE: 6 YEARS OLD	1.212	1.453	1.450	1.226	1.327	1.603	1.801	1.920	1.919	1.970	2.094
26	AGE: 7 YEARS OLD	1.013	1.169	1.404	1.402	1.185	1.281	1.543	1.730	1.841	1.836	1.879
27	AGE: 8 YEARS OLD	0.974	0.967	1.117	1.343	1.340	1.130	1.219	1.466	1.641	1.741	1.732
28	AGE: 9 YEARS OLD	0.942	0.918	0.913	1.056	1.268	1.264	1.063	1.145	1.374	1.533	1.623
29	AGE: 10 YEARS OLD	0.774	0.877	0.857	0.853	0.985	1.181	1.174	0.986	1.060	1.268	1.412
30	AGE: 11 TO 15 YEARS OLD	2.420	2.605	2.836	2.990	3.088	3.292	3.614	3.838	3.870	3.955	4.148
31	AGE: 16 TO 20 YEARS OLD	0.707	0.791	0.897	1.013	1.142	1.238	1.328	1.438	1.501	1.531	1.615
32	AGE: 21 TO 25 YEARS OLD	0.259	0.249	0.243	0.247	0.252	0.267	0.299	0.338	0.379	0.422	0.450
33	AGE: 26 TO 30 YEARS OLD	0.083	0.080	0.078	0.075	0.073	0.071	0.068	0.066	0.067	0.068	0.071

TABLE 27.00 GROWTH RATES, TRUCKS IN OPERATION BY AGE MID-YEAR

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	PERSONAL TRUCKS: ALL VINTAGES	15.0	14.3	12.9	11.8	11.1	10.4	9.6	8.7	7.4	6.2	5.0
2	LESS THAN ONE YEAR OLD	17.4	10.4	4.6	5.8	7.9	8.3	6.6	3.5	1.5	3.6	5.1
3	AGE: 1 YEAR OLD	16.4	17.1	10.0	4.5	5.6	7.5	7.9	6.3	3.2	0.9	2.6
4	AGE: 2 YEARS OLD	15.3	16.4	17.1	9.9	4.4	5.4	7.3	7.8	5.9	2.5	-0.1
5	AGE: 3 YEARS OLD	2.8	15.3	16.5	17.1	9.8	4.2	5.2	7.1	7.4	5.2	1.5
6	AGE: 4 YEARS OLD	8.5	2.8	15.4	16.5	17.0	9.6	4.0	5.0	6.7	6.7	4.1
7	AGE: 5 YEARS OLD	26.7	8.5	2.9	15.4	16.3	16.8	9.4	3.9	4.6	6.0	5.6
8	AGE: 6 YEARS OLD	25.2	26.7	8.6	2.9	15.3	16.1	16.5	9.2	3.5	4.0	5.0
9	AGE: 7 YEARS OLD	19.0	25.1	26.7	8.5	2.8	15.1	15.8	16.4	8.8	2.8	2.9
10	AGE: 8 YEARS OLD	28.8	18.9	25.1	26.7	8.4	2.6	14.8	15.7	15.9	8.1	1.8
11	AGE: 9 YEARS OLD	11.8	29.0	19.0	25.0	26.5	8.1	2.3	14.7	15.2	15.2	7.0
12	AGE: 10 YEARS OLD	7.2	11.8	29.3	18.9	24.8	26.2	7.9	2.2	14.3	14.4	14.0
13	AGE: 11 TO 15 YEARS OLD	12.3	11.9	11.1	13.8	15.8	20.2	23.0	18.5	12.0	11.4	10.2
14	AGE: 16 TO 20 YEARS OLD	7.6	6.2	10.4	19.2	17.7	12.8	12.1	11.4	14.6	15.2	17.7
15	AGE: 21 TO 25 YEARS OLD	3.3	2.7	6.4	12.3	10.6	7.0	5.1	9.9	23.1	20.3	12.3
16	AGE: 26 TO 30 YEARS OLD	-0.5	1.3	2.6	0.7	0.5	3.0	2.2	6.2	11.9	8.9	4.1
17												
18	COMMERCIAL TRUCKS: ALL VINTAGES	6.9	7.0	6.5	6.2	6.3	6.2	5.8	5.1	4.3	3.6	3.0
19	LESS THAN ONE YEAR OLD	12.6	7.0	0.8	3.8	7.7	7.1	4.2	1.3	-0.6	-0.7	0.9
20	AGE: 1 YEAR OLD	20.7	12.6	7.2	0.9	3.7	7.5	6.9	4.0	1.1	-0.9	-0.9
21	AGE: 2 YEARS OLD	8.1	20.8	12.8	7.3	0.8	3.5	7.3	6.7	3.8	0.8	-1.1
22	AGE: 3 YEARS OLD	-15.7	8.1	21.0	12.9	7.2	0.6	3.3	7.1	6.5	3.5	0.6
23	AGE: 4 YEARS OLD	-0.4	-15.7	8.3	21.1	12.8	7.0	0.4	3.1	6.8	6.2	3.2
24	AGE: 5 YEARS OLD	19.9	-0.4	-15.5	8.4	21.0	12.6	6.8	0.2	2.9	6.5	5.9
25	AGE: 6 YEARS OLD	15.3	19.9	-0.2	-15.5	8.3	20.7	12.4	6.6	-0.0	2.6	6.3
26	AGE: 7 YEARS OLD	-0.7	15.4	20.1	-0.1	-15.5	8.1	20.5	12.1	6.4	-0.3	2.4
27	AGE: 8 YEARS OLD	-2.6	-0.7	15.5	20.2	-0.2	-15.7	7.9	20.3	11.9	6.1	-0.5
28	AGE: 9 YEARS OLD	13.3	-2.5	-0.5	15.6	20.1	-0.4	-15.9	7.7	20.0	11.6	5.8
29	AGE: 10 YEARS OLD	8.8	13.4	-2.4	-0.5	15.6	19.9	-0.6	-16.0	7.4	19.7	11.3
30	AGE: 11 TO 15 YEARS OLD	8.9	7.7	8.8	5.4	3.3	6.6	9.8	6.2	0.8	2.2	4.9
31	AGE: 16 TO 20 YEARS OLD	5.4	11.9	13.3	13.0	12.8	8.4	7.2	8.3	4.4	2.0	5.5
32	AGE: 21 TO 25 YEARS OLD	-2.1	-3.7	-2.4	1.8	1.9	5.8	12.2	12.9	12.1	11.4	6.7
33	AGE: 26 TO 30 YEARS OLD	-2.8	-3.5	-3.2	-3.8	-2.7	-2.2	-4.3	-2.9	1.3	1.2	5.0

TABLE 28.00 PRICES AND CAPITALIZED COSTS (DOLLARS)

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL PRICE											
2	AUTOMOBILES	6896.2	7501.6	8177.0	8940.0	9789.6	10747.5	11689.4	12550.3	13409.6	14245.9	15096.3
3	PERSONAL TRUCKS	5997.7	6560.7	7150.1	7827.4	8523.7	9238.1	9984.3	10732.1	11475.8	12204.7	12937.0
4	COMMERCIAL TRUCKS	6454.3	7075.4	7727.0	8475.2	9246.2	10030.0	10848.6	11669.3	12485.4	13285.7	14090.5
5	GVW 1	5992.5	6558.9	7152.1	7831.9	8530.9	9248.3	9997.4	10747.6	11493.5	12224.8	12959.6
6	GVW 2	6800.6	7451.3	8133.2	8916.7	9723.1	10551.1	11416.1	12283.7	13146.7	13993.0	14844.4
7												
8	TRANSPORTATION CHARGES											
9	AUTOMOBILES	257.4	287.0	318.4	349.9	384.5	421.2	460.3	498.4	537.0	576.2	609.6
10	PERSONAL TRUCKS	289.0	319.9	352.1	385.9	421.6	461.3	504.3	543.8	585.3	628.1	663.3
11	COMMERCIAL TRUCKS	316.2	349.7	384.7	421.8	461.2	504.3	551.0	594.0	639.0	685.3	723.7
12	GVW 1	289.0	319.9	352.1	385.9	421.6	461.3	504.3	543.8	585.3	628.1	663.3
13	GVW 2	336.7	371.5	407.7	446.5	487.6	533.0	582.0	627.4	674.8	723.4	764.0
14												
15	BASE PRICE											
16	AUTOMOBILES	5361.1	5810.4	6315.1	6904.8	7568.0	8319.9	9046.8	9710.2	10367.1	11002.0	11649.7
17	PERSONAL TRUCKS	4949.3	5398.6	5865.0	6410.8	6965.5	7529.1	8114.4	8702.8	9283.6	9846.6	10418.9
18	COMMERCIAL TRUCKS	5167.2	5652.0	6156.4	6747.4	7349.7	7955.6	8585.4	9219.0	9845.0	10452.1	11069.6
19	GVW 1	4779.7	5218.8	5674.8	6208.7	6751.4	7303.0	7876.0	8452.1	9021.1	9572.7	10133.5
20	GVW 2	5457.8	5967.2	6496.7	7117.2	7748.5	8390.7	9058.4	9730.3	10394.2	11038.4	11693.6
21												
22	OPTIONS INSTALLED											
23	AUTOMOBILES	969.3	1058.9	1156.2	1249.7	1346.8	1453.4	1564.5	1661.6	1760.6	1857.0	1952.8
24	PERSONAL TRUCKS	474.7	513.4	553.7	595.0	636.9	679.6	722.5	764.2	804.4	843.6	882.9
25	COMMERCIAL TRUCKS	664.7	719.3	776.1	834.4	893.6	953.4	1013.7	1072.2	1128.6	1183.6	1238.7
26	GVW 1	639.3	691.5	745.7	801.3	857.8	915.2	973.1	1029.3	1083.4	1136.2	1189.1
27	GVW 2	683.8	739.6	797.6	857.1	917.4	978.9	1040.8	1100.9	1158.7	1215.2	1271.8
28												
29	CAPITALIZED COST PER MILE											
30	PERSONAL VEHICLES	0.2583	0.2793	0.3026	0.3269	0.3537	0.3818	0.4101	0.4386	0.4682	0.4976	0.5280
31	AUTOMOBILES	0.2553	0.2762	0.2996	0.3236	0.3503	0.3778	0.4056	0.4335	0.4626	0.4916	0.5215
32	PERSONAL TRUCKS	0.2820	0.3038	0.3267	0.3535	0.3813	0.4140	0.4468	0.4798	0.5129	0.5461	0.5800
33	COMMERCIAL TRUCKS	0.2197	0.2367	0.2545	0.2749	0.2961	0.3214	0.3469	0.3725	0.3981	0.4238	0.4500
34	GVW 1	0.2283	0.2451	0.2627	0.2832	0.3047	0.3308	0.3571	0.3835	0.4100	0.4365	0.4636
35	GVW 2	0.2103	0.2280	0.2463	0.2670	0.2883	0.3129	0.3378	0.3626	0.3875	0.4125	0.4381

TABLE 29.00 GROWTH RATES, PRICES AND CAPITALIZED COSTS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	TOTAL PRICE											
2	AUTOMOBILES	9.1	8.8	9.0	9.3	9.5	9.8	8.8	7.4	6.8	6.2	6.0
3	PERSONAL TRUCKS	9.1	9.4	9.0	9.5	8.9	8.4	8.1	7.5	6.9	6.4	6.0
4	COMMERCIAL TRUCKS	9.4	9.6	9.2	9.7	9.1	8.5	8.2	7.6	7.0	6.4	6.1
5	GVW 1	9.2	9.5	9.0	9.5	8.9	8.4	8.1	7.5	6.9	6.4	6.0
6	GVW 2	9.3	9.6	9.2	9.6	9.0	8.5	8.2	7.6	7.0	6.4	6.1
7												
8	TRANSPORTATION CHARGES											
9	AUTOMOBILES	14.9	11.5	10.9	9.9	9.9	9.5	9.3	8.3	7.8	7.3	5.8
10	PERSONAL TRUCKS	14.4	10.7	10.1	9.6	9.3	9.4	9.3	7.8	7.6	7.3	5.6
11	COMMERCIAL TRUCKS	14.2	10.6	10.0	9.6	9.3	9.3	9.3	7.8	7.6	7.2	5.6
12	GVW 1	14.4	10.7	10.1	9.6	9.3	9.4	9.3	7.8	7.6	7.3	5.6
13	GVW 2	13.9	10.3	9.8	9.5	9.2	9.3	9.2	7.8	7.6	7.2	5.6
14												
15	BASE PRICE											
16	AUTOMOBILES	9.1	8.4	8.7	9.3	9.6	9.9	8.7	7.3	6.8	6.1	5.9
17	PERSONAL TRUCKS	8.7	9.1	8.6	9.3	8.7	8.1	7.8	7.3	6.7	6.1	5.8
18	COMMERCIAL TRUCKS	9.0	9.4	8.9	9.6	8.9	8.2	7.9	7.4	6.8	6.2	5.9
19	GVW 1	8.8	9.2	8.7	9.4	8.7	8.2	7.8	7.3	6.7	6.1	5.9
20	GVW 2	8.9	9.3	8.9	9.6	8.9	8.3	8.0	7.4	6.8	6.2	5.9
21												
22	OPTIONS INSTALLED											
23	AUTOMOBILES	7.1	9.2	9.2	8.1	7.8	7.9	7.6	6.2	6.0	5.5	5.2
24	PERSONAL TRUCKS	7.8	8.2	7.8	7.5	7.0	6.7	6.3	5.8	5.3	4.9	4.7
25	COMMERCIAL TRUCKS	7.8	8.2	7.9	7.5	7.1	6.7	6.3	5.8	5.3	4.9	4.7
26	GVW 1	7.8	8.2	7.8	7.5	7.0	6.7	6.3	5.8	5.3	4.9	4.7
27	GVW 2	7.8	8.2	7.8	7.5	7.0	6.7	6.3	5.8	5.3	4.9	4.7
28												
29	CAPITALIZED COST PER MILE											
30	PERSONAL VEHICLES	8.1	8.1	8.4	8.0	8.2	7.9	7.4	7.0	6.8	6.3	6.1
31	AUTOMOBILES	8.0	8.2	8.5	8.0	8.2	7.9	7.3	6.9	6.7	6.3	6.1
32	PERSONAL TRUCKS	8.6	7.7	7.6	8.2	7.9	8.6	7.9	7.4	6.9	6.5	6.2
33	COMMERCIAL TRUCKS	8.1	7.7	7.5	8.0	7.7	8.5	7.9	7.4	6.9	6.5	6.2
34	GVW 1	8.4	7.3	7.2	7.8	7.6	8.6	8.0	7.4	6.9	6.5	6.2
35	GVW 2	8.1	8.4	8.0	8.4	8.0	8.5	7.9	7.3	6.9	6.5	6.2

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	OVERALL FLEET MILES PER GALLON												
2	AUTOMOBILES		13.7	13.9	14.2	14.6	15.1	15.8	16.4	17.1	17.9	18.6	19.3
3	PERSONAL TRUCKS		10.8	11.0	11.2	11.5	12.0	12.3	12.7	13.0	13.3	13.6	13.8
4	COMMERCIAL TRUCKS		11.0	11.0	11.2	11.3	11.6	11.8	12.0	12.2	12.4	12.6	12.8
5													
6	TOTAL FUEL CONSUMPTION	BILL GAL	109.696	112.287	113.792	114.858	115.488	116.198	117.023	117.878	118.426	118.742	119.134
7	AUTOMOBILES		82.142	82.584	82.272	81.615	80.288	78.917	77.611	76.350	74.940	73.574	72.508
8	PERSONAL TRUCKS		8.512	9.661	10.716	11.717	12.688	13.690	14.708	15.693	16.570	17.333	17.953
9	COMMERCIAL TRUCKS		19.042	20.042	20.803	21.527	22.511	23.590	24.704	25.834	26.916	27.835	28.673
10													
11	AVERAGE AGE												
12	PERSONAL VEHICLES		5.636	5.619	5.619	5.634	5.642	5.629	5.614	5.621	5.655	5.697	5.731
13	AUTOMOBILES		5.731	5.724	5.727	5.741	5.744	5.721	5.691	5.680	5.696	5.719	5.734
14	TRUCKS		4.550	4.564	4.642	4.754	4.875	4.996	5.122	5.264	5.425	5.580	5.713
15	COMMERCIAL TRUCKS		6.221	6.181	6.188	6.211	6.224	6.230	6.247	6.288	6.357	6.447	6.542
16													
17	MILES PER VEHICLE												
18	PERSONAL VEHICLES		11.154	11.214	11.263	11.306	11.366	11.427	11.489	11.546	11.610	11.676	11.738
19	AUTOMOBILES		11.218	11.286	11.342	11.390	11.451	11.515	11.579	11.638	11.709	11.782	11.849
20	TRUCKS		10.426	10.487	10.542	10.620	10.723	10.817	10.908	10.985	11.046	11.100	11.152
21	COMMERCIAL TRUCKS		11.656	11.533	11.374	11.258	11.306	11.376	11.469	11.601	11.763	11.911	12.063
22													
23	NEW REGISTRATIONS TO BEGINNING STOCK												
24	PERSONAL VEHICLES		0.115	0.111	0.109	0.108	0.113	0.114	0.115	0.110	0.106	0.107	0.108
25	AUTOMOBILES		0.109	0.104	0.103	0.102	0.107	0.110	0.110	0.106	0.102	0.102	0.103
26	TRUCKS		0.195	0.176	0.164	0.156	0.153	0.149	0.144	0.136	0.129	0.131	0.134
27	COMMERCIAL TRUCKS		0.129	0.122	0.115	0.116	0.119	0.119	0.116	0.111	0.106	0.103	0.103
28													
29	SCRAPPAGE TO BEGINNING STOCK												
30	PERSONAL VEHICLES		0.089	0.089	0.086	0.084	0.085	0.085	0.084	0.082	0.082	0.086	0.089
31	AUTOMOBILES		0.093	0.093	0.091	0.089	0.090	0.090	0.088	0.087	0.086	0.088	0.089
32	TRUCKS		0.043	0.041	0.041	0.042	0.044	0.048	0.052	0.054	0.063	0.073	0.092
33	COMMERCIAL TRUCKS		0.057	0.055	0.053	0.054	0.055	0.058	0.061	0.063	0.067	0.071	0.075
34													
35	ACTIVITIES AS SHARE OF INCOME	%	28.8	28.3	27.9	28.0	28.0	28.1	28.3	28.5	28.6	28.8	29.1
36													
37	FARM PROPRIETOR'S INCOME	BILL $	24.275	26.046	28.081	30.081	32.081	34.081	36.081	38.081	40.081	42.081	44.532
38	EMPLOYEE COMPENSATION												
39	AGRICULTURE		12.372	14.204	15.583	17.223	18.931	20.797	22.569	24.225	25.749	27.418	29.202
40	CONTRACT CONSTRUCTION		64.625	69.518	74.001	80.756	88.811	97.070	105.456	113.895	122.077	131.352	142.042
41	SERVICES		186.930	206.204	227.209	253.393	283.696	318.412	355.562	394.044	433.549	476.854	525.792
42	WHOLESALE AND RETAIL TRADE		203.437	222.445	240.921	264.515	290.891	319.996	350.551	381.187	411.800	444.411	480.553
43													
44	AUTO REG. FEES INDEX (1967=100)		150.0	159.1	168.8	179.8	190.9	202.1	213.1	223.6	233.6	243.6	253.6
45	PERCENT OF FAMILIES WITH INCOME OVER												
46	$15,000 (1975 DOLLARS)		49.7	50.0	50.1	50.4	50.9	51.4	52.1	52.7	53.1	53.4	54.1
47	COMMERCIAL BANK RATE ON NEW AUTO LOANS		10.9	11.1	11.2	11.4	11.6	11.4	11.1	10.8	10.7	10.6	10.5

TABLE 31.00 GROWTH RATES, MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	OVERALL FLEET MILES PER GALLON												
2	AUTOMOBILES		0.6	1.4	2.1	2.5	3.8	4.2	4.4	4.3	4.3	4.0	3.5
3	PERSONAL TRUCKS		0.3	1.3	2.3	3.0	3.6	3.3	2.9	2.6	2.2	2.0	1.9
4	COMMERCIAL TRUCKS		0.0	0.6	1.1	1.6	2.1	2.0	1.9	1.7	1.5	1.4	1.3
5													
6	TOTAL FUEL CONSUMPTION	BILL GAL	3.8	2.4	1.3	0.9	0.5	0.6	0.7	0.7	0.5	0.3	0.3
7	AUTOMOBILES		2.0	0.5	-0.4	-0.8	-1.6	-1.7	-1.7	-1.6	-1.8	-1.8	-1.4
8	PERSONAL TRUCKS		15.6	13.5	10.9	9.3	8.3	7.9	7.4	6.7	5.6	4.6	3.6
9	COMMERCIAL TRUCKS		7.2	5.3	3.8	3.5	4.6	4.8	4.7	4.6	4.2	3.4	3.0
10													
11	AVERAGE AGE												
12	PERSONAL VEHICLES		-0.4	-0.3	-0.0	0.3	0.1	-0.2	-0.3	0.1	0.6	0.7	0.6
13	AUTOMOBILES		-0.2	-0.1	0.0	0.2	0.1	-0.4	-0.5	-0.2	0.3	0.4	0.3
14	TRUCKS		-0.6	0.3	1.7	2.4	2.6	2.5	2.5	2.8	3.1	2.9	2.4
15	COMMERCIAL TRUCKS		-0.8	-0.6	0.1	0.4	0.2	0.1	0.3	0.7	1.1	1.4	1.5
16													
17	MILES PER VEHICLE												
18	PERSONAL VEHICLES		0.8	0.5	0.4	0.4	0.3	0.5	0.5	0.5	0.6	0.6	0.5
19	AUTOMOBILES		0.8	0.6	0.5	0.4	0.5	0.6	0.6	0.5	0.6	0.6	0.6
20	TRUCKS		0.8	0.6	0.5	0.7	1.0	0.9	0.8	0.7	0.6	0.5	0.5
21	COMMERCIAL TRUCKS		0.3	-1.1	-1.4	-1.0	0.4	0.6	0.8	1.2	1.4	1.3	1.3
22													
23	NEW REGISTRATIONS TO BEGINNING STOCK												
24	PERSONAL VEHICLES			-4.2	-1.3	-1.1	4.4	1.6	0.4	-4.4	-3.3	0.6	1.0
25	AUTOMOBILES			-4.1	-0.9	-1.0	5.0	1.9	0.8	-4.3	-3.3	0.2	0.4
26	TRUCKS			-9.7	-7.3	-4.9	-1.9	-2.3	-3.3	-6.0	-4.6	1.3	2.3
27	COMMERCIAL TRUCKS			-5.7	-5.6	0.8	2.3	0.2	-2.7	-4.2	-4.9	-2.3	0.1
28													
29	SCRAPPAGE TO BEGINNING STOCK												
30	PERSONAL VEHICLES			-0.6	-2.9	-2.4	0.7	-0.0	-1.3	-1.8	0.4	4.4	3.6
31	AUTOMOBILES			0.1	-2.4	-2.2	0.9	-0.2	-1.3	-2.1	-0.9	3.1	0.4
32	TRUCKS			-4.1	-0.2	2.6	5.3	9.9	6.6	5.2	15.6	16.4	25.2
33	COMMERCIAL TRUCKS			-2.8	-3.7	1.2	3.2	4.8	4.6	3.8	5.6	6.4	5.8
34													
35	ACTIVITIES AS SHARE OF INCOME	%	0.1	-1.5	-1.4	0.2	0.2	0.3	0.4	0.8	0.9	0.6	0.9
36													
37	FARM PROPRIETORS INCOME	BILL $	20.0	7.3	7.8	7.1	6.6	6.2	5.9	5.5	5.3	5.0	5.8
38	EMPLOYEE COMPENSATION												
39	AGRICULTURE		10.5	14.8	9.7	10.5	9.9	9.9	8.5	7.3	6.3	6.5	6.5
40	CONTRACT CONSTRUCTION		10.2	7.6	6.4	9.1	10.0	9.3	8.6	8.0	7.2	7.6	8.1
41	SERVICES		14.6	10.3	10.2	11.5	12.0	12.2	11.7	10.8	10.0	10.0	10.3
42	WHOLESALE AND RETAIL TRADE		9.3	9.3	8.3	9.8	10.0	10.0	9.5	8.7	8.0	7.9	8.1
43													
44	AUTO REG. FEES INDEX (1967=100)		6.4	6.1	6.1	6.5	6.2	5.8	5.4	4.9	4.5	4.3	4.1
45	PERCENT OF FAMILIES WITH INCOME OVER												
46	$15,000 (1975 DOLLARS)		0.8	0.5	0.2	0.6	1.1	0.9	1.3	1.1	0.8	0.7	1.3
47	COMMERCIAL BANK RATE ON NEW AUTO LOANS		3.0	1.7	0.6	2.3	1.3	-1.5	-2.5	-2.8	-1.3	-1.0	-0.6

TABLE 32.00 CONSTANT ADJUSTMENTS

LINE	VAR LABEL	I T E M	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	AVAGECT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	AVAGEPT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	AVAGEPV		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	AVAGE0-20		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	CTGSCON		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	EPACDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	EPACDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	EPACFMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	EPACFMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	EPAFDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	EPAFDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	EPALDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	EPALDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	EPALFMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	EPALFMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	EPAMDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	EPAMDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	EPASDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	EPASDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	EPASFMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	EPASFMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	FRMCICB		-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	0.0	0.0	0.0	0.0	0.0
23	FRMCICR		-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	0.0	0.0	0.0	0.0	0.0
24	GASAUTOADJ		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	KEND*CT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	KEND*AY/FM		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	KEND*AY/LD		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	KEND*PT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	KEND*PV		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	OLDVMT/K		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	OMVUANR		-0.365	-1.100	-1.100	-1.000	-0.600	-0.500	-0.500	-0.500	-0.500	-0.500	-0.500
32	OMVUCTNROK		0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
33	OMVUPTNROK		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	OMVUPVNROK		-0.137	-0.760	-0.520	-0.200	0.400	0.700	0.900	1.000	1.100	1.350	1.600
35	OPMVUAC*LFYEND		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	PC4112-1741		-8.8	-8.8	-8.8	-8.8	-8.8	-8.8	-8.8	-8.8	-8.8	-8.8	-8.8
37	PC4121-1000		-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
38	PC4122-1001		-7.9	-7.9	-6.7	-7.9	-7.9	-7.9	-7.9	-7.9	-7.9	-7.9	-7.9
39	PC4122-1780		-16.4	-16.4	-16.4	-16.4	-16.4	-16.4	-16.4	-16.4	-16.4	-16.4	-16.4
40	PC4122-1783		-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
41	PDCEDAVN		3,000	5,500	7,500	6,800	6,000	5,300	5,000	5,000	5,000	5,000	5,000
42	PER15+		4,800	4,500	3,500	3,000	3,000	3,000	3,000	2,700	2,200	1,700	1,400
43	PER15+Y75		6,000	5,500	4,500	4,000	4,000	4,000	4,000	3,700	3,100	2,400	2,000
44	PINPUTA		0.0	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
45	PRC1PUBASE		-11.	-11.	-11.	-11.	-11.	-11.	-11.	-11.	-11.	-11.	-11.
46	PRC1PUOPT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	PRC1PUTRN		9.	17.	25.	30.	34.	40.	48.	53.	60.	68.	72.
48	PRC2PUBASE		-39.	-39.	-39.	-39.	-39.	-39.	-39.	-39.	-39.	-39.	-39.
49	PRC2PUOPT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	PRC2PUTRN		9.	17.	25.	30.	34.	40.	48.	53.	60.	68.	72.
51	PRPTPUBASE		28.	28.	28.	28.	28.	28.	28.	28.	28.	28.	28.

TABLE 32.00 CONSTANT ADJUSTMENTS

LINE	VAR	LABEL	I T E M	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	PRPTPUOPT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	PRPTPUTRN			9.	17.	25.	30.	34.	40.	48.	55.	60.	68.	72.
3	PTGSCON			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	PU/NCT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	PU/NFD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	PU/NLT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	PU/NMD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	PU/NST			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	PUCEDAVN			-0.050	-0.100	-0.150	-0.150	-0.150	-0.150	-0.150	-0.150	-0.150	-0.150	-0.150
10	PURMVUUA			1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
11	PUSEDW			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	SAWRRDAV			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	SAWRRDAVD-V			0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110
14	SAWRRDAVF-V			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	SCMVUA			-1.100	-0.600	-0.600	-0.800	-0.800	-0.800	-0.900	-1.100	-1.300	-1.300	-1.500
16	SCMVUAC+LF			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	SCMVUACD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	SCMVUACF			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	SCMVUACT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	SCMVUAFD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	SCMVUALD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	SCMVUALF			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	SCMVUALT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	SCMVUAMD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	SCMVUASD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	SCMVUASF			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	SCMVUAST			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	SCMVUATD			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	SCMVUATF			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	SCMVUCT			0.040	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	SCMVUPV			-1.245	-0.846	-1.007	-1.380	-1.590	-1.790	-2.110	-2.520	-2.860	-3.035	-3.220
32	SHRC+LFTNR			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
33	SHRCD*A			0.020	0.019	0.020	0.020	0.021	0.020	0.020	0.020	0.021	0.022	0.022
34	SHRCDTNR			0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060
35	SHRCF*A			0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	SHRFD*A			-0.050	-0.052	-0.051	-0.054	-0.051	-0.052	-0.052	-0.053	-0.053	-0.054	-0.055
37	SHRFDTNR			-0.0400	-0.0525	-0.0550	-0.0550	-0.0550	-0.0550	-0.0550	-0.0550	-0.0550	-0.0550	-0.0550
38	SHRLD*A			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	SHRLDTNR			-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
40	SHRLF*A			0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
41	SHRMD*A			0.049	0.050	0.050	0.050	0.051	0.051	0.051	0.051	0.052	0.053	0.053
42	SHRMDTNR			0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027
43	SHRSD*A			0.015	0.016	0.018	0.018	0.019	0.019	0.019	0.021	0.023	0.024	0.025
44	SHRSDTNR			-0.0060	0.0025	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
45	SHRSF*A			-0.006	-0.005	-0.007	-0.006	-0.009	-0.013	-0.014	-0.017	-0.020	-0.021	-0.023
46	SHRSFTNR			0.0242	0.0272	0.0272	0.0272	0.0272	0.0272	0.0272	0.0272	0.0272	0.0272	0.0272
47	SPLTADJ			0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48	TXRFC1			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	TXRFC2			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	TXRFPT			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	USCOMPGC			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 32.00 CONSTANT ADJUSTMENTS

LINE	VAR LABEL	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	USCDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	USCDPOPTM		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3	USCDPUBASE=2		0.	-5.	-10.	-15.	-20.	181.	186.	198.	209.	221.	233.
4	USCDPUOPT=2		66.	60.	54.	48.	42.	36.	30.	24.	18.	12.	6.
5	USCDPUTRN		-7.	-7.	-7.	-7.	-7.	-7.	-7.	-7.	-7.	-7.	-7.
6	USCFMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	USCFMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	USCFPUBASE=2		886.	886.	886.	886.	886.	1111.	1122.	1134.	1146.	1158.	1170.
9	USCFPUTRN		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	USFDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	USFDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	USFDPOPTM		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
13	USFDPUBASE=2		24.	29.	34.	39.	319.	338.	357.	372.	388.	405.	423.
14	USFDPUOPT=2		17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.
15	USFDPUTRN		17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.
16	USLDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	USLDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	USLDPOPTM		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
19	USLDPUBASE=2		260.	265.	275.	285.	595.	620.	646.	662.	680.	708.	736.
20	USLDPUOPT=2		13.	13.	13.	13.	13.	13.	13.	13.	13.	13.	13.
21	USLDPUTRN		17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.
22	USLFMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	USLFMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	USLFPUBASE=2		1300.	1300.	1300.	1300.	1300.	1550.	1563.	1576.	1589.	1603.	1617.
25	USLFPUTRN		7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.
26	USMDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	USMDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	USMDPOPTM		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29	USMDPUBASE=2		250.	230.	230.	230.	230.	470.	482.	495.	508.	522.	537.
30	USMDPUOPT=2		-33.	-33.	-33.	-33.	-33.	-33.	-33.	-33.	-33.	-33.	-33.
31	USMDPUTRN		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
32	USSDMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	USSDMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	USSDPOPTM		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35	USSDPUBASE=2		-41.	-50.	-60.	-70.	-80.	-90.	60.	65.	70.	70.	75.
36	USSDPUOPT=2		-3.	-7.	-11.	-15.	-19.	-23.	-27.	-31.	-31.	-31.	-31.
37	USSDPUTRN		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
38	USSFMPGC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	USSFMPGH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	USSFPUBASE=2		361.	361.	361.	361.	361.	361.	522.	530.	538.	547.	556.
41	USSFPUTRN		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42	USTDPOPTMFW		39.	59.	79.	99.	119.	139.	159.	179.	199.	219.	239.
43	USTDPUBASEFW		21.	21.	21.	21.	21.	21.	21.	21.	21.	21.	21.
44	VMCT/K		0.600	0.600	0.700	0.800	0.800	0.700	0.600	0.500	0.400	0.300	0.200
45	VMPT/K		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	VMT/PM		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	VMT/K		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	VMTMVA=MC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	VMTR*/K		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	VMTU*/K		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	WBCCCS		2,800	2,800	4,000	3,500	3,000	2,500	2,000	2,000	2,000	2,000	2,000
52	WBCSVS		9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
53	WBCWRS		11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000

TABLE 32.10 EXOGENOUS ASSUMPTIONS

LINE	I T E M	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	DUMAUTOS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
2	EFFC	1.	1.	2.	8.	12.	16.	19.	19.	19.	19.	19.
3	EFFC*	1.	1.	3.	11.	17.	23.	26.	27.	27.	27.	27.
4	EFFCCD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5	EFFCCD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
6	EFFCCF	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
7	EFFCCF*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
8	EFFCFD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
9	EFFCFD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	EFFCLD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	EFFCLD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12	EFFCLF	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
13	EFFCLF*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
14	EFFCMD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15	EFFCMD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
16	EFFCSD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
17	EFFCSD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
18	EFFCSF	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
19	EFFCSF*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	EFFH	1.	1.	2.	8.	12.	16.	19.	19.	19.	19.	19.
21	EFFH*	1.	1.	3.	11.	17.	23.	26.	27.	27.	27.	27.
22	EFFHCD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
23	EFFHCD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
24	EFFHCF	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25	EFFHCF*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
26	EFFHFD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
27	EFFHFD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
28	EFFHLD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29	EFFHLD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	EFFHLF	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
31	EFFHLF*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
32	EFFHMD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
33	EFFHMD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
34	EFFHSD	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35	EFFHSD*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
36	EFFHSF	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
37	EFFHSF*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
38	FRMBPC	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
39	GMTWO/NER	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943
40	GRPUT/NER	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974
41	GRPUT/PTR	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994
42	LDMV	141.20	144.30	147.20	149.90	152.50	154.90	157.20	159.40	161.80	164.10	166.10
43	MPGC1	11.48	12.40	13.61	14.88	16.20	16.20	16.20	16.20	16.20	16.20	16.20
44	MPGC2	10.71	11.03	11.58	12.13	12.71	12.71	12.71	12.71	12.71	12.71	12.71
45	MPGPT	10.97	11.85	13.01	14.22	15.48	15.48	15.48	15.48	15.48	15.48	15.48
46	NCFM3*4/PM	0.308	0.309	0.312	0.313	0.315	0.316	0.317	0.318	0.318	0.318	0.319
47	NCFM5*/PM	0.136	0.130	0.122	0.117	0.111	0.106	0.102	0.096	0.094	0.090	0.087
48	NCHOC/NCH	0.378	0.383	0.388	0.393	0.398	0.403	0.408	0.413	0.418	0.423	0.428
49	NPMET	73.270	73.270	73.270	73.270	73.270	73.270	73.270	73.270	73.270	73.270	73.270
50	NPR	218.001	219.770	221.770	223.740	225.870	228.030	230.210	232.480	234.580	236.750	238.880

TABLE 32.10 EXOGENOUS ASSUMPTIONS

LINE	I T E M	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	NPRENC/R	0.192	0.193	0.193	0.194	0.195	0.195	0.196	0.197	0.197	0.198	0.198
2	NPRESC/R	0.062	0.061	0.060	0.059	0.059	0.058	0.057	0.057	0.056	0.055	0.055
3	NPRMTN/R	0.048	0.049	0.050	0.051	0.052	0.053	0.054	0.055	0.056	0.057	0.058
4	NPRNEW/R	0.057	0.057	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.055	0.055
5	NPRPAC/R	0.136	0.137	0.138	0.139	0.140	0.141	0.142	0.143	0.144	0.145	0.147
6	NPRSA/R	0.157	0.157	0.156	0.156	0.156	0.155	0.155	0.154	0.154	0.154	0.153
7	NPRWNC/R	0.077	0.077	0.077	0.076	0.076	0.076	0.076	0.075	0.075	0.075	0.074
8	NPRWSC/R	0.100	0.101	0.101	0.102	0.103	0.103	0.104	0.104	0.105	0.106	0.106
9	NPR20.29	38.23	38.89	39.54	40.13	40.55	40.81	40.91	40.78	40.39	39.76	38.89
10	NPR65+	23.950	24.440	24.920	25.370	25.780	26.230	26.720	27.300	27.820	28.380	28.890
11	OMVUACFNR	0.098	0.093	0.089	0.084	0.080	0.076	0.072	0.069	0.065	0.062	0.059
12	OMVUVNR	0.1780	0.1820	0.1900	0.1980	0.2091	0.2220	0.2340	0.2480	0.2619	0.2779	0.2935
13	PC4111=2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	PC4113=1747	146.0	154.7	164.0	173.8	184.3	195.3	207.0	219.5	232.6	246.6	261.4
15	PSCRAPAV	85.08	91.46	98.32	105.69	113.09	120.44	127.66	134.69	141.42	148.49	155.91
16	PU/NADJCT	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163
17	PU/NADJFD	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265
18	PU/NADJLT	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229
19	PU/NADJMD	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189
20	PU/NADJST	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192
21	RPOLK/USYEND	0.9729	0.9748	0.9768	0.9787	0.9807	0.9826	0.9846	0.9866	0.9886	0.9905	0.9925
22	RWMMV	3857.4	3857.4	3857.4	3857.4	3857.4	3857.4	3857.4	3857.4	3857.4	3857.4	3857.4
23	RWMMVI	42.580	42.580	42.580	42.580	42.580	42.580	42.580	42.580	42.580	42.580	42.580
24	RWMMVR	3260.7	3260.7	3260.7	3260.7	3260.7	3260.7	3260.7	3260.7	3260.7	3260.7	3260.7
25	SHRC1/CT	0.520	0.509	0.498	0.488	0.478	0.476	0.474	0.472	0.470	0.469	0.467
26	SHRC1/CTNR	0.428	0.421	0.414	0.407	0.400	0.400	0.400	0.400	0.400	0.400	0.400
27	TXPTIC	0.00901	0.00901	0.00901	0.00901	0.00901	0.00901	0.00901	0.00901	0.00901	0.00901	0.00901
28	TXPTLC	0.00929	0.00929	0.00929	0.00929	0.00929	0.00929	0.00929	0.00929	0.00929	0.00929	0.00929
29	TXPTLT	0.93	0.98	1.04	1.10	1.16	1.22	1.29	1.35	1.40	1.46	1.50
30	TXPTSC	0.01040	0.01040	0.01040	0.01040	0.01040	0.01040	0.01040	0.01040	0.01040	0.01040	0.01040
31	TXROWN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	TXROWNCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	TXROWNFD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	TXROWNLT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	TXROWNMD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	TXROWNST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	TXRPUCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	TXRPUFD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	TXRPULT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	TXRPUMD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	TXRPUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	TXRWTDAUTO	4.86	5.02	5.18	5.34	5.50	5.66	5.82	5.98	6.14	6.30	6.50
43	TXSTLT	5.25	5.56	5.91	6.22	6.57	6.92	7.28	7.62	7.95	8.29	8.60
44	USCDCURB	3400.	3100.	3050.	3000.	2900.	2800.	2750.	2700.	2700.	2700.	2700.
45	USCDDISP	248.0	217.0	207.0	198.0	183.0	168.0	158.0	150.0	150.0	150.0	150.0
46	USCDFAUTO	0.900	0.875	0.850	0.800	0.750	0.700	0.675	0.675	0.675	0.675	0.675
47	USCDFOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	USCDF4CYL	0.100	0.150	0.200	0.300	0.400	0.450	0.500	0.550	0.550	0.550	0.550
49	USCDF6CYL	0.500	0.600	0.550	0.500	0.450	0.400	0.350	0.300	0.300	0.300	0.300
50	USCDPOPTM/T	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969

TABLE 32.10 EXOGENOUS ASSUMPTIONS

LINE	ITEM	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1	USCDPUBASE=2/T	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833
2	USCFCURB	2894.	2865.	2837.	2808.	2780.	2752.	2725.	2698.	2698.	2698.	2698.
3	USCFDISP	116.2	114.5	112.8	111.1	109.4	107.8	106.2	104.6	104.6	104.6	104.6
4	USCFFAUTO	0.650	0.550	0.450	0.450	0.450	0.450	0.450	0.450	0.450	0.450	0.450
5	USCFFOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	USCFF4CYL	0.900	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850
7	USCFF6CYL	0.100	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
8	USFDCURB	4100.	3800.	3700.	3600.	3450.	3300.	3250.	3200.	3200.	3200.	3200.
9	USFDDISP	316.0	287.0	274.0	259.0	242.0	224.0	216.0	210.0	210.0	210.0	210.0
10	USFDFAUTO	0.990	0.980	0.970	0.950	0.925	0.900	0.875	0.850	0.850	0.850	0.850
11	USFDFOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	USFDF4CYL	0.0	0.0	0.025	0.050	0.075	0.100	0.125	0.150	0.150	0.150	0.150
13	USFDF6CYL	0.050	0.100	0.200	0.300	0.400	0.500	0.600	0.650	0.650	0.650	0.650
14	USFDPOPTM/T	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014
15	USFDPUBASE=2/T	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019
16	USLDCURB	4450.	4100.	4000.	3850.	3700.	3600.	3550.	3500.	3500.	3500.	3500.
17	USLDDISP	387.0	351.0	336.0	318.0	298.0	283.0	272.0	265.0	265.0	266.0	265.0
18	USLDFAUTO	0.980	0.970	0.960	0.950	0.940	0.920	0.900	0.880	0.880	0.880	0.880
19	USLDFOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	USLDF4CYL	0.0	0.001	0.005	0.010	0.020	0.050	0.100	0.150	0.150	0.150	0.150
21	USLDF6CYL	0.0	0.050	0.100	0.150	0.200	0.250	0.300	0.350	0.350	0.350	0.350
22	USLDPOPTM/T	1.034	1.034	1.034	1.034	1.034	1.034	1.034	1.034	1.034	1.034	1.034
23	USLDPUBASE=2/T	1.621	1.621	1.621	1.621	1.621	1.621	1.621	1.621	1.621	1.621	1.621
24	USLFCURB	3234.	3169.	3106.	3044.	2983.	2923.	2865.	2808.	2808.	2808.	2808.
25	USLFDISP	173.6	171.0	168.4	165.9	163.4	160.9	158.5	156.1	156.1	156.1	156.1
26	USLFFAUTO	0.700	0.600	0.500	0.490	0.470	0.450	0.450	0.450	0.450	0.450	0.450
27	USLFFOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	USLFF4CYL	0.550	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
29	USLFF6CYL	0.450	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400
30	USMDCURB	3710.	3550.	3450.	3400.	3250.	3100.	3050.	3000.	3000.	3000.	3000.
31	USMDDISP	282.0	263.0	248.0	238.0	218.0	198.0	189.0	180.0	180.0	180.0	180.0
32	USMDFAUTO	0.950	0.900	0.850	0.800	0.775	0.750	0.725	0.725	0.725	0.725	0.725
33	USMDFOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	USMDF4CYL	0.0	0.0	0.025	0.050	0.075	0.100	0.150	0.150	0.150	0.150	0.150
35	USMDF6CYL	0.115	0.200	0.350	0.500	0.650	0.700	0.700	0.700	0.700	0.700	0.700
36	USMDPOPTM/T	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017
37	USMDPUBASE=2/T	0.929	0.929	0.929	0.929	0.929	0.929	0.929	0.929	0.929	0.929	0.929
38	USSDCURB	2650.	2600.	2550.	2500.	2440.	2380.	2330.	2300.	2300.	2300.	2300.
39	USSDDISP	152.0	143.0	135.0	130.0	125.0	115.0	110.0	105.0	105.0	105.0	105.0
40	USSDFAUTO	0.625	0.600	0.575	0.550	0.525	0.475	0.425	0.400	0.400	0.400	0.400
41	USSDFOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	USSDF4CYL	0.725	0.750	0.775	0.800	0.825	0.850	0.875	0.900	0.900	0.900	0.900
43	USSDF6CYL	0.255	0.250	0.225	0.200	0.175	0.150	0.125	0.100	0.100	0.100	0.100
44	USSDPOPTM/T	0.922	0.922	0.922	0.922	0.922	0.922	0.922	0.922	0.922	0.922	0.922
45	USSDPUBASE=2/T	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.729
46	USSFCURB	2328.	2293.	2258.	2224.	2191.	2158.	2126.	2094.	2094.	2094.	2094.
47	USSFDISP	95.8	93.9	92.1	90.2	88.4	86.6	84.9	83.2	83.2	83.2	83.2
48	USSFFAUTO	0.400	0.350	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
49	USSFFOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	USSFF4CYL	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
51	USSFF6CYL	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050

APPENDIX C

SIMULATION ANALYSIS TABLES

C.1 2 Percent Increase in Personal Income

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	EQUILIBRIUM ('DESIRED') STOCKS											
2	PERSONAL VEHICLES											
3	YPS UP 2%	116.027	117.828	119.924	122.308	124.895	126.018	127.298	129.642	132.032	134.174	135.943
4	CONTROL	115.710	117.540	119.814	122.298	124.941	126.119	127.433	129.805	132.203	134.321	136.036
5	DIFFERENCE	0.317	0.288	0.110	0.010	-0.046	-0.101	-0.135	-0.163	-0.171	-0.148	-0.093
6	% DIFFERENCE	0.27	0.25	0.09	0.01	-0.04	-0.08	-0.11	-0.13	-0.13	-0.11	-0.07
7	AUTOMOBILES											
8	YPS UP 2%	103.164	104.786	106.694	108.909	111.274	112.139	113.200	115.326	117.471	119.304	120.726
9	CONTROL	102.842	104.499	106.594	108.930	111.348	112.275	113.379	115.539	117.695	119.505	120.871
10	DIFFERENCE	0.322	0.287	0.100	-0.021	-0.073	-0.136	-0.179	-0.213	-0.224	-0.201	-0.145
11	% DIFFERENCE	0.31	0.27	0.09	-0.02	-0.07	-0.12	-0.16	-0.18	-0.19	-0.17	-0.12
12	MEMO TRUCKS AND VANS REG AS AUTOS											
13	YPS UP 2%	12.863	13.042	13.230	13.399	13.621	13.879	14.099	14.316	14.561	14.870	15.217
14	CONTROL	12.868	13.041	13.221	13.368	13.593	13.844	14.054	14.266	14.508	14.816	15.165
15	DIFFERENCE	-0.005	0.001	0.010	0.031	0.027	0.035	0.044	0.050	0.053	0.054	0.052
16	% DIFFERENCE	-0.04	0.01	0.07	0.23	0.20	0.25	0.32	0.35	0.36	0.36	0.34
17	LIGHT TRUCKS											
18	YPS UP 2%	29.617	29.849	30.053	30.177	30.444	30.691	30.733	30.806	31.051	31.402	31.805
19	CONTROL	29.452	29.726	29.941	30.052	30.329	30.572	30.602	30.670	30.914	31.268	31.676
20	DIFFERENCE	0.165	0.122	0.111	0.126	0.116	0.120	0.130	0.136	0.137	0.134	0.129
21	% DIFFERENCE	0.56	0.41	0.37	0.42	0.38	0.39	0.43	0.44	0.44	0.43	0.41
22	MEMO TRUCKS AND VANS REG AS AUTOS											
23	YPS UP 2%	12.863	13.042	13.230	13.399	13.621	13.879	14.099	14.316	14.561	14.870	15.217
24	CONTROL	12.868	13.041	13.221	13.368	13.593	13.844	14.054	14.266	14.508	14.816	15.165
25	DIFFERENCE	-0.005	0.001	0.010	0.031	0.027	0.035	0.044	0.050	0.053	0.054	0.052
26	% DIFFERENCE	-0.04	0.01	0.07	0.23	0.20	0.25	0.32	0.35	0.36	0.36	0.34
27	NONMEMO TRUCKS											
28	YPS UP 2%	16.754	16.807	16.823	16.778	16.824	16.812	16.634	16.490	16.490	16.532	16.588
29	CONTROL	16.584	16.685	16.721	16.683	16.735	16.727	16.548	16.404	16.406	16.452	16.512
30	DIFFERENCE	0.170	0.122	0.102	0.095	0.089	0.085	0.086	0.086	0.084	0.080	0.077
31	% DIFFERENCE	1.03	0.73	0.61	0.57	0.53	0.51	0.52	0.53	0.51	0.49	0.47
32												
33	NEW REGISTRATIONS											
34	PERSONAL VEHICLES											
35	YPS UP 2%	13.668	13.184	13.462	13.908	14.508	14.452	14.380	14.804	15.162	15.299	15.463
36	CONTROL	12.486	12.640	13.302	13.920	14.529	14.477	14.404	14.829	15.184	15.314	15.468
37	DIFFERENCE	1.182	0.545	0.160	-0.012	-0.020	-0.024	-0.024	-0.025	-0.022	-0.015	-0.005
38	% DIFFERENCE	9.46	4.31	1.21	-0.08	-0.14	-0.17	-0.17	-0.17	-0.14	-0.10	-0.03
39	AUTOMOBILES											
40	YPS UP 2%	11.477	10.986	11.149	11.461	11.904	11.733	11.554	11.763	12.000	11.992	12.012
41	CONTROL	10.591	10.617	11.101	11.546	11.980	11.798	11.608	11.811	12.039	12.019	12.023
42	DIFFERENCE	0.886	0.369	0.048	-0.085	-0.076	-0.064	-0.054	-0.048	-0.039	-0.027	-0.011
43	% DIFFERENCE	8.36	3.48	0.43	-0.74	-0.63	-0.55	-0.47	-0.40	-0.33	-0.22	-0.09
44	AUTOMOBILES AND VANS REG AS AUTOS											
45	YPS UP 2%	11.667	11.184	11.358	11.683	12.138	11.981	11.816	12.041	12.293	12.301	12.338
46	CONTROL	10.781	10.815	11.310	11.768	12.214	12.046	11.870	12.089	12.332	12.328	12.349
47	DIFFERENCE	0.886	0.369	0.048	-0.085	-0.076	-0.064	-0.054	-0.048	-0.039	-0.027	-0.011
48	% DIFFERENCE	8.22	3.41	0.42	-0.72	-0.62	-0.53	-0.46	-0.40	-0.32	-0.22	-0.09
49	MEMO TRUCKS											
50	YPS UP 2%	2.002	2.000	2.104	2.225	2.370	2.471	2.564	2.763	2.869	2.998	3.126
51	CONTROL	1.706	1.824	1.991	2.152	2.315	2.431	2.534	2.740	2.852	2.986	3.119
52	DIFFERENCE	0.296	0.176	0.112	0.073	0.055	0.040	0.030	0.023	0.018	0.012	0.006
53	% DIFFERENCE	17.34	9.63	5.64	3.41	2.39	1.65	1.17	0.83	0.62	0.41	0.20

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	LIGHT TRUCKS											
2	YPS UP 2%	4.842	4.860	5.088	5.345	5.626	5.857	6.070	6.402	6.644	6.882	7.105
3	CONTROL	4.181	4.470	4.860	5.206	5.500	5.742	5.963	6.300	6.543	6.787	7.018
4	DIFFERENCE	0.661	0.390	0.228	0.139	0.125	0.115	0.106	0.102	0.101	0.094	0.087
5	% DIFFERENCE	15.80	8.73	4.69	2.67	2.28	2.00	1.79	1.63	1.54	1.39	1.24
6	MEMO TRUCKS AND VANS REG AS AUTOS											
7	YPS UP 2%	2.192	2.198	2.313	2.447	2.604	2.719	2.826	3.041	3.163	3.307	3.452
8	CONTROL	1.896	2.022	2.200	2.374	2.549	2.679	2.796	3.018	3.145	3.295	3.445
9	DIFFERENCE	0.296	0.176	0.112	0.073	0.055	0.040	0.030	0.023	0.018	0.012	0.006
10	% DIFFERENCE	15.60	8.68	5.10	3.10	2.17	1.50	1.06	0.76	0.56	0.37	0.18
11	NONMEMO TRUCKS											
12	YPS UP 2%	2.650	2.662	2.775	2.898	3.022	3.138	3.244	3.362	3.481	3.575	3.653
13	CONTROL	2.285	2.447	2.659	2.832	2.952	3.063	3.167	3.282	3.398	3.493	3.573
14	DIFFERENCE	0.365	0.215	0.116	0.065	0.070	0.074	0.077	0.080	0.083	0.082	0.080
15	% DIFFERENCE	15.97	8.77	4.35	2.31	2.38	2.43	2.42	2.43	2.44	2.35	2.25
16												
17	SCRAPPAGE											
18	PERSONAL VEHICLES											
19	YPS UP 2%	9.624	9.825	10.223	10.910	11.218	11.048	11.005	11.527	12.050	12.421	12.864
20	CONTROL	9.621	9.963	10.282	10.807	10.968	10.792	10.769	11.301	11.834	12.208	12.646
21	DIFFERENCE	0.003	-0.138	-0.059	0.103	0.250	0.256	0.236	0.226	0.215	0.213	0.219
22	% DIFFERENCE	0.03	-1.39	-0.58	0.95	2.28	2.37	2.19	2.00	1.82	1.74	1.73
23	AUTOMOBILES											
24	YPS UP 2%	9.202	9.355	9.662	10.206	10.324	9.960	9.715	9.961	10.326	10.534	10.804
25	CONTROL	9.188	9.438	9.660	10.065	10.080	9.746	9.551	9.837	10.241	10.473	10.752
26	DIFFERENCE	0.014	-0.084	0.002	0.141	0.244	0.214	0.164	0.123	0.085	0.061	0.052
27	% DIFFERENCE	0.15	-0.89	0.02	1.40	2.42	2.20	1.71	1.25	0.83	0.59	0.48
28	MEMO TRUCKS AND VANS REG AS AUTOS											
29	YPS UP 2%	0.422	0.471	0.561	0.705	0.894	1.088	1.290	1.567	1.723	1.887	2.061
30	CONTROL	0.433	0.525	0.623	0.742	0.888	1.046	1.217	1.464	1.594	1.735	1.894
31	DIFFERENCE	-0.011	-0.054	-0.062	-0.038	0.006	0.041	0.072	0.103	0.130	0.152	0.167
32	% DIFFERENCE	-2.60	-10.36	-9.89	-5.09	0.66	3.96	5.93	7.04	8.14	8.73	8.84
33	LIGHT TRUCKS											
34	YPS UP 2%	1.469	1.595	1.827	2.118	2.428	2.756	3.145	3.621	3.972	4.332	4.728
35	CONTROL	1.485	1.656	1.862	2.125	2.422	2.723	3.063	3.490	3.796	4.116	4.477
36	DIFFERENCE	-0.016	-0.061	-0.036	-0.006	0.007	0.034	0.082	0.131	0.176	0.216	0.251
37	% DIFFERENCE	-1.09	-3.71	-1.92	-0.29	0.27	1.25	2.66	3.75	4.64	5.26	5.60
38	MEMO TRUCKS AND VANS REG AS AUTOS											
39	YPS UP 2%	0.422	0.471	0.561	0.705	0.894	1.088	1.290	1.567	1.723	1.887	2.061
40	CONTROL	0.433	0.525	0.623	0.742	0.888	1.046	1.217	1.464	1.594	1.735	1.894
41	DIFFERENCE	-0.011	-0.054	-0.062	-0.038	0.006	0.041	0.072	0.103	0.130	0.152	0.167
42	% DIFFERENCE	-2.60	-10.36	-9.89	-5.09	0.66	3.96	5.93	7.04	8.14	8.73	8.84
43	NONMEMO TRUCKS											
44	YPS UP 2%	1.047	1.124	1.266	1.414	1.534	1.669	1.855	2.054	2.249	2.445	2.667
45	CONTROL	1.052	1.131	1.240	1.382	1.534	1.676	1.846	2.027	2.202	2.381	2.584
46	DIFFERENCE	-0.005	-0.007	0.026	0.032	0.001	-0.008	0.009	0.028	0.046	0.065	0.083
47	% DIFFERENCE	-0.47	-0.62	2.08	2.28	0.05	-0.45	0.51	1.36	2.10	2.72	3.23
48												
49	YEAR END STOCK											
50	PERSONAL VEHICLES											
51	YPS UP 2%	117.546	120.905	124.144	127.142	130.432	133.837	137.212	140.489	143.601	146.480	149.079
52	CONTROL	116.367	119.044	122.063	125.175	128.736	132.420	136.056	139.584	142.933	146.039	148.862
53	DIFFERENCE	1.179	1.861	2.081	1.966	1.696	1.417	1.156	0.905	0.668	0.440	0.217
54	% DIFFERENCE	1.01	1.56	1.70	1.57	1.32	1.07	0.85	0.65	0.47	0.30	0.15

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	AUTOMOBILES											
2	YPS UP 2%	104.989	106.621	108.108	109.363	110.943	112.717	114.555	116.358	118.031	119.490	120.698
3	CONTROL	104.117	105.296	106.738	108.219	110.118	112.170	114.227	116.201	117.999	119.546	120.816
4	DIFFERENCE	0.872	1.324	1.370	1.144	0.825	0.546	0.328	0.157	0.032	-0.056	-0.119
5	% DIFFERENCE	0.84	1.26	1.28	1.06	0.75	0.49	0.29	0.14	0.03	-0.05	-0.10
6	MEMO TRUCKS AND VANS REG AS AUTOS											
7	YPS UP 2%	12.557	14.284	16.036	17.779	19.489	21.120	22.657	24.130	25.570	26.990	28.381
8	CONTROL	12.250	13.747	15.325	16.957	18.617	20.250	21.829	23.383	24.934	26.494	28.046
9	DIFFERENCE	0.307	0.537	0.711	0.822	0.872	0.870	0.828	0.748	0.636	0.497	0.335
10	% DIFFERENCE	2.51	3.91	4.64	4.85	4.68	4.30	3.79	3.20	2.55	1.87	1.20
11	LIGHT TRUCKS											
12	YPS UP 2%	33.970	37.236	40.497	43.724	46.921	50.022	52.947	55.729	58.400	60.950	63.327
13	CONTROL	33.293	36.107	39.104	42.186	45.265	48.285	51.185	53.995	56.742	59.413	61.954
14	DIFFERENCE	0.677	1.129	1.392	1.538	1.657	1.737	1.762	1.734	1.659	1.537	1.373
15	% DIFFERENCE	2.03	3.13	3.56	3.64	3.66	3.60	3.44	3.21	2.92	2.59	2.22
16	MEMO TRUCKS AND VANS REG AS AUTOS											
17	YPS UP 2%	12.557	14.284	16.036	17.779	19.489	21.120	22.657	24.130	25.570	26.990	28.381
18	CONTROL	12.250	13.747	15.325	16.957	18.617	20.250	21.829	23.383	24.934	26.494	28.046
19	DIFFERENCE	0.307	0.537	0.711	0.822	0.872	0.870	0.828	0.748	0.636	0.497	0.335
20	% DIFFERENCE	2.51	3.91	4.64	4.85	4.68	4.30	3.79	3.20	2.55	1.87	1.20
21	NONMEMO TRUCKS											
22	YPS UP 2%	21.413	22.951	24.461	25.945	27.432	28.901	30.291	31.598	32.830	33.960	34.946
23	CONTROL	21.044	22.360	23.779	25.230	26.647	28.035	29.356	30.612	31.807	32.920	33.909
24	DIFFERENCE	0.370	0.592	0.682	0.715	0.785	0.867	0.934	0.986	1.023	1.040	1.037
25	% DIFFERENCE	1.76	2.65	2.87	2.84	2.95	3.09	3.18	3.22	3.22	3.16	3.06
26												
27	MID YEAR STOCK											
28	PERSONAL VEHICLES											
29	YPS UP 2%	115.465	119.159	122.463	125.567	128.702	132.044	135.421	138.753	141.955	144.940	147.678
30	CONTROL	114.876	117.639	120.492	123.544	126.871	130.486	134.133	137.719	141.166	144.382	147.346
31	DIFFERENCE	0.589	1.520	1.971	2.024	1.831	1.557	1.288	1.033	0.789	0.558	0.332
32	% DIFFERENCE	0.51	1.29	1.64	1.64	1.44	1.19	0.96	0.75	0.56	0.39	0.23
33	AUTOMOBILES											
34	YPS UP 2%	103.793	105.738	107.303	108.660	110.068	111.739	113.533	115.359	117.105	118.660	119.993
35	CONTROL	103.357	104.640	105.956	107.403	109.084	111.053	113.094	115.114	117.007	118.669	120.076
36	DIFFERENCE	0.436	1.098	1.347	1.257	0.985	0.686	0.439	0.245	0.098	-0.008	-0.084
37	% DIFFERENCE	0.42	1.05	1.27	1.17	0.90	0.62	0.39	0.21	0.08	-0.01	-0.07
38	MEMO TRUCKS AND VANS REG AS AUTOS											
39	YPS UP 2%	11.672	13.421	15.160	16.907	18.634	20.305	21.889	23.394	24.850	26.280	27.685
40	CONTROL	11.519	12.998	14.536	16.141	17.787	19.434	21.039	22.606	24.159	25.714	27.270
41	DIFFERENCE	0.154	0.422	0.624	0.767	0.847	0.871	0.849	0.788	0.692	0.566	0.416
42	% DIFFERENCE	1.33	3.25	4.29	4.75	4.76	4.48	4.04	3.49	2.86	2.20	1.53
43	LIGHT TRUCKS											
44	YPS UP 2%	32.284	35.603	38.866	42.110	45.323	48.472	51.485	54.338	57.065	59.675	62.138
45	CONTROL	31.945	34.700	37.606	40.645	43.726	46.775	49.735	52.590	55.368	58.077	60.684
46	DIFFERENCE	0.339	0.903	1.261	1.465	1.597	1.697	1.750	1.748	1.696	1.598	1.455
47	% DIFFERENCE	1.06	2.60	3.35	3.60	3.65	3.63	3.52	3.32	3.06	2.75	2.40
48	MEMO TRUCKS AND VANS REG AS AUTOS											
49	YPS UP 2%	11.672	13.421	15.160	16.907	18.634	20.305	21.889	23.394	24.850	26.280	27.685
50	CONTROL	11.519	12.998	14.536	16.141	17.787	19.434	21.039	22.606	24.159	25.714	27.270
51	DIFFERENCE	0.154	0.422	0.624	0.767	0.847	0.871	0.849	0.788	0.692	0.566	0.416
52	% DIFFERENCE	1.33	3.25	4.29	4.75	4.76	4.48	4.04	3.49	2.86	2.20	1.53

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	NONMEMO TRUCKS											
2	YPS UP 2%	20.612	22.182	23.706	25.203	26.689	28.167	29.596	30.944	32.214	33.395	34.453
3	CONTROL	20.427	21.702	23.070	24.504	25.939	27.341	28.695	29.984	31.210	32.364	33.414
4	DIFFERENCE	0.185	0.481	0.637	0.698	0.750	0.826	0.901	0.960	1.005	1.032	1.039
5	% DIFFERENCE	0.91	2.22	2.76	2.85	2.89	3.02	3.14	3.20	3.22	3.19	3.11

THE WHARTON EFA MOTOR VEHICLE DEMAND MODEL
2 % INCREASE IN PERSONAL INCOME

TABLE 28.00 PRICES AND CAPITALIZED COSTS (DOLLARS)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1												
2	CAPITALIZED COST PER MILE											
3	PERSONAL VEHICLES											
4	YPS UP 2%	0.3030	0.3273	0.3540	0.3820	0.4103	0.4388	0.4685	0.4980	0.5285	0.5604	0.5936
5	CONTROL	0.3027	0.3270	0.3538	0.3818	0.4102	0.4387	0.4684	0.4979	0.5283	0.5603	0.5935
6	DIFFERENCE	0.0003	0.0003	0.0003	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002
7	% DIFFERENCE	0.10	0.09	0.07	0.04	0.03	0.03	0.03	0.02	0.03	0.03	0.03
8	AUTOMOBILES											
9	YPS UP 2%	0.3000	0.3240	0.3506	0.3781	0.4058	0.4338	0.4630	0.4921	0.5221	0.5535	0.5862
10	CONTROL	0.2997	0.3237	0.3504	0.3779	0.4057	0.4337	0.4629	0.4920	0.5220	0.5534	0.5860
11	DIFFERENCE	0.0004	0.0003	0.0003	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
12	% DIFFERENCE	0.12	0.11	0.08	0.05	0.03	0.03	0.02	0.02	0.02	0.02	0.02
13	PERSONAL TRUCKS											
14	YPS UP 2%	0.3267	0.3535	0.3813	0.4140	0.4468	0.4798	0.5129	0.5461	0.5800	0.6157	0.6530
15	CONTROL	0.3267	0.3535	0.3813	0.4140	0.4468	0.4798	0.5129	0.5461	0.5800	0.6157	0.6530
16	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	COMMERCIAL TRUCKS											
19	YPS UP 2%	0.2545	0.2749	0.2961	0.3214	0.3469	0.3725	0.3981	0.4238	0.4500	0.4776	0.5065
20	CONTROL	0.2545	0.2749	0.2961	0.3214	0.3469	0.3725	0.3981	0.4238	0.4500	0.4776	0.5065
21	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	GVW 1											
24	YPS UP 2%	0.2627	0.2832	0.3047	0.3308	0.3571	0.3835	0.4100	0.4365	0.4636	0.4922	0.5220
25	CONTROL	0.2627	0.2832	0.3047	0.3308	0.3571	0.3835	0.4100	0.4365	0.4636	0.4922	0.5220
26	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	GVW 2											
29	YPS UP 2%	0.2463	0.2670	0.2883	0.3129	0.3378	0.3626	0.3875	0.4125	0.4381	0.4650	0.4931
30	CONTROL	0.2463	0.2670	0.2883	0.3129	0.3378	0.3626	0.3875	0.4125	0.4381	0.4650	0.4931
31	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	OVERALL FLEET MILES PER GALLON												
2	AUTOMOBILES												
3	YPS UP 2%		14.2	14.5	15.0	15.7	16.4	17.1	17.8	18.6	19.2	19.8	20.3
4	CONTROL		14.2	14.5	15.1	15.7	16.4	17.1	17.8	18.5	19.2	19.8	20.3
5	DIFFERENCE		0.0	-0.1	-0.1	-0.1	-0.0	-0.0	-0.0	0.0	0.0	0.0	0.0
6	% DIFFERENCE		0.04	-0.52	-0.54	-0.33	-0.18	-0.12	-0.02	0.04	0.06	0.08	0.13
7	PERSONAL TRUCKS												
8	YPS UP 2%		11.2	11.6	12.1	12.5	12.8	13.1	13.4	13.7	13.9	14.2	14.4
9	CONTROL		11.2	11.6	12.0	12.4	12.8	13.1	13.4	13.7	13.9	14.1	14.3
10	DIFFERENCE		0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
11	% DIFFERENCE		0.17	0.43	0.51	0.47	0.40	0.32	0.25	0.19	0.13	0.09	0.06
12	COMMERCIAL TRUCKS												
13	YPS UP 2%		11.2	11.4	11.6	11.8	12.1	12.3	12.5	12.6	12.8	13.0	13.1
14	CONTROL		11.2	11.3	11.6	11.8	12.0	12.2	12.4	12.6	12.8	12.9	13.1
15	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	% DIFFERENCE		0.08	0.23	0.29	0.28	0.25	0.22	0.19	0.17	0.14	0.12	0.09
17													
18	TOTAL FUEL CONSUMPTION	BILL GAL											
19	YPS UP 2%		116,477	120,025	122,010	123,112	124,206	125,449	126,690	127,888	129,292	130,941	132,520
20	CONTROL		115,585	117,128	118,170	119,146	120,242	121,512	122,794	124,035	125,468	127,160	128,821
21	DIFFERENCE		0.892	2.897	3.839	3.967	3.965	3.937	3.896	3.853	3.824	3.781	3.698
22	% DIFFERENCE		0.77	2.47	3.25	3.33	3.30	3.24	3.17	3.11	3.05	2.97	2.87
23	AUTOMOBILES												
24	YPS UP 2%		84,277	84,933	84,219	82,895	81,549	80,328	79,140	78,067	77,273	76,662	76,056
25	CONTROL		83,957	83,668	82,663	81,464	80,313	79,286	78,274	77,331	76,612	76,061	75,517
26	DIFFERENCE		0.320	1.265	1.557	1.431	1.236	1.042	0.866	0.736	0.661	0.601	0.538
27	% DIFFERENCE		0.38	1.51	1.88	1.76	1.54	1.31	1.11	0.95	0.86	0.79	0.71
28	PERSONAL TRUCKS												
29	YPS UP 2%		10,960	12,302	13,544	14,773	15,971	17,093	18,128	19,091	20,019	20,938	21,848
30	CONTROL		10,825	11,934	12,996	14,092	15,212	16,315	17,367	18,378	19,380	20,395	21,418
31	DIFFERENCE		0.135	0.368	0.548	0.681	0.759	0.778	0.761	0.713	0.639	0.543	0.430
32	% DIFFERENCE		1.25	3.08	4.21	4.83	4.99	4.77	4.38	3.88	3.29	2.66	2.01
33	COMMERCIAL TRUCKS												
34	YPS UP 2%		21,240	22,791	24,246	25,445	26,687	28,028	29,422	30,731	32,001	33,341	34,616
35	CONTROL		20,803	21,527	22,511	23,590	24,717	25,911	27,152	28,326	29,476	30,704	31,886
36	DIFFERENCE		0.436	1.264	1.735	1.854	1.970	2.117	2.270	2.404	2.524	2.637	2.730
37	% DIFFERENCE		2.10	5.87	7.71	7.86	7.97	8.17	8.36	8.49	8.56	8.59	8.56
38													
39	AVERAGE AGE												
40	PERSONAL VEHICLES												
41	YPS UP 2%		5.599	5.579	5.581	5.570	5.546	5.542	5.577	5.630	5.679	5.724	5.772
42	CONTROL		5.628	5.638	5.639	5.616	5.582	5.570	5.597	5.642	5.683	5.721	5.764
43	DIFFERENCE		-0.029	-0.059	-0.057	-0.046	-0.036	-0.028	-0.020	-0.012	-0.004	0.003	0.008
44	% DIFFERENCE		-0.51	-1.04	-1.02	-0.82	-0.64	-0.50	-0.36	-0.22	-0.08	0.05	0.14
45	AUTOMOBILES												
46	YPS UP 2%		5.718	5.709	5.713	5.695	5.654	5.630	5.644	5.678	5.706	5.728	5.751
47	CONTROL		5.743	5.758	5.758	5.727	5.677	5.648	5.658	5.687	5.710	5.728	5.749
48	DIFFERENCE		-0.025	-0.048	-0.044	-0.032	-0.023	-0.018	-0.014	-0.009	-0.005	-0.000	0.003
49	% DIFFERENCE		-0.43	-0.84	-0.77	-0.56	-0.41	-0.33	-0.25	-0.17	-0.08	-0.00	0.04
50	TRUCKS												
51	YPS UP 2%		4.541	4.555	4.646	4.770	4.909	5.061	5.228	5.392	5.550	5.708	5.862
52	CONTROL		4.597	4.672	4.770	4.879	4.996	5.125	5.268	5.411	5.550	5.692	5.831
53	DIFFERENCE		-0.056	-0.117	-0.124	-0.109	-0.087	-0.063	-0.040	-0.019	0.000	0.017	0.031
54	% DIFFERENCE		-1.22	-2.51	-2.60	-2.24	-1.74	-1.23	-0.76	-0.35	0.01	0.30	0.53

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	COMMERCIAL TRUCKS											
2	YPS UP 2%	6,135	6,093	6,092	6,110	6,142	6,185	6,240	6,304	6,373	6,448	6,530
3	CONTROL	6,188	6,211	6,224	6,230	6,243	6,270	6,309	6,358	6,414	6,477	6,547
4	DIFFERENCE	-0.052	-0.118	-0.132	-0.120	-0.102	-0.085	-0.069	-0.054	-0.041	-0.028	-0.017
5	% DIFFERENCE	-0.85	-1.90	-2.12	-1.93	-1.63	-1.35	-1.10	-0.86	-0.64	-0.44	-0.26
6												
7	MILES PER VEHICLE											
8	PERSONAL VEHICLES											
9	YPS UP 2%	11,410	11,503	11,647	11,808	11,967	12,091	12,209	12,315	12,408	12,491	12,567
10	CONTROL	11,410	11,509	11,638	11,779	11,917	12,027	12,132	12,229	12,315	12,394	12,464
11	DIFFERENCE	0.000	-0.006	0.009	0.029	0.051	0.064	0.076	0.086	0.092	0.098	0.103
12	% DIFFERENCE	0.00	-0.05	0.08	0.25	0.42	0.53	0.63	0.70	0.75	0.79	0.83
13	AUTOMOBILES											
14	YPS UP 2%	11,506	11,611	11,769	11,950	12,132	12,276	12,417	12,544	12,657	12,759	12,853
15	CONTROL	11,506	11,618	11,762	11,921	12,078	12,206	12,331	12,447	12,552	12,648	12,736
16	DIFFERENCE	0.000	-0.007	0.007	0.030	0.054	0.070	0.086	0.098	0.105	0.111	0.117
17	% DIFFERENCE	0.00	-0.06	0.06	0.25	0.45	0.58	0.69	0.78	0.84	0.88	0.92
18	TRUCKS											
19	YPS UP 2%	10,555	10,657	10,781	10,891	10,991	11,067	11,128	11,181	11,231	11,280	11,325
20	CONTROL	10,546	10,628	10,735	10,832	10,924	11,002	11,064	11,118	11,169	11,219	11,265
21	DIFFERENCE	0.009	0.029	0.046	0.060	0.067	0.065	0.064	0.063	0.062	0.061	0.060
22	% DIFFERENCE	0.09	0.27	0.43	0.55	0.61	0.60	0.58	0.57	0.55	0.54	0.53
23	COMMERCIAL TRUCKS											
24	YPS UP 2%	11,517	11,687	11,885	11,964	12,066	12,210	12,388	12,552	12,719	12,935	13,155
25	CONTROL	11,374	11,258	11,306	11,376	11,470	11,604	11,769	11,921	12,076	12,277	12,482
26	DIFFERENCE	0.144	0.430	0.579	0.587	0.596	0.607	0.619	0.631	0.643	0.658	0.672
27	% DIFFERENCE	1.26	3.82	5.12	5.16	5.20	5.23	5.26	5.29	5.33	5.36	5.39
28												
29	NEW REGISTRATIONS TO BEGINNING STOCK											
30	PERSONAL VEHICLES											
31	YPS UP 2%	0.120	0.112	0.111	0.112	0.114	0.111	0.107	0.108	0.108	0.107	0.106
32	CONTROL	0.110	0.109	0.112	0.114	0.116	0.112	0.109	0.109	0.109	0.107	0.106
33	DIFFERENCE	0.010	0.004	-0.000	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.000
34	% DIFFERENCE	9.46	3.26	-0.35	-1.76	-1.69	-1.47	-1.23	-1.01	-0.79	-0.56	-0.33
35	AUTOMOBILES											
36	YPS UP 2%	0.112	0.105	0.105	0.106	0.109	0.106	0.103	0.103	0.103	0.102	0.101
37	CONTROL	0.103	0.102	0.105	0.108	0.111	0.107	0.103	0.103	0.104	0.102	0.101
38	DIFFERENCE	0.009	0.003	-0.001	-0.002	-0.002	-0.001	-0.001	-0.001	-0.000	-0.000	-0.000
39	% DIFFERENCE	8.36	2.62	-0.81	-2.00	-1.67	-1.29	-0.95	-0.69	-0.46	-0.25	-0.05
40	TRUCKS											
41	YPS UP 2%	0.203	0.175	0.162	0.153	0.146	0.140	0.134	0.134	0.131	0.129	0.128
42	CONTROL	0.176	0.165	0.160	0.155	0.150	0.144	0.138	0.138	0.135	0.132	0.130
43	DIFFERENCE	0.027	0.010	0.002	-0.002	-0.004	-0.004	-0.004	-0.004	-0.003	-0.003	-0.002
44	% DIFFERENCE	15.60	6.03	1.15	-1.48	-2.55	-3.04	-3.10	-2.93	-2.55	-2.12	-1.66
45	COMMERCIAL TRUCKS											
46	YPS UP 2%	0.134	0.124	0.121	0.118	0.116	0.114	0.112	0.111	0.110	0.109	0.108
47	CONTROL	0.115	0.116	0.119	0.119	0.117	0.115	0.113	0.112	0.111	0.110	0.109
48	DIFFERENCE	0.018	0.008	0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
49	% DIFFERENCE	15.97	6.89	1.66	-0.54	-0.45	-0.50	-0.65	-0.73	-0.76	-0.84	-0.88
50												
51	SCRAPPAGE TO BEGINNING STOCK											

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	PERSONAL VEHICLES											
2	YPS UP 2%	0.085	0.084	0.085	0.088	0.088	0.085	0.082	0.084	0.086	0.086	0.088
3	CONTROL	0.085	0.086	0.086	0.089	0.088	0.084	0.081	0.083	0.085	0.085	0.087
4	DIFFERENCE	0.000	-0.002	-0.002	-0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
5	% DIFFERENCE	0.03	-2.37	-2.11	-0.74	0.69	1.04	1.11	1.14	1.16	1.27	1.43
6	AUTOMOBILES											
7	YPS UP 2%	0.090	0.089	0.091	0.094	0.094	0.090	0.086	0.087	0.089	0.089	0.090
8	CONTROL	0.089	0.091	0.092	0.094	0.093	0.089	0.085	0.086	0.088	0.089	0.090
9	DIFFERENCE	0.000	-0.002	-0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.000	0.000
10	% DIFFERENCE	0.15	-1.71	-1.22	0.11	1.35	1.44	1.22	0.96	0.70	0.56	0.53
11	TRUCKS											
12	YPS UP 2%	0.039	0.037	0.039	0.044	0.050	0.056	0.061	0.069	0.071	0.074	0.076
13	CONTROL	0.040	0.043	0.045	0.048	0.052	0.056	0.060	0.067	0.068	0.070	0.071
14	DIFFERENCE	-0.001	-0.005	-0.006	-0.005	-0.002	-0.000	0.001	0.002	0.003	0.004	0.005
15	% DIFFERENCE	-2.60	-12.55	-13.28	-9.29	-4.00	-0.69	1.56	3.13	4.79	6.03	6.84
16	COMMERCIAL TRUCKS											
17	YPS UP 2%	0.053	0.052	0.055	0.058	0.059	0.061	0.064	0.068	0.071	0.074	0.079
18	CONTROL	0.053	0.054	0.055	0.058	0.061	0.063	0.066	0.069	0.072	0.075	0.078
19	DIFFERENCE	-0.000	-0.001	-0.000	-0.000	-0.002	-0.002	-0.002	-0.001	-0.001	-0.000	0.000
20	% DIFFERENCE	-0.47	-2.33	-0.55	-0.57	-2.71	-3.30	-2.51	-1.76	-1.08	-0.48	0.06
21												
22	ACTIVITIES AS SHARE OF INCOME %											
23	YPS UP 2%	28.5	28.5	28.6	28.7	28.8	29.0	29.2	29.4	29.6	29.8	30.1
24	CONTROL	27.9	28.0	28.0	28.1	28.3	28.5	28.6	28.8	29.1	29.3	29.5
25	DIFFERENCE	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
26	% DIFFERENCE	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96
27												
28	FARM PROPRIETOR'S INCOME BILL $											
29	YPS UP 2%	29,205	31,285	33,365	35,445	37,525	39,605	41,685	43,765	46,314	49,156	52,157
30	CONTROL	28,081	30,081	32,081	34,081	36,081	38,081	40,081	42,081	44,532	47,265	50,151
31	DIFFERENCE	1,123	1,203	1,283	1,363	1,443	1,523	1,603	1,683	1,781	1,891	2,006
32	% DIFFERENCE	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
33	EMPLOYEE COMPENSATION											
34	AGRICULTURE											
35	YPS UP 2%	16,206	17,912	19,688	21,629	23,472	25,194	26,778	28,511	30,370	32,124	33,939
36	CONTROL	15,583	17,223	18,931	20,797	22,569	24,225	25,749	27,415	29,202	30,888	32,634
37	DIFFERENCE	0,623	0,689	0,757	0,832	0,903	0,969	1,030	1,097	1,168	1,236	1,305
38	% DIFFERENCE	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
39	CONTRACT CONSTRUCTION											
40	YPS UP 2%	76,961	83,986	92,363	100,953	109,675	118,451	126,960	136,606	147,724	157,428	167,496
41	CONTROL	74,001	80,756	88,811	97,070	105,456	113,895	122,077	131,352	142,042	151,373	161,054
42	DIFFERENCE	2,960	3,230	3,552	3,883	4,218	4,556	4,883	5,254	5,682	6,055	6,442
43	% DIFFERENCE	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
44	SERVICES											
45	YPS UP 2%	236,297	263,529	295,251	331,148	369,784	409,805	450,891	495,928	546,823	598,781	654,990
46	CONTROL	227,209	253,393	283,896	318,412	355,562	394,044	433,549	476,854	525,792	575,751	629,798
47	DIFFERENCE	9,088	10,136	11,356	12,736	14,222	15,762	17,342	19,074	21,031	23,030	25,192
48	% DIFFERENCE	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
49	WHOLESALE AND RETAIL TRADE											
50	YPS UP 2%	250,558	275,095	302,527	332,796	364,573	396,434	428,271	462,188	499,775	537,447	577,537
51	CONTROL	240,921	264,515	290,891	319,996	350,551	381,187	411,800	444,411	480,553	516,776	555,324
52	DIFFERENCE	9,637	10,581	11,635	12,800	14,022	15,247	16,472	17,776	19,222	20,671	22,213
53	% DIFFERENCE	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

C.2 5 Percent Increase in Truck Prices

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	I T E M	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	EQUILIBRIUM ('DESIRED') STOCKS											
2	PERSONAL VEHICLES											
3	TRUCK PR UP 5%	115,595	117,429	119,703	122,187	124,828	126,002	127,313	129,682	132,079	134,196	135,908
4	CONTROL	115,710	117,540	119,814	122,298	124,941	126,119	127,433	129,805	132,203	134,321	136,036
5	DIFFERENCE	-0,115	-0,110	-0,112	-0,112	-0,113	-0,117	-0,121	-0,122	-0,123	-0,125	-0,127
6	% DIFFERENCE	-0,10	-0,09	-0,09	-0,09	-0,09	-0,09	-0,09	-0,09	-0,09	-0,09	-0,09
7	AUTOMOBILES											
8	TRUCK PR UP 5%	102,842	104,499	106,594	108,930	111,348	112,275	113,379	115,539	117,695	119,505	120,871
9	CONTROL	102,842	104,499	106,594	108,930	111,348	112,275	113,379	115,539	117,695	119,505	120,871
10	DIFFERENCE	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
11	% DIFFERENCE	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
12	MEMO TRUCKS AND VANS REG AS AUTOS											
13	TRUCK PR UP 5%	12,753	12,930	13,109	13,257	13,481	13,727	13,934	14,144	14,385	14,691	15,038
14	CONTROL	12,868	13,041	13,221	13,368	13,593	13,844	14,054	14,266	14,508	14,816	15,165
15	DIFFERENCE	-0,115	-0,110	-0,112	-0,112	-0,113	-0,117	-0,121	-0,122	-0,123	-0,125	-0,127
16	% DIFFERENCE	-0,89	-0,85	-0,84	-0,84	-0,83	-0,85	-0,86	-0,86	-0,85	-0,84	-0,84
17	LIGHT TRUCKS											
18	TRUCK PR UP 5%	29,162	29,448	29,659	29,772	30,050	30,291	30,320	30,388	30,633	30,987	31,396
19	CONTROL	29,452	29,726	29,941	30,052	30,329	30,572	30,602	30,670	30,914	31,268	31,676
20	DIFFERENCE	-0,290	-0,278	-0,282	-0,280	-0,279	-0,281	-0,282	-0,282	-0,281	-0,281	-0,281
21	% DIFFERENCE	-0,98	-0,94	-0,94	-0,93	-0,92	-0,92	-0,92	-0,92	-0,91	-0,90	-0,89
22	MEMO TRUCKS AND VANS REG AS AUTOS											
23	TRUCK PR UP 5%	12,753	12,930	13,109	13,257	13,481	13,727	13,934	14,144	14,385	14,691	15,038
24	CONTROL	12,868	13,041	13,221	13,368	13,593	13,844	14,054	14,266	14,508	14,816	15,165
25	DIFFERENCE	-0,115	-0,110	-0,112	-0,112	-0,113	-0,117	-0,121	-0,122	-0,123	-0,125	-0,127
26	% DIFFERENCE	-0,89	-0,85	-0,84	-0,84	-0,83	-0,85	-0,86	-0,86	-0,85	-0,84	-0,84
27	NONMEMO TRUCKS											
28	TRUCK PR UP 5%	16,409	16,517	16,550	16,515	16,569	16,564	16,387	16,245	16,249	16,296	16,358
29	CONTROL	16,584	16,685	16,721	16,683	16,735	16,727	16,548	16,404	16,406	16,452	16,512
30	DIFFERENCE	-0,175	-0,168	-0,170	-0,168	-0,166	-0,163	-0,161	-0,159	-0,157	-0,155	-0,154
31	% DIFFERENCE	-1,05	-1,01	-1,02	-1,01	-0,99	-0,98	-0,97	-0,97	-0,96	-0,95	-0,93
32												
33	NEW REGISTRATIONS											
34	PERSONAL VEHICLES											
35	TRUCK PR UP 5%	12,369	12,629	13,291	13,910	14,518	14,465	14,393	14,817	15,172	15,302	15,456
36	CONTROL	12,486	12,640	13,302	13,920	14,529	14,477	14,404	14,829	15,184	15,314	15,468
37	DIFFERENCE	-0,118	-0,011	-0,010	-0,010	-0,011	-0,011	-0,011	-0,012	-0,012	-0,012	-0,012
38	% DIFFERENCE	-0,94	-0,09	-0,08	-0,07	-0,07	-0,08	-0,08	-0,08	-0,08	-0,08	-0,08
39	AUTOMOBILES											
40	TRUCK PR UP 5%	10,591	10,617	11,101	11,546	11,980	11,798	11,608	11,811	12,039	12,019	12,023
41	CONTROL	10,591	10,617	11,101	11,546	11,980	11,798	11,608	11,811	12,039	12,019	12,023
42	DIFFERENCE	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
43	% DIFFERENCE	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
44	AUTOMOBILES AND VANS REG AS AUTOS											
45	TRUCK PR UP 5%	10,769	10,814	11,309	11,767	12,213	12,045	11,869	12,088	12,331	12,327	12,347
46	CONTROL	10,781	10,815	11,310	11,768	12,214	12,046	11,870	12,089	12,332	12,328	12,349
47	DIFFERENCE	-0,012	-0,001	-0,001	-0,001	-0,001	-0,001	-0,001	-0,001	-0,001	-0,001	-0,001
48	% DIFFERENCE	-0,11	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01
49	MEMO TRUCKS											
50	TRUCK PR UP 5%	1,600	1,814	1,982	2,143	2,305	2,421	2,524	2,729	2,841	2,975	3,109
51	CONTROL	1,706	1,824	1,991	2,152	2,315	2,431	2,534	2,740	2,852	2,986	3,119
52	DIFFERENCE	-0,106	-0,010	-0,009	-0,009	-0,010	-0,010	-0,010	-0,010	-0,011	-0,011	-0,011
53	% DIFFERENCE	-6,22	-0,56	-0,47	-0,42	-0,42	-0,42	-0,41	-0,38	-0,37	-0,36	-0,35

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	LIGHT TRUCKS											
2	TRUCK PR UP 5%	3,943	4,442	4,829	5,173	5,464	5,704	5,923	6,258	6,499	6,742	6,971
3	CONTROL	4,181	4,470	4,860	5,206	5,500	5,742	5,963	6,300	6,543	6,787	7,018
4	DIFFERENCE	-0,238	-0,028	-0,030	-0,033	-0,036	-0,039	-0,040	-0,042	-0,045	-0,046	-0,047
5	% DIFFERENCE	-5,70	-0,62	-0,63	-0,64	-0,66	-0,67	-0,67	-0,67	-0,68	-0,67	-0,67
6	MEMO TRUCKS AND VANS REG AS AUTOS											
7	TRUCK PR UP 5%	1,778	2,011	2,190	2,364	2,538	2,668	2,785	3,006	3,133	3,283	3,433
8	CONTROL	1,896	2,022	2,200	2,374	2,549	2,679	2,796	3,018	3,145	3,295	3,445
9	DIFFERENCE	-0,118	-0,011	-0,010	-0,010	-0,011	-0,011	-0,011	-0,012	-0,012	-0,012	-0,012
10	% DIFFERENCE	-6,22	-0,56	-0,47	-0,42	-0,42	-0,42	-0,41	-0,38	-0,38	-0,36	-0,36
11	NONMEMO TRUCKS											
12	TRUCK PR UP 5%	2,165	2,431	2,639	2,809	2,926	3,036	3,138	3,252	3,365	3,459	3,538
13	CONTROL	2,285	2,447	2,659	2,832	2,952	3,063	3,167	3,282	3,398	3,493	3,573
14	DIFFERENCE	-0,120	-0,017	-0,020	-0,023	-0,026	-0,028	-0,029	-0,031	-0,033	-0,034	-0,035
15	% DIFFERENCE	-5,27	-0,68	-0,75	-0,82	-0,87	-0,90	-0,91	-0,93	-0,97	-0,97	-0,97
16												
17	SCRAPPAGE											
18	PERSONAL VEHICLES											
19	TRUCK PR UP 5%	9,631	9,989	10,300	10,816	10,967	10,783	10,752	11,278	11,806	12,176	12,611
20	CONTROL	9,621	9,963	10,282	10,807	10,968	10,792	10,769	11,301	11,834	12,208	12,646
21	DIFFERENCE	0,010	0,026	0,018	0,009	-0,001	-0,009	-0,016	-0,023	-0,028	-0,032	-0,035
22	% DIFFERENCE	0,11	0,26	0,18	0,08	-0,01	-0,09	-0,15	-0,20	-0,24	-0,26	-0,27
23	AUTOMOBILES											
24	TRUCK PR UP 5%	9,188	9,438	9,660	10,065	10,080	9,746	9,551	9,837	10,241	10,473	10,752
25	CONTROL	9,188	9,438	9,660	10,065	10,080	9,746	9,551	9,837	10,241	10,473	10,752
26	DIFFERENCE	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
27	% DIFFERENCE	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
28	MEMO TRUCKS AND VANS REG AS AUTOS											
29	TRUCK PR UP 5%	0,443	0,551	0,641	0,751	0,887	1,037	1,201	1,441	1,566	1,703	1,859
30	CONTROL	0,433	0,525	0,623	0,742	0,888	1,046	1,217	1,464	1,594	1,735	1,894
31	DIFFERENCE	0,010	0,026	0,018	0,009	-0,001	-0,009	-0,016	-0,023	-0,028	-0,032	-0,035
32	% DIFFERENCE	2,40	4,93	2,90	1,17	-0,11	-0,88	-1,33	-1,54	-1,76	-1,85	-1,83
33	LIGHT TRUCKS											
34	TRUCK PR UP 5%	1,500	1,695	1,891	2,142	2,427	2,717	3,047	3,464	3,760	4,072	4,426
35	CONTROL	1,485	1,656	1,862	2,125	2,422	2,723	3,063	3,490	3,796	4,116	4,477
36	DIFFERENCE	0,016	0,039	0,028	0,017	0,005	-0,006	-0,016	-0,026	-0,036	-0,044	-0,051
37	% DIFFERENCE	1,05	2,33	1,53	0,81	0,22	-0,21	-0,52	-0,75	-0,95	-1,08	-1,15
38	MEMO TRUCKS AND VANS REG AS AUTOS											
39	TRUCK PR UP 5%	0,443	0,551	0,641	0,751	0,887	1,037	1,201	1,441	1,566	1,703	1,859
40	CONTROL	0,433	0,525	0,623	0,742	0,888	1,046	1,217	1,464	1,594	1,735	1,894
41	DIFFERENCE	0,010	0,026	0,018	0,009	-0,001	-0,009	-0,016	-0,023	-0,028	-0,032	-0,035
42	% DIFFERENCE	2,40	4,93	2,90	1,17	-0,11	-0,88	-1,33	-1,54	-1,76	-1,85	-1,83
43	NONMEMO TRUCKS											
44	TRUCK PR UP 5%	1,057	1,144	1,250	1,391	1,540	1,680	1,846	2,023	2,195	2,368	2,567
45	CONTROL	1,052	1,131	1,240	1,382	1,534	1,676	1,846	2,027	2,202	2,381	2,584
46	DIFFERENCE	0,005	0,013	0,010	0,009	0,006	0,003	0,000	-0,004	-0,008	-0,012	-0,017
47	% DIFFERENCE	0,49	1,12	0,84	0,62	0,42	0,20	0,01	-0,18	-0,36	-0,51	-0,65
48												
49	YEAR END STOCK											
50	PERSONAL VEHICLES											
51	TRUCK PR UP 5%	116,239	118,878	121,869	124,963	128,514	132,196	135,836	139,375	142,741	145,867	148,712
52	CONTROL	116,367	119,044	122,063	125,175	128,736	132,420	136,056	139,584	142,933	146,039	148,862
53	DIFFERENCE	-0,128	-0,165	-0,194	-0,213	-0,222	-0,224	-0,219	-0,208	-0,192	-0,172	-0,150
54	% DIFFERENCE	-0,11	-0,14	-0,16	-0,17	-0,17	-0,17	-0,16	-0,15	-0,13	-0,12	-0,10

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	AUTOMOBILES											
2	TRUCK PR UP 5%	104.117	105.296	106.738	108.219	110.118	112.170	114.227	116.201	117.999	119.546	120.816
3	CONTROL	104.117	105.296	106.738	108.219	110.118	112.170	114.227	116.201	117.999	119.546	120.816
4	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	MEMO TRUCKS AND VANS REG AS AUTOS											
7	TRUCK PR UP 5%	12.122	13.582	15.131	16.744	18.395	20.026	21.609	23.174	24.742	26.322	27.896
8	CONTROL	12.250	13.747	15.325	16.957	18.617	20.250	21.829	23.383	24.934	26.494	28.046
9	DIFFERENCE	-0.128	-0.165	-0.194	-0.213	-0.222	-0.224	-0.219	-0.208	-0.192	-0.172	-0.150
10	% DIFFERENCE	-1.05	-1.20	-1.27	-1.25	-1.19	-1.11	-1.00	-0.89	-0.77	-0.65	-0.53
11	LIGHT TRUCKS											
12	TRUCK PR UP 5%	33.040	35.787	38.725	41.757	44.794	47.780	50.656	53.450	56.189	58.859	61.404
13	CONTROL	33.293	36.107	39.104	42.186	45.265	48.285	51.185	53.995	56.742	59.413	61.954
14	DIFFERENCE	-0.254	-0.320	-0.379	-0.430	-0.471	-0.504	-0.528	-0.544	-0.553	-0.555	-0.550
15	% DIFFERENCE	-0.76	-0.89	-0.97	-1.02	-1.04	-1.04	-1.03	-1.01	-0.97	-0.93	-0.89
16	MEMO TRUCKS AND VANS REG AS AUTOS											
17	TRUCK PR UP 5%	12.122	13.582	15.131	16.744	18.395	20.026	21.609	23.174	24.742	26.322	27.896
18	CONTROL	12.250	13.747	15.325	16.957	18.617	20.250	21.829	23.383	24.934	26.494	28.046
19	DIFFERENCE	-0.128	-0.165	-0.194	-0.213	-0.222	-0.224	-0.219	-0.208	-0.192	-0.172	-0.150
20	% DIFFERENCE	-1.05	-1.20	-1.27	-1.25	-1.19	-1.11	-1.00	-0.89	-0.77	-0.65	-0.53
21	NONMEMO TRUCKS											
22	TRUCK PR UP 5%	20.918	22.205	23.594	25.012	26.398	27.754	29.047	30.276	31.446	32.537	33.508
23	CONTROL	21.044	22.360	23.779	25.230	26.647	28.035	29.356	30.612	31.807	32.920	33.909
24	DIFFERENCE	-0.126	-0.155	-0.185	-0.217	-0.249	-0.280	-0.309	-0.336	-0.361	-0.383	-0.400
25	% DIFFERENCE	-0.60	-0.69	-0.78	-0.86	-0.94	-1.00	-1.05	-1.10	-1.13	-1.16	-1.18
26												
27	MID YEAR STOCK											
28	PERSONAL VEHICLES											
29	TRUCK PR UP 5%	114.812	117.492	120.312	123.340	126.654	130.263	133.911	137.505	140.966	144.200	147.185
30	CONTROL	114.876	117.639	120.492	123.544	126.871	130.486	134.133	137.719	141.166	144.382	147.346
31	DIFFERENCE	-0.064	-0.147	-0.180	-0.203	-0.217	-0.223	-0.222	-0.214	-0.200	-0.182	-0.161
32	% DIFFERENCE	-0.06	-0.12	-0.15	-0.16	-0.17	-0.17	-0.17	-0.16	-0.14	-0.13	-0.11
33	AUTOMOBILES											
34	TRUCK PR UP 5%	103.357	104.640	105.956	107.403	109.084	111.053	113.094	115.114	117.007	118.669	120.076
35	CONTROL	103.357	104.640	105.956	107.403	109.084	111.053	113.094	115.114	117.007	118.669	120.076
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	MEMO TRUCKS AND VANS REG AS AUTOS											
39	TRUCK PR UP 5%	11.454	12.852	14.356	15.938	17.570	19.211	20.818	22.392	23.958	25.532	27.109
40	CONTROL	11.519	12.998	14.536	16.141	17.787	19.434	21.039	22.606	24.159	25.714	27.270
41	DIFFERENCE	-0.064	-0.147	-0.180	-0.203	-0.217	-0.223	-0.222	-0.214	-0.200	-0.182	-0.161
42	% DIFFERENCE	-0.56	-1.13	-1.24	-1.26	-1.22	-1.15	-1.05	-0.95	-0.83	-0.71	-0.59
43	LIGHT TRUCKS											
44	TRUCK PR UP 5%	31.818	34.413	37.256	40.241	43.275	46.287	49.218	52.053	54.819	57.524	60.131
45	CONTROL	31.945	34.700	37.606	40.645	43.726	46.775	49.735	52.590	55.368	58.077	60.684
46	DIFFERENCE	-0.127	-0.287	-0.350	-0.404	-0.450	-0.488	-0.516	-0.536	-0.549	-0.554	-0.552
47	% DIFFERENCE	-0.40	-0.83	-0.93	-0.99	-1.03	-1.04	-1.04	-1.02	-0.99	-0.95	-0.91
48	MEMO TRUCKS AND VANS REG AS AUTOS											
49	TRUCK PR UP 5%	11.454	12.852	14.356	15.938	17.570	19.211	20.818	22.392	23.958	25.532	27.109
50	CONTROL	11.519	12.998	14.536	16.141	17.787	19.434	21.039	22.606	24.159	25.714	27.270
51	DIFFERENCE	-0.064	-0.147	-0.180	-0.203	-0.217	-0.223	-0.222	-0.214	-0.200	-0.182	-0.161
52	% DIFFERENCE	-0.56	-1.13	-1.24	-1.26	-1.22	-1.15	-1.05	-0.95	-0.83	-0.71	-0.59

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
11	NONMEMO TRUCKS											
21	TRUCK PR UP 5%	20.364	21.561	22.899	24.303	25.705	27.076	28.401	29.662	30.861	31.992	33.023
31	CONTROL	20.427	21.702	23.070	24.504	25.939	27.341	28.695	29.984	31.210	32.364	33.414
41	DIFFERENCE	-0.063	-0.140	-0.170	-0.201	-0.233	-0.265	-0.295	-0.323	-0.349	-0.372	-0.391
51	% DIFFERENCE	-0.31	-0.65	-0.74	-0.82	-0.90	-0.97	-1.03	-1.08	-1.12	-1.15	-1.17

THE WHARTON EFA MOTOR VEHICLE DEMAND MODEL
5 % INCREASE IN TRUCK PRICES, 1980 - 1990

TABLE 28.00 PRICES AND CAPITALIZED COSTS (DOLLARS)

LINE	I T E M	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1												
2	CAPITALIZED COST PER MILE											
3	PERSONAL VEHICLES											
4	TRUCK PR UP 5%	0.3034	0.3278	0.3547	0.3828	0.4112	0.4399	0.4697	0.4992	0.5297	0.5617	0.5951
5	CONTROL	0.3027	0.3270	0.3538	0.3818	0.4102	0.4387	0.4684	0.4979	0.5283	0.5603	0.5935
6	DIFFERENCE	0.0008	0.0008	0.0009	0.0010	0.0011	0.0011	0.0012	0.0013	0.0014	0.0015	0.0016
7	% DIFFERENCE	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.27
8	AUTOMOBILES											
9	TRUCK PR UP 5%	0.2997	0.3237	0.3504	0.3779	0.4057	0.4337	0.4629	0.4920	0.5220	0.5534	0.5860
10	CONTROL	0.2997	0.3237	0.3504	0.3779	0.4057	0.4337	0.4629	0.4920	0.5220	0.5534	0.5860
11	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	PERSONAL TRUCKS											
14	TRUCK PR UP 5%	0.3339	0.3614	0.3900	0.4234	0.4570	0.4906	0.5245	0.5585	0.5931	0.6296	0.6677
15	CONTROL	0.3267	0.3535	0.3813	0.4140	0.4468	0.4798	0.5129	0.5461	0.5800	0.6157	0.6530
16	DIFFERENCE	0.0072	0.0079	0.0087	0.0094	0.0101	0.0109	0.0116	0.0124	0.0131	0.0139	0.0147
17	% DIFFERENCE	2.20	2.25	2.28	2.27	2.27	2.27	2.27	2.27	2.26	2.26	2.26
18	COMMERCIAL TRUCKS											
19	TRUCK PR UP 5%	0.2591	0.2800	0.3017	0.3274	0.3534	0.3794	0.4055	0.4317	0.4584	0.4866	0.5160
20	CONTROL	0.2545	0.2749	0.2961	0.3214	0.3469	0.3725	0.3981	0.4238	0.4500	0.4776	0.5065
21	DIFFERENCE	0.0046	0.0051	0.0055	0.0060	0.0065	0.0070	0.0075	0.0079	0.0084	0.0090	0.0095
22	% DIFFERENCE	1.80	1.84	1.87	1.87	1.87	1.87	1.87	1.88	1.87	1.88	1.87
23	GVW 1											
24	TRUCK PR UP 5%	0.2677	0.2887	0.3107	0.3373	0.3641	0.3910	0.4180	0.4451	0.4727	0.5019	0.5322
25	CONTROL	0.2627	0.2832	0.3047	0.3308	0.3571	0.3835	0.4100	0.4365	0.4636	0.4922	0.5220
26	DIFFERENCE	0.0050	0.0055	0.0060	0.0065	0.0070	0.0075	0.0081	0.0086	0.0091	0.0097	0.0103
27	% DIFFERENCE	1.89	1.93	1.97	1.97	1.96	1.96	1.97	1.97	1.97	1.97	1.96
28	GVW 2											
29	TRUCK PR UP 5%	0.2505	0.2716	0.2934	0.3185	0.3438	0.3690	0.3944	0.4199	0.4459	0.4733	0.5020
30	CONTROL	0.2463	0.2670	0.2883	0.3129	0.3378	0.3626	0.3875	0.4125	0.4381	0.4650	0.4931
31	DIFFERENCE	0.0042	0.0047	0.0051	0.0056	0.0060	0.0064	0.0069	0.0074	0.0078	0.0083	0.0088
32	% DIFFERENCE	1.71	1.74	1.77	1.77	1.78	1.78	1.78	1.79	1.79	1.79	1.79

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	OVERALL FLEET MILES PER GALLON												
2	AUTOMOBILES												
3	TRUCK PR UP 5%		14.2	14.5	15.1	15.7	16.4	17.1	17.8	18.5	19.2	19.8	20.3
4	CONTROL		14.2	14.5	15.1	15.7	16.4	17.1	17.8	18.5	19.2	19.8	20.3
5	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	PERSONAL TRUCKS												
8	TRUCK PR UP 5%		11.2	11.6	12.0	12.4	12.8	13.1	13.4	13.7	13.9	14.1	14.3
9	CONTROL		11.2	11.6	12.0	12.4	12.8	13.1	13.4	13.7	13.9	14.1	14.3
10	DIFFERENCE		-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
11	% DIFFERENCE		-0.07	-0.13	-0.11	-0.08	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-0.00
12	COMMERCIAL TRUCKS												
13	TRUCK PR UP 5%		11.2	11.3	11.6	11.8	12.0	12.2	12.4	12.6	12.8	12.9	13.1
14	CONTROL		11.2	11.3	11.6	11.8	12.0	12.2	12.4	12.6	12.8	12.9	13.1
15	DIFFERENCE		-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
16	% DIFFERENCE		-0.03	-0.06	-0.06	-0.06	-0.06	-0.05	-0.05	-0.04	-0.04	-0.04	-0.03
17													
18	TOTAL FUEL CONSUMPTION	BILL GAL											
19	TRUCK PR UP 5%		115,469	116,872	117,860	118,789	119,847	121,086	122,343	123,565	124,986	126,669	128,326
20	CONTROL		115,585	117,128	118,170	119,146	120,242	121,512	122,794	124,035	125,468	127,160	128,821
21	DIFFERENCE		-0.116	-0.257	-0.310	-0.356	-0.395	-0.426	-0.451	-0.470	-0.482	-0.491	-0.495
22	% DIFFERENCE		-0.10	-0.22	-0.26	-0.30	-0.33	-0.35	-0.37	-0.38	-0.38	-0.39	-0.38
23	AUTOMOBILES												
24	TRUCK PR UP 5%		83,957	83,668	82,663	81,464	80,313	79,286	78,274	77,331	76,612	76,061	75,517
25	CONTROL		83,957	83,668	82,663	81,464	80,313	79,286	78,274	77,331	76,612	76,061	75,517
26	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	PERSONAL TRUCKS												
29	TRUCK PR UP 5%		10,770	11,811	12,846	13,923	15,033	16,133	17,189	18,207	19,222	20,252	21,293
30	CONTROL		10,825	11,934	12,996	14,092	15,212	16,315	17,367	18,378	19,380	20,395	21,418
31	DIFFERENCE		-0.055	-0.123	-0.151	-0.169	-0.179	-0.182	-0.178	-0.170	-0.158	-0.143	-0.126
32	% DIFFERENCE		-0.51	-1.03	-1.16	-1.20	-1.18	-1.11	-1.03	-0.93	-0.82	-0.70	-0.59
33	COMMERCIAL TRUCKS												
34	TRUCK PR UP 5%		20,742	21,394	22,352	23,403	24,501	25,667	26,880	28,027	29,152	30,356	31,516
35	CONTROL		20,803	21,527	22,511	23,590	24,717	25,911	27,152	28,326	29,476	30,704	31,886
36	DIFFERENCE		-0.061	-0.133	-0.160	-0.188	-0.216	-0.245	-0.273	-0.299	-0.324	-0.348	-0.370
37	% DIFFERENCE		-0.30	-0.62	-0.71	-0.80	-0.87	-0.94	-1.01	-1.06	-1.10	-1.13	-1.16
38													
39	AVERAGE AGE												
40	PERSONAL VEHICLES												
41	TRUCK PR UP 5%		5,631	5,643	5,643	5,620	5,585	5,572	5,599	5,643	5,683	5,721	5,763
42	CONTROL		5,628	5,638	5,639	5,616	5,582	5,570	5,597	5,642	5,683	5,721	5,764
43	DIFFERENCE		0.003	0.005	0.005	0.004	0.003	0.002	0.002	0.001	0.000	-0.001	-0.001
44	% DIFFERENCE		0.05	0.09	0.09	0.07	0.06	0.04	0.03	0.01	0.00	-0.01	-0.02
45	AUTOMOBILES												
46	TRUCK PR UP 5%		5,743	5,758	5,758	5,727	5,677	5,648	5,658	5,687	5,710	5,728	5,749
47	CONTROL		5,743	5,758	5,758	5,727	5,677	5,648	5,658	5,687	5,710	5,728	5,749
48	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	TRUCKS												
51	TRUCK PR UP 5%		4,619	4,710	4,800	4,901	5,012	5,135	5,274	5,413	5,549	5,688	5,826
52	CONTROL		4,597	4,672	4,770	4,879	4,996	5,125	5,268	5,411	5,550	5,692	5,831
53	DIFFERENCE		0.023	0.038	0.029	0.022	0.016	0.011	0.006	0.003	-0.001	-0.003	-0.005
54	% DIFFERENCE		0.49	0.81	0.62	0.45	0.32	0.21	0.12	0.05	-0.01	-0.06	-0.09

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	COMMERCIAL TRUCKS											
2	TRUCK PR UP 5%	6,205	6,244	6,254	6,257	6,268	6,293	6,330	6,376	6,430	6,491	6,559
3	CONTROL	6,188	6,211	6,224	6,230	6,243	6,270	6,309	6,358	6,414	6,477	6,547
4	DIFFERENCE	0.018	0.033	0.030	0.027	0.025	0.023	0.021	0.018	0.016	0.014	0.012
5	% DIFFERENCE	0.28	0.52	0.48	0.44	0.40	0.36	0.33	0.29	0.25	0.21	0.18
6												
7	MILES PER VEHICLE											
8	PERSONAL VEHICLES											
9	TRUCK PR UP 5%	11,410	11,509	11,639	11,780	11,918	12,028	12,134	12,230	12,317	12,398	12,465
10	CONTROL	11,410	11,509	11,638	11,779	11,917	12,027	12,132	12,229	12,315	12,394	12,464
11	DIFFERENCE	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.001	0.001
12	% DIFFERENCE	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
13	AUTOMOBILES											
14	TRUCK PR UP 5%	11,506	11,618	11,762	11,921	12,078	12,206	12,331	12,447	12,552	12,648	12,736
15	CONTROL	11,506	11,618	11,762	11,921	12,078	12,206	12,331	12,447	12,552	12,648	12,736
16	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	TRUCKS											
19	TRUCK PR UP 5%	10,544	10,624	10,732	10,829	10,922	11,000	11,063	11,117	11,169	11,219	11,265
20	CONTROL	10,546	10,628	10,735	10,832	10,924	11,002	11,064	11,118	11,169	11,219	11,265
21	DIFFERENCE	-0.002	-0.004	-0.003	-0.003	-0.002	-0.001	-0.001	-0.001	-0.001	-0.000	-0.000
22	% DIFFERENCE	-0.02	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	-0.00	-0.00	-0.00
23	COMMERCIAL TRUCKS											
24	TRUCK PR UP 5%	11,372	11,254	11,302	11,373	11,466	11,600	11,766	11,918	12,074	12,279	12,480
25	CONTROL	11,374	11,258	11,306	11,376	11,470	11,604	11,769	11,921	12,076	12,277	12,482
26	DIFFERENCE	-0.002	-0.004	-0.004	-0.004	-0.004	-0.004	-0.003	-0.003	-0.003	-0.003	-0.002
27	% DIFFERENCE	-0.01	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
28												
29	NEW REGISTRATIONS TO BEGINNING STOCK											
30	PERSONAL VEHICLES											
31	TRUCK PR UP 5%	0.109	0.109	0.112	0.114	0.116	0.113	0.109	0.109	0.109	0.107	0.106
32	CONTROL	0.110	0.109	0.112	0.114	0.116	0.112	0.109	0.109	0.109	0.107	0.106
33	DIFFERENCE	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	% DIFFERENCE	-0.94	0.02	0.06	0.09	0.10	0.10	0.09	0.08	0.07	0.06	0.04
35	AUTOMOBILES											
36	TRUCK PR UP 5%	0.103	0.102	0.105	0.108	0.111	0.107	0.103	0.103	0.104	0.102	0.101
37	CONTROL	0.103	0.102	0.105	0.108	0.111	0.107	0.103	0.103	0.104	0.102	0.101
38	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	TRUCKS											
41	TRUCK PR UP 5%	0.165	0.166	0.161	0.156	0.152	0.145	0.139	0.139	0.135	0.133	0.130
42	CONTROL	0.176	0.165	0.160	0.155	0.150	0.144	0.138	0.138	0.135	0.132	0.130
43	DIFFERENCE	-0.011	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000
44	% DIFFERENCE	-6.22	0.50	0.74	0.86	0.85	0.79	0.71	0.63	0.52	0.41	0.30
45	COMMERCIAL TRUCKS											
46	TRUCK PR UP 5%	0.109	0.116	0.119	0.119	0.117	0.115	0.113	0.112	0.111	0.110	0.109
47	CONTROL	0.115	0.116	0.119	0.119	0.117	0.115	0.113	0.112	0.111	0.110	0.109
48	DIFFERENCE	-0.006	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	% DIFFERENCE	-5.27	-0.08	-0.06	-0.04	-0.01	0.04	0.09	0.12	0.13	0.17	0.20
50												
51	SCRAPPAGE TO BEGINNING STOCK											

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	PERSONAL VEHICLES											
2	TRUCK PR UP 5%	0.085	0.086	0.087	0.089	0.088	0.084	0.081	0.083	0.085	0.085	0.086
3	CONTROL	0.085	0.086	0.086	0.089	0.088	0.084	0.081	0.083	0.085	0.085	0.087
4	DIFFERENCE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000
5	% DIFFERENCE	0.11	0.37	0.32	0.24	0.16	0.09	0.02	-0.04	-0.09	-0.13	-0.16
6	AUTOMOBILES											
7	TRUCK PR UP 5%	0.089	0.091	0.092	0.094	0.093	0.089	0.085	0.086	0.088	0.089	0.090
8	CONTROL	0.089	0.091	0.092	0.094	0.093	0.089	0.085	0.086	0.088	0.089	0.090
9	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	TRUCKS											
12	TRUCK PR UP 5%	0.041	0.045	0.047	0.050	0.053	0.056	0.060	0.067	0.068	0.069	0.071
13	CONTROL	0.040	0.043	0.045	0.048	0.052	0.056	0.060	0.067	0.068	0.070	0.071
14	DIFFERENCE	0.001	0.003	0.002	0.001	0.001	0.000	-0.000	-0.000	-0.001	-0.001	-0.001
15	% DIFFERENCE	2.40	6.04	4.16	2.47	1.16	0.32	-0.23	-0.54	-0.88	-1.09	-1.19
16	COMMERCIAL TRUCKS											
17	TRUCK PR UP 5%	0.053	0.055	0.056	0.059	0.062	0.064	0.067	0.070	0.072	0.075	0.079
18	CONTROL	0.053	0.054	0.055	0.058	0.061	0.063	0.066	0.069	0.072	0.075	0.078
19	DIFFERENCE	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.000
20	% DIFFERENCE	0.49	1.72	1.54	1.41	1.29	1.15	1.02	0.88	0.75	0.63	0.52
21												
22	ACTIVITIES AS SHARE OF INCOME %											
23	TRUCK PR UP 5%	27.9	28.0	28.0	28.1	28.3	28.5	28.6	28.8	29.1	29.3	29.5
24	CONTROL	27.9	28.0	28.0	28.1	28.3	28.5	28.6	28.8	29.1	29.3	29.5
25	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27												
28	FARM PROPRIETORS INCOME BILL $											
29	TRUCK PR UP 5%	28,081	30,081	32,081	34,081	36,081	38,081	40,081	42,081	44,532	47,265	50,151
30	CONTROL	28,081	30,081	32,081	34,081	36,081	38,081	40,081	42,081	44,532	47,265	50,151
31	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	EMPLOYEE COMPENSATION											
34	AGRICULTURE											
35	TRUCK PR UP 5%	15,583	17,223	18,931	20,797	22,569	24,225	25,749	27,415	29,202	30,888	32,634
36	CONTROL	15,583	17,223	18,931	20,797	22,569	24,225	25,749	27,415	29,202	30,888	32,634
37	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	CONTRACT CONSTRUCTION											
40	TRUCK PR UP 5%	74,001	80,756	88,811	97,070	105,456	113,895	122,077	131,352	142,042	151,373	161,054
41	CONTROL	74,001	80,756	88,811	97,070	105,456	113,895	122,077	131,352	142,042	151,373	161,054
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	SERVICES											
45	TRUCK PR UP 5%	227,209	253,393	283,896	318,412	355,562	394,044	433,549	476,854	525,792	575,751	629,798
46	CONTROL	227,209	253,393	283,896	318,412	355,562	394,044	433,549	476,854	525,792	575,751	629,798
47	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	WHOLESALE AND RETAIL TRADE											
50	TRUCK PR UP 5%	240,921	264,515	290,891	319,996	350,551	381,187	411,800	444,411	480,553	516,776	555,324
51	CONTROL	240,921	264,515	290,891	319,996	350,551	381,187	411,800	444,411	480,553	516,776	555,324
52	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

C.3 10 Percent Increase in Gasoline Prices

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	EQUILIBRIUM ('DESIRED') STOCKS											
2	PERSONAL VEHICLES											
3	GAS UP 10%	115,053	117,265	119,820	122,311	124,728	125,687	126,849	129,134	131,498	133,621	135,358
4	CONTROL	115,710	117,540	119,814	122,298	124,941	126,119	127,433	129,805	132,203	134,321	136,036
5	DIFFERENCE	-0,657	-0,274	0,006	0,013	-0,213	-0,433	-0,584	-0,671	-0,704	-0,700	-0,678
6	% DIFFERENCE	-0,57	-0,23	0,00	0,01	-0,17	-0,34	-0,46	-0,52	-0,53	-0,52	-0,50
7	AUTOMOBILES											
8	GAS UP 10%	102,338	104,375	106,757	109,109	111,298	111,992	112,934	115,001	117,121	118,935	120,326
9	CONTROL	102,842	104,499	106,594	108,930	111,348	112,275	113,379	115,539	117,695	119,505	120,871
10	DIFFERENCE	-0,504	-0,124	0,163	0,179	-0,050	-0,283	-0,445	-0,538	-0,574	-0,570	-0,545
11	% DIFFERENCE	-0,49	-0,12	0,15	0,16	-0,05	-0,25	-0,39	-0,47	-0,49	-0,48	-0,45
12	MEMO TRUCKS AND VANS REG AS AUTOS											
13	GAS UP 10%	12,715	12,890	13,063	13,202	13,431	13,694	13,915	14,132	14,377	14,686	15,032
14	CONTROL	12,868	13,041	13,221	13,368	13,593	13,844	14,054	14,266	14,508	14,816	15,165
15	DIFFERENCE	-0,153	-0,150	-0,157	-0,166	-0,163	-0,150	-0,139	-0,133	-0,131	-0,131	-0,133
16	% DIFFERENCE	-1,19	-1,15	-1,19	-1,24	-1,20	-1,08	-0,99	-0,94	-0,90	-0,88	-0,87
17	LIGHT TRUCKS											
18	GAS UP 10%	29,053	29,343	29,564	29,668	29,949	30,207	30,252	30,329	30,577	30,932	31,340
19	CONTROL	29,452	29,726	29,941	30,052	30,329	30,572	30,602	30,670	30,914	31,268	31,676
20	DIFFERENCE	-0,399	-0,383	-0,377	-0,384	-0,380	-0,365	-0,350	-0,341	-0,337	-0,336	-0,337
21	% DIFFERENCE	-1,35	-1,29	-1,26	-1,28	-1,25	-1,19	-1,14	-1,11	-1,09	-1,07	-1,06
22	MEMO TRUCKS AND VANS REG AS AUTOS											
23	GAS UP 10%	12,715	12,890	13,063	13,202	13,431	13,694	13,915	14,132	14,377	14,686	15,032
24	CONTROL	12,868	13,041	13,221	13,368	13,593	13,844	14,054	14,266	14,508	14,816	15,165
25	DIFFERENCE	-0,153	-0,150	-0,157	-0,166	-0,163	-0,150	-0,139	-0,133	-0,131	-0,131	-0,133
26	% DIFFERENCE	-1,19	-1,15	-1,19	-1,24	-1,20	-1,08	-0,99	-0,94	-0,90	-0,88	-0,87
27	NONMEMO TRUCKS											
28	GAS UP 10%	16,338	16,453	16,500	16,465	16,518	16,512	16,337	16,196	16,200	16,246	16,307
29	CONTROL	16,584	16,685	16,721	16,683	16,735	16,727	16,548	16,404	16,406	16,452	16,512
30	DIFFERENCE	-0,246	-0,233	-0,220	-0,218	-0,217	-0,215	-0,211	-0,208	-0,206	-0,205	-0,204
31	% DIFFERENCE	-1,48	-1,39	-1,32	-1,31	-1,30	-1,29	-1,28	-1,27	-1,26	-1,25	-1,24
32												
33	NEW REGISTRATIONS											
34	PERSONAL VEHICLES											
35	GAS UP 10%	12,390	12,592	13,288	13,913	14,501	14,430	14,344	14,761	15,113	15,245	15,402
36	CONTROL	12,486	12,640	13,302	13,920	14,529	14,477	14,404	14,829	15,184	15,314	15,468
37	DIFFERENCE	-0,096	-0,048	-0,013	-0,007	-0,028	-0,047	-0,060	-0,068	-0,071	-0,069	-0,067
38	% DIFFERENCE	-0,77	-0,38	-0,10	-0,05	-0,19	-0,32	-0,42	-0,46	-0,47	-0,45	-0,43
39	AUTOMOBILES											
40	GAS UP 10%	10,438	10,511	11,046	11,542	11,974	11,776	11,572	11,763	11,983	11,961	11,965
41	CONTROL	10,591	10,617	11,101	11,546	11,980	11,798	11,608	11,811	12,039	12,019	12,023
42	DIFFERENCE	-0,153	-0,107	-0,055	-0,004	-0,006	-0,021	-0,036	-0,048	-0,056	-0,058	-0,058
43	% DIFFERENCE	-1,44	-1,01	-0,49	-0,04	-0,05	-0,18	-0,31	-0,41	-0,47	-0,48	-0,48
44	AUTOMOBILES AND VANS REG AS AUTOS											
45	GAS UP 10%	10,628	10,708	11,255	11,764	12,208	12,024	11,834	12,041	12,276	12,270	12,291
46	CONTROL	10,781	10,815	11,310	11,768	12,214	12,046	11,870	12,089	12,332	12,328	12,349
47	DIFFERENCE	-0,153	-0,107	-0,055	-0,004	-0,006	-0,021	-0,036	-0,048	-0,056	-0,058	-0,058
48	% DIFFERENCE	-1,42	-0,99	-0,48	-0,04	-0,05	-0,18	-0,31	-0,40	-0,46	-0,47	-0,47
49	MEMO TRUCKS											
50	GAS UP 10%	1,762	1,883	2,033	2,149	2,294	2,405	2,510	2,720	2,836	2,974	3,111
51	CONTROL	1,706	1,824	1,991	2,152	2,315	2,431	2,534	2,740	2,852	2,986	3,119
52	DIFFERENCE	0,057	0,059	0,041	-0,003	-0,021	-0,026	-0,024	-0,020	-0,015	-0,011	-0,009
53	% DIFFERENCE	3,32	3,23	2,08	-0,15	-0,92	-1,05	-0,94	-0,72	-0,53	-0,38	-0,28

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	I T E M	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	LIGHT TRUCKS											
2	GAS UP 10%	4.233	4.530	4.909	5.210	5.485	5.722	5.944	6.283	6.530	6.777	7.009
3	CONTROL	4.181	4.470	4.860	5.206	5.500	5.742	5.963	6.300	6.543	6.787	7.018
4	DIFFERENCE	0.052	0.060	0.050	0.004	-0.015	-0.020	-0.020	-0.017	-0.013	-0.010	-0.009
5	% DIFFERENCE	1.25	1.35	1.02	0.07	-0.28	-0.36	-0.33	-0.26	-0.20	-0.15	-0.13
6	MEMO TRUCKS AND VANS REG AS AUTOS											
7	GAS UP 10%	1.952	2.081	2.242	2.371	2.528	2.653	2.772	2.998	3.130	3.283	3.437
8	CONTROL	1.896	2.022	2.200	2.374	2.549	2.679	2.796	3.018	3.145	3.295	3.445
9	DIFFERENCE	0.057	0.059	0.041	-0.003	-0.021	-0.026	-0.024	-0.020	-0.015	-0.011	-0.009
10	% DIFFERENCE	2.99	2.91	1.89	-0.14	-0.84	-0.95	-0.85	-0.65	-0.48	-0.34	-0.26
11	NONMEMO TRUCKS											
12	GAS UP 10%	2.281	2.449	2.667	2.840	2.958	3.068	3.171	3.285	3.400	3.493	3.572
13	CONTROL	2.285	2.447	2.659	2.832	2.952	3.063	3.167	3.282	3.398	3.493	3.573
14	DIFFERENCE	-0.004	0.002	0.008	0.007	0.006	0.005	0.004	0.003	0.002	0.001	-0.000
15	% DIFFERENCE	-0.20	0.06	0.31	0.25	0.21	0.16	0.13	0.09	0.06	0.02	-0.01
16												
17	SCRAPPAGE											
18	PERSONAL VEHICLES											
19	GAS UP 10%	8.790	9.303	10.125	11.521	11.536	11.192	10.980	11.356	11.796	12.125	12.549
20	CONTROL	9.621	9.963	10.282	10.807	10.968	10.792	10.769	11.301	11.834	12.208	12.646
21	DIFFERENCE	-0.831	-0.660	-0.157	0.714	0.568	0.400	0.211	0.055	-0.038	-0.083	-0.096
22	% DIFFERENCE	-8.64	-6.63	-1.53	6.60	5.18	3.70	1.96	0.49	-0.32	-0.68	-0.76
23	AUTOMOBILES											
24	GAS UP 10%	8.389	8.858	9.569	10.736	10.597	10.089	9.709	9.848	10.167	10.362	10.636
25	CONTROL	9.188	9.438	9.660	10.065	10.080	9.746	9.551	9.837	10.241	10.473	10.752
26	DIFFERENCE	-0.799	-0.580	-0.090	0.671	0.516	0.343	0.158	0.010	-0.074	-0.111	-0.116
27	% DIFFERENCE	-8.70	-6.15	-0.94	6.67	5.12	3.52	1.66	0.11	-0.72	-1.06	-1.08
28	MEMO TRUCKS AND VANS REG AS AUTOS											
29	GAS UP 10%	0.401	0.445	0.556	0.785	0.939	1.102	1.270	1.508	1.629	1.763	1.914
30	CONTROL	0.433	0.525	0.623	0.742	0.888	1.046	1.217	1.464	1.594	1.735	1.894
31	DIFFERENCE	-0.032	-0.080	-0.066	0.043	0.051	0.056	0.053	0.044	0.036	0.027	0.020
32	% DIFFERENCE	-7.40	-15.27	-10.67	5.77	5.79	5.37	4.33	3.03	2.25	1.58	1.07
33	LIGHT TRUCKS											
34	GAS UP 10%	1.445	1.506	1.729	2.184	2.487	2.791	3.128	3.547	3.845	4.156	4.511
35	CONTROL	1.485	1.656	1.862	2.125	2.422	2.723	3.063	3.490	3.796	4.116	4.477
36	DIFFERENCE	-0.040	-0.150	-0.134	0.059	0.065	0.068	0.065	0.057	0.048	0.040	0.034
37	% DIFFERENCE	-2.68	-9.04	-7.17	2.78	2.69	2.51	2.12	1.62	1.28	0.98	0.76
38	MEMO TRUCKS AND VANS REG AS AUTOS											
39	GAS UP 10%	0.401	0.445	0.556	0.785	0.939	1.102	1.270	1.508	1.629	1.763	1.914
40	CONTROL	0.433	0.525	0.623	0.742	0.888	1.046	1.217	1.464	1.594	1.735	1.894
41	DIFFERENCE	-0.032	-0.080	-0.066	0.043	0.051	0.056	0.053	0.044	0.036	0.027	0.020
42	% DIFFERENCE	-7.40	-15.27	-10.67	5.77	5.79	5.37	4.33	3.03	2.25	1.58	1.07
43	NONMEMO TRUCKS											
44	GAS UP 10%	1.044	1.061	1.173	1.398	1.547	1.688	1.858	2.039	2.215	2.394	2.597
45	CONTROL	1.052	1.131	1.240	1.382	1.534	1.676	1.846	2.027	2.202	2.381	2.584
46	DIFFERENCE	-0.008	-0.070	-0.067	0.016	0.014	0.012	0.012	0.012	0.013	0.013	0.014
47	% DIFFERENCE	-0.74	-6.15	-5.42	1.18	0.89	0.73	0.66	0.61	0.57	0.55	0.53
48												
49	YEAR END STOCK											
50	PERSONAL VEHICLES											
51	GAS UP 10%	117.102	120.391	123.554	125.945	128.910	132.149	135.513	138.918	142.234	145.354	148.207
52	CONTROL	116.367	119.044	122.063	125.175	128.736	132.420	136.056	139.584	142.933	146.039	148.862
53	DIFFERENCE	0.735	1.347	1.491	0.770	0.175	-0.272	-0.543	-0.666	-0.699	-0.685	-0.655
54	% DIFFERENCE	0.63	1.13	1.22	0.62	0.14	-0.21	-0.40	-0.48	-0.49	-0.47	-0.44

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	AUTOMOBILES											
2	GAS UP 10%	104.764	106.416	107.893	108.699	110.076	111.763	113.626	115.541	117.356	118.956	120.285
3	CONTROL	104.117	105.296	106.738	108.219	110.118	112.170	114.227	116.201	117.999	119.546	120.816
4	DIFFERENCE	0.646	1.120	1.155	0.480	-0.042	-0.407	-0.601	-0.660	-0.643	-0.590	-0.531
5	% DIFFERENCE	0.62	1.06	1.08	0.44	-0.04	-0.36	-0.53	-0.57	-0.54	-0.49	-0.44
6	MEMO TRUCKS AND VANS REG AS AUTOS											
7	GAS UP 10%	12.339	13.975	15.661	17.246	18.834	20.385	21.887	23.378	24.878	26.399	27.922
8	CONTROL	12.250	13.747	15.325	16.957	18.617	20.250	21.829	23.383	24.934	26.494	28.046
9	DIFFERENCE	0.089	0.228	0.336	0.290	0.217	0.135	0.059	-0.005	-0.056	-0.095	-0.124
10	% DIFFERENCE	0.72	1.66	2.19	1.71	1.16	0.67	0.27	-0.02	-0.23	-0.36	-0.44
11	LIGHT TRUCKS											
12	GAS UP 10%	33.385	36.409	39.590	42.616	45.615	48.546	51.361	54.098	56.783	59.404	61.902
13	CONTROL	33.293	36.107	39.104	42.186	45.265	48.285	51.185	53.995	56.742	59.413	61.954
14	DIFFERENCE	0.092	0.302	0.485	0.430	0.350	0.261	0.176	0.103	0.041	-0.010	-0.053
15	% DIFFERENCE	0.28	0.84	1.24	1.02	0.77	0.54	0.34	0.19	0.07	-0.02	-0.08
16	MEMO TRUCKS AND VANS REG AS AUTOS											
17	GAS UP 10%	12.339	13.975	15.661	17.246	18.834	20.385	21.887	23.378	24.878	26.399	27.922
18	CONTROL	12.250	13.747	15.325	16.957	18.617	20.250	21.829	23.383	24.934	26.494	28.046
19	DIFFERENCE	0.089	0.228	0.336	0.290	0.217	0.135	0.059	-0.005	-0.056	-0.095	-0.124
20	% DIFFERENCE	0.72	1.66	2.19	1.71	1.16	0.67	0.27	-0.02	-0.23	-0.36	-0.44
21	NONMEMO TRUCKS											
22	GAS UP 10%	21.047	22.434	23.929	25.370	26.780	28.160	29.474	30.720	31.905	33.005	33.980
23	CONTROL	21.044	22.360	23.779	25.230	26.647	28.035	29.356	30.612	31.807	32.920	33.909
24	DIFFERENCE	0.003	0.074	0.150	0.141	0.133	0.126	0.118	0.108	0.098	0.085	0.071
25	% DIFFERENCE	0.02	0.33	0.63	0.56	0.50	0.45	0.40	0.35	0.31	0.26	0.21
26												
27	MID YEAR STOCK											
28	PERSONAL VEHICLES											
29	GAS UP 10%	115.243	118.678	121.907	124.668	127.338	130.433	133.722	137.112	140.481	143.688	146.673
30	CONTROL	114.876	117.639	120.492	123.544	126.871	130.486	134.133	137.719	141.166	144.382	147.346
31	DIFFERENCE	0.368	1.039	1.416	1.125	0.467	-0.053	-0.411	-0.607	-0.685	-0.695	-0.673
32	% DIFFERENCE	0.32	0.88	1.17	0.91	0.37	-0.04	-0.31	-0.44	-0.49	-0.48	-0.46
33	AUTOMOBILES											
34	GAS UP 10%	103.680	105.521	107.089	108.215	109.298	110.824	112.585	114.479	116.353	118.049	119.512
35	CONTROL	103.357	104.640	105.956	107.403	109.084	111.053	113.094	115.114	117.007	118.669	120.076
36	DIFFERENCE	0.323	0.881	1.134	0.812	0.214	-0.229	-0.508	-0.634	-0.654	-0.619	-0.564
37	% DIFFERENCE	0.31	0.84	1.07	0.76	0.20	-0.21	-0.45	-0.55	-0.56	-0.52	-0.47
38	MEMO TRUCKS AND VANS REG AS AUTOS											
39	GAS UP 10%	11.563	13.157	14.818	16.453	18.040	19.610	21.136	22.632	24.128	25.638	27.160
40	CONTROL	11.519	12.998	14.536	16.141	17.787	19.434	21.039	22.606	24.159	25.714	27.270
41	DIFFERENCE	0.044	0.158	0.282	0.313	0.253	0.176	0.097	0.027	-0.031	-0.076	-0.109
42	% DIFFERENCE	0.39	1.22	1.94	1.94	1.42	0.91	0.46	0.12	-0.13	-0.29	-0.40
43	LIGHT TRUCKS											
44	GAS UP 10%	31.991	34.897	37.999	41.103	44.116	47.080	49.953	52.729	55.440	58.093	60.653
45	CONTROL	31.945	34.700	37.606	40.645	43.726	46.775	49.735	52.590	55.368	58.077	60.684
46	DIFFERENCE	0.046	0.197	0.394	0.458	0.390	0.305	0.219	0.140	0.072	0.016	-0.031
47	% DIFFERENCE	0.14	0.57	1.05	1.13	0.89	0.65	0.44	0.27	0.13	0.03	-0.05
48	MEMO TRUCKS AND VANS REG AS AUTOS											
49	GAS UP 10%	11.563	13.157	14.818	16.453	18.040	19.610	21.136	22.632	24.128	25.638	27.160
50	CONTROL	11.519	12.998	14.536	16.141	17.787	19.434	21.039	22.606	24.159	25.714	27.270
51	DIFFERENCE	0.044	0.158	0.282	0.313	0.253	0.176	0.097	0.027	-0.031	-0.076	-0.109
52	% DIFFERENCE	0.39	1.22	1.94	1.94	1.42	0.91	0.46	0.12	-0.13	-0.29	-0.40

THE WHARTON EFA MOTOR VEHICLE DEMAND MODEL
10 % INCREASE IN GASOLINE PRICE

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	NONMEMO TRUCKS	20.428	21.741	23.182	24.650	26.075	27.470	28.817	30.097	31.313	32.455	33.492
2	GAS UP 10%	20.427	21.702	23.070	24.504	25.939	27.341	28.695	29.984	31.210	32.364	33.414
3	CONTROL	0.002	0.039	0.112	0.145	0.137	0.129	0.122	0.113	0.103	0.091	0.078
4	DIFFERENCE	0.01	0.18	0.49	0.59	0.53	0.47	0.42	0.38	0.33	0.28	0.23
5	% DIFFERENCE											

THE WHARTON EFA MOTOR VEHICLE DEMAND MODEL
10 % INCREASE IN GASOLINE PRICE

TABLE 28.00 PRICES AND CAPITALIZED COSTS (DOLLARS)

LINE	I T E M	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	TOTAL PRICE											
2	AUTOMOBILES											
3	GAS UP 10%	8149.6	8920.1	9773.0	10738.6	11688.8	12555.1	13417.3	14256.0	15108.6	16011.6	16944.9
4	CONTROL	8153.6	8924.8	9778.8	10742.4	11691.2	12556.6	13418.7	14257.4	15110.2	16013.5	16946.8
5	DIFFERENCE	-4.0	-4.7	-5.8	-3.9	-2.5	-1.6	-1.4	-1.4	-1.6	-1.9	-1.9
6	% DIFFERENCE	-0.05	-0.05	-0.06	-0.04	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
7	PERSONAL TRUCKS											
8	GAS UP 10%	7150.1	7827.4	8523.7	9238.1	9984.3	10732.1	11475.8	12204.7	12937.0	13724.7	14537.4
9	CONTROL	7150.1	7827.4	8523.7	9238.1	9984.3	10732.1	11475.8	12204.7	12937.0	13724.7	14537.4
10	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	COMMERCIAL TRUCKS											
13	GAS UP 10%	7727.0	8475.2	9246.2	10030.0	10848.6	11669.3	12485.4	13285.7	14090.5	14955.9	15848.8
14	CONTROL	7727.0	8475.2	9246.2	10030.0	10848.6	11669.3	12485.4	13285.7	14090.5	14955.9	15848.8
15	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	GVW 1											
18	GAS UP 10%	7152.1	7831.9	8530.9	9248.3	9997.4	10747.6	11493.5	12224.8	12959.6	13749.2	14563.7
19	CONTROL	7152.1	7831.9	8530.9	9248.3	9997.4	10747.6	11493.5	12224.8	12959.6	13749.2	14563.7
20	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	GVW 2											
23	GAS UP 10%	8133.2	8916.7	9723.1	10551.1	11416.1	12283.7	13146.7	13993.0	14844.4	15760.3	16705.6
24	CONTROL	8133.2	8916.7	9723.1	10551.1	11416.1	12283.7	13146.7	13993.0	14844.4	15760.3	16705.6
25	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27												
28	TRANSPORTATION CHARGES											
29	AUTOMOBILES											
30	GAS UP 10%	317.8	349.6	384.4	421.2	460.4	498.5	537.1	576.2	609.8	645.9	680.8
31	CONTROL	318.2	349.9	384.6	421.3	460.5	498.5	537.2	576.3	609.8	646.0	680.9
32	DIFFERENCE	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.0	-0.0	-0.0	-0.0
33	% DIFFERENCE	-0.11	-0.09	-0.06	-0.04	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
34	PERSONAL TRUCKS											
35	GAS UP 10%	352.1	385.9	421.6	461.3	504.3	543.8	585.3	628.1	663.3	701.0	737.4
36	CONTROL	352.1	385.9	421.6	461.3	504.3	543.8	585.3	628.1	663.3	701.0	737.4
37	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	COMMERCIAL TRUCKS											
40	GAS UP 10%	384.7	421.8	461.2	504.3	551.0	594.0	639.0	685.3	723.7	764.8	804.6
41	CONTROL	384.7	421.8	461.2	504.3	551.0	594.0	639.0	685.3	723.7	764.8	804.6
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	GVW 1											
45	GAS UP 10%	352.1	385.9	421.6	461.3	504.3	543.8	585.3	628.1	663.3	701.0	737.4
46	CONTROL	352.1	385.9	421.6	461.3	504.3	543.8	585.3	628.1	663.3	701.0	737.4
47	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	GVW 2											
50	GAS UP 10%	407.7	446.5	487.6	533.0	582.0	627.4	674.8	723.4	764.0	807.4	849.4
51	CONTROL	407.7	446.5	487.6	533.0	582.0	627.4	674.8	723.4	764.0	807.4	849.4
52	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 28.00 PRICES AND CAPITALIZED COSTS (DOLLARS)

LINE	I T E M	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1												
2	BASE PRICE											
3	AUTOMOBILES											
4	GAS UP 10%	6294.9	6890.0	7554.7	8312.2	9045.5	9713.4	10372.9	11010.0	11659.7	12356.1	13077.1
5	CONTROL	6294.2	6890.0	7556.5	8312.9	9045.6	9713.1	10372.6	11009.8	11659.7	12356.3	13077.3
6	DIFFERENCE	0.7	-0.0	-1.8	-0.8	-0.1	0.3	0.3	0.2	-0.0	-0.3	-0.2
7	% DIFFERENCE	0.01	-0.00	-0.02	-0.01	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00
8	PERSONAL TRUCKS											
9	GAS UP 10%	5865.0	6410.8	6965.5	7529.1	8114.4	8702.8	9283.6	9846.6	10418.9	11035.3	11671.4
10	CONTROL	5865.0	6410.8	6965.5	7529.1	8114.4	8702.8	9283.6	9846.6	10418.9	11035.3	11671.4
11	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	COMMERCIAL TRUCKS											
14	GAS UP 10%	6156.4	6747.4	7349.7	7955.6	8585.4	9219.0	9845.0	10452.1	11069.6	11735.1	12422.2
15	CONTROL	6156.4	6747.4	7349.7	7955.6	8585.4	9219.0	9845.0	10452.1	11069.6	11735.1	12422.2
16	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	GVW 1											
19	GAS UP 10%	5674.8	6208.7	6751.4	7303.0	7876.0	8452.1	9021.1	9572.7	10133.5	10737.7	11361.2
20	CONTROL	5674.8	6208.7	6751.4	7303.0	7876.0	8452.1	9021.1	9572.7	10133.5	10737.7	11361.2
21	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	GVW 2											
24	GAS UP 10%	6496.7	7117.2	7748.5	8390.7	9058.4	9730.3	10394.2	11038.4	11693.6	12400.0	13129.6
25	CONTROL	6496.7	7117.2	7748.5	8390.7	9058.4	9730.3	10394.2	11038.4	11693.6	12400.0	13129.6
26	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28												
29	OPTIONS INSTALLED											
30	AUTOMOBILES											
31	GAS UP 10%	1150.8	1245.9	1344.4	1452.6	1565.1	1662.8	1761.9	1858.4	1954.2	2048.8	2144.4
32	CONTROL	1155.0	1250.0	1348.0	1455.4	1567.2	1664.5	1763.5	1859.9	1955.7	2050.3	2145.9
33	DIFFERENCE	-4.2	-4.1	-3.6	-2.7	-2.1	-1.7	-1.6	-1.5	-1.5	-1.5	-1.5
34	% DIFFERENCE	-0.36	-0.33	-0.26	-0.19	-0.14	-0.10	-0.09	-0.08	-0.07	-0.07	-0.07
35	PERSONAL TRUCKS											
36	GAS UP 10%	553.7	595.0	636.9	679.6	722.5	764.2	804.4	843.6	882.9	923.0	963.6
37	CONTROL	553.7	595.0	636.9	679.6	722.5	764.2	804.4	843.6	882.9	923.0	963.6
38	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	COMMERCIAL TRUCKS											
41	GAS UP 10%	776.1	834.4	893.6	953.4	1013.7	1072.2	1128.6	1183.6	1238.7	1295.0	1352.0
42	CONTROL	776.1	834.4	893.6	953.4	1013.7	1072.2	1128.6	1183.6	1238.7	1295.0	1352.0
43	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	GVW 1											
46	GAS UP 10%	745.7	801.3	857.8	915.2	973.1	1029.3	1083.4	1136.2	1189.1	1243.1	1297.9
47	CONTROL	745.7	801.3	857.8	915.2	973.1	1029.3	1083.4	1136.2	1189.1	1243.1	1297.9
48	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	GVW 2											
51	GAS UP 10%	797.6	857.1	917.4	978.9	1040.8	1100.9	1158.7	1215.2	1271.8	1329.6	1388.1
52	CONTROL	797.6	857.1	917.4	978.9	1040.8	1100.9	1158.7	1215.2	1271.8	1329.6	1388.1
53	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 28.00 PRICES AND CAPITALIZED COSTS (DOLLARS)

LINE	I T E M	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1												
2	CAPITALIZED COST PER MILE											
3	PERSONAL VEHICLES											
4	GAS UP 10%	0.3078	0.3321	0.3588	0.3869	0.4153	0.4441	0.4741	0.5039	0.5347	0.5669	0.6005
5	CONTROL	0.3027	0.3270	0.3538	0.3818	0.4102	0.4387	0.4684	0.4979	0.5283	0.5603	0.5935
6	DIFFERENCE	0.0051	0.0051	0.0051	0.0051	0.0052	0.0054	0.0057	0.0060	0.0063	0.0066	0.0070
7	% DIFFERENCE	1.68	1.55	1.43	1.33	1.26	1.23	1.22	1.21	1.20	1.19	1.18
8	AUTOMOBILES											
9	GAS UP 10%	0.3047	0.3287	0.3554	0.3829	0.4107	0.4389	0.4684	0.4978	0.5281	0.5598	0.5928
10	CONTROL	0.2997	0.3237	0.3504	0.3779	0.4057	0.4337	0.4629	0.4920	0.5220	0.5534	0.5860
11	DIFFERENCE	0.0050	0.0050	0.0050	0.0050	0.0051	0.0052	0.0055	0.0058	0.0061	0.0064	0.0068
12	% DIFFERENCE	1.68	1.55	1.43	1.32	1.25	1.21	1.19	1.18	1.17	1.16	1.15
13	PERSONAL TRUCKS											
14	GAS UP 10%	0.3326	0.3593	0.3870	0.4201	0.4534	0.4867	0.5202	0.5538	0.5881	0.6243	0.6620
15	CONTROL	0.3267	0.3535	0.3813	0.4140	0.4468	0.4798	0.5129	0.5461	0.5800	0.6157	0.6530
16	DIFFERENCE	0.0059	0.0058	0.0057	0.0061	0.0065	0.0069	0.0073	0.0077	0.0081	0.0086	0.0090
17	% DIFFERENCE	1.79	1.64	1.50	1.48	1.46	1.44	1.43	1.41	1.40	1.39	1.38
18	COMMERCIAL TRUCKS											
19	GAS UP 10%	0.2606	0.2811	0.3024	0.3281	0.3541	0.3800	0.4061	0.4322	0.4589	0.4870	0.5164
20	CONTROL	0.2545	0.2749	0.2961	0.3214	0.3469	0.3725	0.3981	0.4238	0.4500	0.4776	0.5065
21	DIFFERENCE	0.0061	0.0062	0.0063	0.0067	0.0071	0.0076	0.0080	0.0085	0.0089	0.0094	0.0099
22	% DIFFERENCE	2.39	2.25	2.11	2.09	2.06	2.04	2.01	2.00	1.98	1.96	1.95
23	GVW 1											
24	GAS UP 10%	0.2683	0.2888	0.3101	0.3366	0.3634	0.3901	0.4170	0.4439	0.4714	0.5004	0.5306
25	CONTROL	0.2627	0.2832	0.3047	0.3308	0.3571	0.3835	0.4100	0.4365	0.4636	0.4922	0.5220
26	DIFFERENCE	0.0056	0.0055	0.0055	0.0059	0.0062	0.0066	0.0070	0.0074	0.0078	0.0082	0.0086
27	% DIFFERENCE	2.13	1.95	1.80	1.77	1.75	1.73	1.71	1.69	1.68	1.66	1.65
28	GVW 2											
29	GAS UP 10%	0.2529	0.2738	0.2953	0.3204	0.3457	0.3710	0.3964	0.4219	0.4480	0.4754	0.5041
30	CONTROL	0.2463	0.2670	0.2883	0.3129	0.3378	0.3626	0.3875	0.4125	0.4381	0.4650	0.4931
31	DIFFERENCE	0.0066	0.0068	0.0070	0.0075	0.0080	0.0084	0.0089	0.0094	0.0099	0.0104	0.0110
32	% DIFFERENCE	2.67	2.54	2.42	2.39	2.36	2.33	2.30	2.28	2.26	2.24	2.22

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	OVERALL FLEET MILES PER GALLON											
2	AUTOMOBILES											
3	GAS UP 10%	14.2	14.5	15.1	15.7	16.4	17.1	17.8	18.5	19.2	19.8	20.3
4	CONTROL	14.2	14.5	15.1	15.7	16.4	17.1	17.8	18.5	19.2	19.8	20.3
5	DIFFERENCE	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	% DIFFERENCE	-0.11	0.03	0.08	0.06	0.04	0.03	0.03	0.03	0.03	0.03	0.02
7	PERSONAL TRUCKS											
8	GAS UP 10%	11.2	11.6	12.0	12.4	12.8	13.1	13.4	13.7	13.9	14.1	14.3
9	CONTROL	11.2	11.6	12.0	12.4	12.8	13.1	13.4	13.7	13.9	14.1	14.3
10	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.0
11	% DIFFERENCE	0.03	0.10	0.14	0.12	0.08	0.04	0.01	-0.00	-0.01	-0.02	-0.02
12	COMMERCIAL TRUCKS											
13	GAS UP 10%	11.2	11.3	11.6	11.8	12.0	12.2	12.4	12.6	12.8	12.9	13.1
14	CONTROL	11.2	11.3	11.6	11.8	12.0	12.2	12.4	12.6	12.8	12.9	13.1
15	DIFFERENCE	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	% DIFFERENCE	-0.00	-0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
17												
18	TOTAL FUEL CONSUMPTION BILL GAL											
19	GAS UP 10%	112,473	114,279	115,514	116,319	117,021	117,949	118,964	120,016	121,307	122,879	124,443
20	CONTROL	115,585	117,128	118,170	119,146	120,242	121,512	122,794	124,035	125,468	127,160	128,821
21	DIFFERENCE	-3,112	-2,849	-2,656	-2,827	-3,221	-3,564	-3,830	-4,019	-4,161	-4,280	-4,379
22	% DIFFERENCE	-2.69	-2.43	-2.25	-2.37	-2.68	-2.93	-3.12	-3.24	-3.32	-3.37	-3.40
23	AUTOMOBILES											
24	GAS UP 10%	82,152	82,051	81,150	79,826	78,441	77,246	76,143	75,175	74,468	73,948	73,446
25	CONTROL	83,957	83,668	82,663	81,464	80,313	79,286	78,274	77,331	76,612	76,061	75,517
26	DIFFERENCE	-1,804	-1,617	-1,512	-1,637	-1,872	-2,040	-2,131	-2,156	-2,144	-2,113	-2,071
27	% DIFFERENCE	-2.15	-1.93	-1.83	-2.01	-2.33	-2.57	-2.72	-2.79	-2.80	-2.78	-2.74
28	PERSONAL TRUCKS											
29	GAS UP 10%	10,582	11,758	12,892	13,980	15,020	16,031	16,993	17,923	18,856	19,810	20,783
30	CONTROL	10,825	11,934	12,996	14,092	15,212	16,315	17,367	18,378	19,380	20,395	21,418
31	DIFFERENCE	-0,243	-0,176	-0,105	-0,112	-0,192	-0,284	-0,374	-0,455	-0,525	-0,584	-0,636
32	% DIFFERENCE	-2.24	-1.48	-0.81	-0.79	-1.26	-1.74	-2.15	-2.47	-2.71	-2.86	-2.97
33	COMMERCIAL TRUCKS											
34	GAS UP 10%	19,738	20,471	21,472	22,513	23,560	24,672	25,827	26,917	27,983	29,121	30,214
35	CONTROL	20,803	21,527	22,511	23,590	24,717	25,911	27,152	28,326	29,476	30,704	31,886
36	DIFFERENCE	-1,065	-1,056	-1,039	-1,078	-1,157	-1,240	-1,325	-1,409	-1,493	-1,583	-1,672
37	% DIFFERENCE	-5.12	-4.91	-4.62	-4.57	-4.68	-4.78	-4.88	-4.97	-5.06	-5.15	-5.24
38												
39	AVERAGE AGE											
40	PERSONAL VEHICLES											
41	GAS UP 10%	5.645	5.687	5.705	5.675	5.617	5.587	5.602	5.641	5.680	5.720	5.764
42	CONTROL	5.628	5.638	5.639	5.616	5.582	5.570	5.597	5.642	5.683	5.721	5.764
43	DIFFERENCE	0.018	0.050	0.067	0.059	0.035	0.017	0.005	-0.001	-0.003	-0.002	-0.000
44	% DIFFERENCE	0.31	0.88	1.19	1.05	0.63	0.30	0.08	-0.02	-0.05	-0.03	-0.00
45	AUTOMOBILES											
46	GAS UP 10%	5.764	5.817	5.839	5.800	5.722	5.669	5.663	5.684	5.704	5.721	5.744
47	CONTROL	5.743	5.758	5.758	5.727	5.677	5.648	5.658	5.687	5.710	5.728	5.749
48	DIFFERENCE	0.021	0.060	0.082	0.073	0.045	0.021	0.005	-0.004	-0.007	-0.007	-0.005
49	% DIFFERENCE	0.36	1.03	1.42	1.27	0.79	0.37	0.08	-0.07	-0.12	-0.12	-0.08
50	TRUCKS											
51	GAS UP 10%	4.586	4.646	4.738	4.853	4.982	5.123	5.276	5.425	5.568	5.712	5.852
52	CONTROL	4.597	4.672	4.770	4.879	4.996	5.125	5.268	5.411	5.550	5.692	5.831
53	DIFFERENCE	-0.010	-0.026	-0.032	-0.027	-0.014	-0.002	0.008	0.014	0.018	0.020	0.021
54	% DIFFERENCE	-0.22	-0.55	-0.67	-0.54	-0.28	-0.03	0.15	0.27	0.33	0.36	0.36

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	COMMERCIAL TRUCKS											
2	GAS UP 10%	6.188	6.212	6.223	6.228	6.240	6.266	6.305	6.354	6.411	6.474	6.546
3	CONTROL	6.188	6.211	6.224	6.230	6.243	6.270	6.309	6.358	6.414	6.477	6.547
4	DIFFERENCE	0.001	0.001	-0.001	-0.002	-0.003	-0.004	-0.004	-0.004	-0.003	-0.002	-0.001
5	% DIFFERENCE	0.01	0.01	-0.01	-0.04	-0.05	-0.06	-0.06	-0.06	-0.05	-0.04	-0.02
6												
7	MILES PER VEHICLE											
8	PERSONAL VEHICLES											
9	GAS UP 10%	11.117	11.197	11.315	11.463	11.617	11.739	11.851	11.949	12.033	12.108	12.174
10	CONTROL	11.410	11.509	11.638	11.779	11.917	12.027	12.132	12.229	12.315	12.394	12.464
11	DIFFERENCE	-0.293	-0.312	-0.323	-0.316	-0.300	-0.288	-0.281	-0.280	-0.282	-0.285	-0.289
12	% DIFFERENCE	-2.57	-2.71	-2.78	-2.68	-2.51	-2.39	-2.32	-2.29	-2.29	-2.30	-2.32
13	AUTOMOBILES											
14	GAS UP 10%	11.211	11.302	11.433	11.601	11.778	11.920	12.053	12.170	12.273	12.365	12.447
15	CONTROL	11.506	11.618	11.762	11.921	12.078	12.206	12.331	12.447	12.552	12.648	12.736
16	DIFFERENCE	-0.295	-0.316	-0.329	-0.320	-0.301	-0.286	-0.279	-0.277	-0.279	-0.284	-0.289
17	% DIFFERENCE	-2.57	-2.72	-2.80	-2.69	-2.49	-2.34	-2.26	-2.23	-2.22	-2.24	-2.27
18	TRUCKS											
19	GAS UP 10%	10.273	10.356	10.461	10.555	10.643	10.718	10.777	10.830	10.879	10.927	10.972
20	CONTROL	10.546	10.628	10.735	10.832	10.924	11.002	11.064	11.118	11.169	11.219	11.265
21	DIFFERENCE	-0.273	-0.273	-0.274	-0.277	-0.281	-0.284	-0.287	-0.288	-0.290	-0.291	-0.293
22	% DIFFERENCE	-2.58	-2.57	-2.56	-2.56	-2.57	-2.58	-2.59	-2.59	-2.60	-2.60	-2.60
23	COMMERCIAL TRUCKS											
24	GAS UP 10%	10.790	10.686	10.732	10.793	10.876	10.997	11.148	11.287	11.428	11.612	11.801
25	CONTROL	11.374	11.258	11.306	11.376	11.470	11.604	11.769	11.921	12.076	12.277	12.482
26	DIFFERENCE	-0.583	-0.571	-0.574	-0.583	-0.593	-0.606	-0.621	-0.634	-0.648	-0.665	-0.682
27	% DIFFERENCE	-5.13	-5.08	-5.08	-5.12	-5.17	-5.22	-5.27	-5.32	-5.37	-5.42	-5.46
28												
29	NEW REGISTRATIONS TO BEGINNING STOCK											
30	PERSONAL VEHICLES											
31	GAS UP 10%	0.109	0.108	0.110	0.113	0.115	0.112	0.109	0.109	0.109	0.107	0.106
32	CONTROL	0.110	0.109	0.112	0.114	0.116	0.112	0.109	0.109	0.109	0.107	0.106
33	DIFFERENCE	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.000	-0.000	0.000	0.000	0.000
34	% DIFFERENCE	-0.77	-1.01	-1.22	-1.26	-0.80	-0.46	-0.21	-0.06	0.01	0.04	0.04
35	AUTOMOBILES											
36	GAS UP 10%	0.102	0.100	0.104	0.107	0.110	0.107	0.104	0.104	0.104	0.102	0.101
37	CONTROL	0.103	0.102	0.105	0.108	0.111	0.107	0.103	0.103	0.104	0.102	0.101
38	DIFFERENCE	-0.001	-0.002	-0.002	-0.001	-0.001	-0.000	0.000	0.000	0.000	0.000	0.000
39	% DIFFERENCE	-1.44	-1.62	-1.54	-1.11	-0.49	-0.14	0.05	0.12	0.10	0.06	0.01
40	TRUCKS											
41	GAS UP 10%	0.181	0.169	0.160	0.151	0.147	0.141	0.136	0.137	0.134	0.132	0.130
42	CONTROL	0.176	0.165	0.160	0.155	0.150	0.144	0.138	0.138	0.135	0.132	0.130
43	DIFFERENCE	0.005	0.004	0.000	-0.004	-0.004	-0.003	-0.002	-0.001	-0.001	-0.000	0.000
44	% DIFFERENCE	2.99	2.17	0.23	-2.28	-2.50	-2.09	-1.51	-0.92	-0.46	-0.12	0.10
45	COMMERCIAL TRUCKS											
46	GAS UP 10%	0.115	0.116	0.119	0.119	0.117	0.115	0.113	0.111	0.111	0.109	0.108
47	CONTROL	0.115	0.116	0.119	0.119	0.117	0.115	0.113	0.112	0.111	0.110	0.109
48	DIFFERENCE	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
49	% DIFFERENCE	-0.20	0.05	-0.03	-0.37	-0.35	-0.33	-0.32	-0.31	-0.29	-0.28	-0.27
50												
51	SCRAPPAGE TO BEGINNING STOCK											

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	PERSONAL VEHICLES											
2	GAS UP 10%	0.077	0.079	0.084	0.093	0.092	0.087	0.083	0.084	0.085	0.085	0.086
3	CONTROL	0.085	0.086	0.086	0.089	0.088	0.084	0.081	0.083	0.085	0.085	0.087
4	DIFFERENCE	-0.007	-0.006	-0.002	0.005	0.004	0.003	0.002	0.001	0.000	-0.000	-0.000
5	% DIFFERENCE	-8.64	-7.21	-2.63	5.32	4.53	3.56	2.17	0.89	0.15	-0.20	-0.29
6	AUTOMOBILES											
7	GAS UP 10%	0.082	0.085	0.090	0.100	0.097	0.092	0.087	0.087	0.088	0.088	0.089
8	CONTROL	0.089	0.091	0.092	0.094	0.093	0.089	0.085	0.086	0.088	0.089	0.090
9	DIFFERENCE	-0.008	-0.006	-0.002	0.005	0.004	0.003	0.002	0.001	-0.000	-0.000	-0.001
10	% DIFFERENCE	-8.70	-6.72	-1.98	5.52	4.66	3.56	2.03	0.64	-0.15	-0.52	-0.59
11	TRUCKS											
12	GAS UP 10%	0.037	0.036	0.040	0.050	0.054	0.059	0.062	0.069	0.070	0.071	0.072
13	CONTROL	0.040	0.043	0.045	0.048	0.052	0.056	0.060	0.067	0.068	0.070	0.071
14	DIFFERENCE	-0.003	-0.007	-0.005	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001
15	% DIFFERENCE	-7.40	-15.88	-12.12	3.51	4.01	4.16	3.64	2.76	2.27	1.81	1.43
16	COMMERCIAL TRUCKS											
17	GAS UP 10%	0.053	0.050	0.052	0.058	0.061	0.063	0.066	0.069	0.072	0.075	0.079
18	CONTROL	0.053	0.054	0.055	0.058	0.061	0.063	0.066	0.069	0.072	0.075	0.078
19	DIFFERENCE	-0.000	-0.003	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	% DIFFERENCE	-0.74	-6.16	-5.73	0.54	0.34	0.23	0.21	0.21	0.22	0.24	0.27
21												
22	ACTIVITIES AS SHARE OF INCOME %											
23	GAS UP 10%	27.9	28.0	28.0	28.1	28.3	28.5	28.6	28.8	29.1	29.3	29.5
24	CONTROL	27.9	28.0	28.0	28.1	28.3	28.5	28.6	28.8	29.1	29.3	29.5
25	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27												
28	FARM PROPRIETOR'S INCOME BILL $											
29	GAS UP 10%	28.081	30.081	32.081	34.081	36.081	38.081	40.081	42.081	44.532	47.265	50.151
30	CONTROL	28.081	30.081	32.081	34.081	36.081	38.081	40.081	42.081	44.532	47.265	50.151
31	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	EMPLOYEE COMPENSATION											
34	AGRICULTURE											
35	GAS UP 10%	15.583	17.223	18.931	20.797	22.569	24.225	25.749	27.415	29.202	30.888	32.634
36	CONTROL	15.583	17.223	18.931	20.797	22.569	24.225	25.749	27.415	29.202	30.888	32.634
37	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	CONTRACT CONSTRUCTION											
40	GAS UP 10%	74.001	80.756	88.811	97.070	105.456	113.895	122.077	131.352	142.042	151.373	161.054
41	CONTROL	74.001	80.756	88.811	97.070	105.456	113.895	122.077	131.352	142.042	151.373	161.054
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	SERVICES											
45	GAS UP 10%	227.209	253.393	283.896	318.412	355.562	394.044	433.549	476.854	525.792	575.751	629.798
46	CONTROL	227.209	253.393	283.896	318.412	355.562	394.044	433.549	476.854	525.792	575.751	629.798
47	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	WHOLESALE AND RETAIL TRADE											
50	GAS UP 10%	240.921	264.515	290.891	319.996	350.551	381.187	411.800	444.411	480.553	516.776	555.324
51	CONTROL	240.921	264.515	290.891	319.996	350.551	381.187	411.800	444.411	480.553	516.776	555.324
52	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	I T E M	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1												
2	AUTO REG. FEES INDEX (1967=100)											
3	GAS UP 10%	168.8	179.8	190.9	202.1	213.1	223.6	233.6	243.6	253.6	263.9	274.5
4	CONTROL	168.8	179.8	190.9	202.1	213.1	223.6	233.6	243.6	253.6	263.9	274.5
5	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	PERCENT OF FAMILIES WITH INCOME OVER											
8	$15,000 (1975 DOLLARS)											
9	GAS UP 10%	50.1	50.4	50.9	51.4	52.1	52.7	53.1	53.4	54.1	54.8	55.4
10	CONTROL	50.1	50.4	50.9	51.4	52.1	52.7	53.1	53.4	54.1	54.8	55.4
11	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	COMMERCIAL BANK RATE ON NEW AUTO LOANS											
14	GAS UP 10%	11.3	11.5	11.7	11.5	11.1	10.8	10.7	10.6	10.5	10.4	10.3
15	CONTROL	11.2	11.4	11.6	11.4	11.1	10.8	10.7	10.6	10.5	10.4	10.3
16	DIFFERENCE	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	% DIFFERENCE	0.89	0.87	0.86	0.88	0.0	0.0	0.0	0.0	0.0	0.0	0.0

C.4 Extended Truck MPG Standards

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	EQUILIBRIUM ('DESIRED') STOCKS											
2	PERSONAL VEHICLES											
3	EXTEND MPG	115.710	117.540	119.814	122.351	125.041	126.261	127.573	129.942	132.338	134.454	136.166
4	CONTROL	115.710	117.540	119.814	122.298	124.941	126.119	127.433	129.805	132.203	134.321	136.036
5	DIFFERENCE	0.0	0.0	0.0	0.053	0.099	0.142	0.140	0.138	0.135	0.133	0.130
6	% DIFFERENCE	0.0	0.0	0.0	0.04	0.08	0.11	0.11	0.11	0.10	0.10	0.10
7	AUTOMOBILES											
8	EXTEND MPG	102.842	104.499	106.594	108.930	111.348	112.275	113.379	115.539	117.695	119.505	120.871
9	CONTROL	102.842	104.499	106.594	108.930	111.348	112.275	113.379	115.539	117.695	119.505	120.871
10	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	MEMO TRUCKS AND VANS REG AS AUTOS											
13	EXTEND MPG	12.868	13.041	13.221	13.421	13.693	13.986	14.194	14.403	14.643	14.949	15.295
14	CONTROL	12.868	13.041	13.221	13.368	13.593	13.844	14.054	14.266	14.508	14.816	15.165
15	DIFFERENCE	0.0	0.0	0.0	0.053	0.099	0.142	0.140	0.138	0.135	0.133	0.130
16	% DIFFERENCE	0.0	0.0	0.0	0.39	0.73	1.02	0.99	0.96	0.93	0.90	0.86
17	LIGHT TRUCKS											
18	EXTEND MPG	29.452	29.726	29.941	30.207	30.623	30.990	31.012	31.071	31.311	31.660	32.064
19	CONTROL	29.452	29.726	29.941	30.052	30.329	30.572	30.602	30.670	30.914	31.268	31.676
20	DIFFERENCE	0.0	0.0	0.0	0.155	0.294	0.419	0.409	0.401	0.397	0.392	0.387
21	% DIFFERENCE	0.0	0.0	0.0	0.52	0.97	1.37	1.34	1.31	1.28	1.25	1.22
22	MEMO TRUCKS AND VANS REG AS AUTOS											
23	EXTEND MPG	12.868	13.041	13.221	13.421	13.693	13.986	14.194	14.403	14.643	14.949	15.295
24	CONTROL	12.868	13.041	13.221	13.368	13.593	13.844	14.054	14.266	14.508	14.816	15.165
25	DIFFERENCE	0.0	0.0	0.0	0.053	0.099	0.142	0.140	0.138	0.135	0.133	0.130
26	% DIFFERENCE	0.0	0.0	0.0	0.39	0.73	1.02	0.99	0.96	0.93	0.90	0.86
27	NONMEMO TRUCKS											
28	EXTEND MPG	16.584	16.685	16.721	16.786	16.930	17.004	16.818	16.668	16.667	16.711	16.769
29	CONTROL	16.584	16.685	16.721	16.683	16.735	16.727	16.548	16.404	16.406	16.452	16.512
30	DIFFERENCE	0.0	0.0	0.0	0.103	0.195	0.277	0.270	0.264	0.261	0.259	0.257
31	% DIFFERENCE	0.0	0.0	0.0	0.62	1.16	1.65	1.63	1.61	1.59	1.57	1.56
32												
33	NEW REGISTRATIONS											
34	PERSONAL VEHICLES											
35	EXTEND MPG	12.486	12.640	13.302	13.926	14.541	14.493	14.420	14.846	15.201	15.330	15.464
36	CONTROL	12.486	12.640	13.302	13.920	14.529	14.477	14.404	14.829	15.184	15.314	15.448
37	DIFFERENCE	0.0	0.0	0.0	0.006	0.012	0.017	0.016	0.017	0.017	0.016	0.016
38	% DIFFERENCE	0.0	0.0	0.0	0.05	0.08	0.12	0.11	0.11	0.11	0.11	0.10
39	AUTOMOBILES											
40	EXTEND MPG	10.591	10.617	11.101	11.546	11.980	11.798	11.608	11.811	12.039	12.019	12.023
41	CONTROL	10.591	10.617	11.101	11.546	11.980	11.798	11.608	11.811	12.039	12.019	12.023
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	AUTOMOBILES AND VANS REG AS AUTOS											
45	EXTEND MPG	10.781	10.815	11.310	11.768	12.214	12.046	11.870	12.089	12.332	12.328	12.349
46	CONTROL	10.781	10.815	11.310	11.768	12.214	12.046	11.870	12.089	12.332	12.328	12.349
47	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	MEMO TRUCKS											
50	EXTEND MPG	1.706	1.824	1.991	2.158	2.327	2.448	2.551	2.756	2.868	3.002	3.136
51	CONTROL	1.706	1.824	1.991	2.152	2.315	2.431	2.534	2.740	2.852	2.986	3.119
52	DIFFERENCE	0.0	0.0	0.0	0.006	0.012	0.017	0.016	0.017	0.017	0.016	0.016
53	% DIFFERENCE	0.0	0.0	0.0	0.29	0.52	0.69	0.65	0.60	0.58	0.55	0.52

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	LIGHT TRUCKS											
2	EXTEND MPG	4,181	4,470	4,860	5,216	5,518	5,767	5,987	6,323	6,565	6,808	7,037
3	CONTROL	4,181	4,470	4,860	5,206	5,500	5,748	5,963	6,300	6,543	6,787	7,018
4	DIFFERENCE	0.0	0.0	0.0	0.009	0.018	0.025	0.024	0.023	0.022	0.020	0.019
5	% DIFFERENCE	0.0	0.0	0.0	0.18	0.32	0.43	0.39	0.36	0.33	0.30	0.27
6	MEMO TRUCKS AND VANS REG AS AUTOS											
7	EXTEND MPG	1,896	2,022	2,200	2,380	2,561	2,696	2,812	3,034	3,162	3,311	3,462
8	CONTROL	1,896	2,022	2,200	2,374	2,549	2,679	2,796	3,018	3,145	3,295	3,445
9	DIFFERENCE	0.0	0.0	0.0	0.006	0.012	0.017	0.016	0.017	0.017	0.016	0.016
10	% DIFFERENCE	0.0	0.0	0.0	0.27	0.47	0.62	0.59	0.55	0.53	0.50	0.47
11	NONMEMO TRUCKS											
12	EXTEND MPG	2,285	2,447	2,659	2,835	2,957	3,071	3,174	3,288	3,403	3,497	3,576
13	CONTROL	2,285	2,447	2,659	2,832	2,952	3,063	3,167	3,282	3,398	3,493	3,573
14	DIFFERENCE	0.0	0.0	0.0	0.003	0.006	0.008	0.007	0.006	0.005	0.004	0.003
15	% DIFFERENCE	0.0	0.0	0.0	0.10	0.19	0.26	0.22	0.18	0.15	0.12	0.08
16												
17	SCRAPPAGE											
18	PERSONAL VEHICLES											
19	EXTEND MPG	9,621	9,963	10,282	10,812	10,967	10,832	10,824	11,360	11,890	12,259	12,691
20	CONTROL	9,621	9,963	10,282	10,807	10,958	10,792	10,769	11,301	11,834	12,208	12,646
21	DIFFERENCE	0.0	0.0	0.0	0.004	0.010	0.040	0.055	0.060	0.056	0.051	0.046
22	% DIFFERENCE	0.0	0.0	0.0	0.04	0.18	0.37	0.51	0.53	0.47	0.41	0.36
23	AUTOMOBILES											
24	EXTEND MPG	9,188	9,438	9,660	10,065	10,080	9,746	9,551	9,837	10,241	10,473	10,752
25	CONTROL	9,188	9,438	9,660	10,065	10,080	9,746	9,551	9,837	10,241	10,473	10,752
26	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	MEMO TRUCKS AND VANS REG AS AUTOS											
29	EXTEND MPG	0,433	0,525	0,623	0,747	0,907	1,087	1,272	1,523	1,649	1,786	1,939
30	CONTROL	0,433	0,525	0,623	0,742	0,888	1,046	1,217	1,464	1,594	1,735	1,894
31	DIFFERENCE	0.0	0.0	0.0	0.004	0.019	0.040	0.055	0.060	0.056	0.051	0.046
32	% DIFFERENCE	0.0	0.0	0.0	0.60	2.16	3.85	4.51	4.07	3.49	2.91	2.41
33	LIGHT TRUCKS											
34	EXTEND MPG	1,485	1,656	1,862	2,127	2,441	2,770	3,134	3,570	3,871	4,185	4,541
35	CONTROL	1,485	1,656	1,862	2,125	2,422	2,723	3,063	3,490	3,796	4,116	4,477
36	DIFFERENCE	0.0	0.0	0.0	0.002	0.019	0.047	0.071	0.080	0.075	0.070	0.064
37	% DIFFERENCE	0.0	0.0	0.0	0.11	0.79	1.73	2.31	2.29	1.98	1.69	1.43
38	MEMO TRUCKS AND VANS REG AS AUTOS											
39	EXTEND MPG	0,433	0,525	0,623	0,747	0,907	1,087	1,272	1,523	1,649	1,786	1,939
40	CONTROL	0,433	0,525	0,623	0,742	0,888	1,046	1,217	1,464	1,594	1,735	1,894
41	DIFFERENCE	0.0	0.0	0.0	0.004	0.019	0.040	0.055	0.060	0.056	0.051	0.046
42	% DIFFERENCE	0.0	0.0	0.0	0.60	2.16	3.85	4.51	4.07	3.49	2.91	2.41
43	NONMEMO TRUCKS											
44	EXTEND MPG	1,052	1,131	1,240	1,380	1,534	1,683	1,861	2,047	2,222	2,400	2,602
45	CONTROL	1,052	1,131	1,240	1,382	1,534	1,676	1,846	2,027	2,202	2,381	2,584
46	DIFFERENCE	0.0	0.0	0.0	-0.002	-0.000	0.007	0.016	0.020	0.020	0.019	0.018
47	% DIFFERENCE	0.0	0.0	0.0	-0.16	-0.00	0.40	0.86	1.00	0.89	0.80	0.71
48												
49	YEAR END STOCK											
50	PERSONAL VEHICLES											
51	EXTEND MPG	116,367	119,044	122,063	125,177	128,730	132,391	135,988	139,473	142,784	145,856	148,649
52	CONTROL	116,367	119,044	122,063	125,175	128,736	132,420	136,056	139,584	142,933	146,039	148,862
53	DIFFERENCE	0.0	0.0	0.0	0.002	-0.005	-0.029	-0.067	-0.110	-0.149	-0.184	-0.213
54	% DIFFERENCE	0.0	0.0	0.0	0.00	-0.00	-0.02	-0.05	-0.08	-0.10	-0.13	-0.14

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	I T E M	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	AUTOMOBILES											
2	EXTEND MPG	104,117	105,296	106,738	108,219	110,118	112,170	114,227	116,201	117,999	119,546	120,816
3	CONTROL	104,117	105,296	106,738	108,219	110,118	112,170	114,227	116,201	117,999	119,546	120,816
4	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	MEMO TRUCKS AND VANS REG AS AUTOS											
7	EXTEND MPG	12,250	13,747	15,325	16,959	18,612	20,221	21,761	23,272	24,785	26,310	27,832
8	CONTROL	12,250	13,747	15,325	16,957	18,617	20,250	21,829	23,383	24,934	26,494	28,046
9	DIFFERENCE	0.0	0.0	0.0	0.002	-0.005	-0.029	-0.067	-0.110	-0.149	-0.184	-0.213
10	% DIFFERENCE	0.0	0.0	0.0	0.01	-0.03	-0.14	-0.31	-0.47	-0.60	-0.69	-0.76
11	LIGHT TRUCKS											
12	EXTEND MPG	33,293	36,107	39,104	42,193	45,270	48,268	51,121	53,873	56,567	59,189	61,685
13	CONTROL	33,293	36,107	39,104	42,186	45,263	48,285	51,185	53,995	56,742	59,413	61,954
14	DIFFERENCE	0.0	0.0	0.0	0.007	0.005	-0.017	-0.064	-0.121	-0.175	-0.224	-0.269
15	% DIFFERENCE	0.0	0.0	0.0	0.02	0.01	-0.04	-0.13	-0.22	-0.31	-0.38	-0.43
16	MEMO TRUCKS AND VANS REG AS AUTOS											
17	EXTEND MPG	12,250	13,747	15,325	16,959	18,612	20,221	21,761	23,272	24,785	26,310	27,832
18	CONTROL	12,250	13,747	15,325	16,957	18,617	20,250	21,829	23,383	24,934	26,494	28,046
19	DIFFERENCE	0.0	0.0	0.0	0.002	-0.005	-0.029	-0.067	-0.110	-0.149	-0.184	-0.213
20	% DIFFERENCE	0.0	0.0	0.0	0.01	-0.03	-0.14	-0.31	-0.47	-0.60	-0.69	-0.76
21	NONMEMO TRUCKS											
22	EXTEND MPG	21,044	22,360	23,779	25,235	26,658	28,046	29,359	30,601	31,782	32,879	33,853
23	CONTROL	21,044	22,360	23,779	25,230	26,647	28,035	29,356	30,612	31,807	32,920	33,909
24	DIFFERENCE	0.0	0.0	0.0	0.005	0.011	0.012	0.003	-0.011	-0.025	-0.040	-0.056
25	% DIFFERENCE	0.0	0.0	0.0	0.02	0.04	0.04	0.01	-0.04	-0.08	-0.12	-0.16
26												
27	MID YEAR STOCK											
28	PERSONAL VEHICLES											
29	EXTEND MPG	114,876	117,639	120,492	123,544	126,869	130,469	134,085	137,630	141,036	144,216	147,147
30	CONTROL	114,876	117,639	120,492	123,544	126,871	130,486	134,133	137,719	141,166	144,382	147,346
31	DIFFERENCE	0.0	0.0	0.0	0.001	-0.002	-0.017	-0.048	-0.089	-0.130	-0.166	-0.198
32	% DIFFERENCE	0.0	0.0	0.0	0.00	-0.00	-0.01	-0.04	-0.06	-0.09	-0.12	-0.13
33	AUTOMOBILES											
34	EXTEND MPG	103,357	104,640	105,956	107,403	109,084	111,053	113,094	115,114	117,007	118,669	120,076
35	CONTROL	103,357	104,640	105,956	107,403	109,084	111,053	113,094	115,114	117,007	118,669	120,076
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	MEMO TRUCKS AND VANS REG AS AUTOS											
39	EXTEND MPG	11,519	12,998	14,536	16,142	17,785	19,417	20,991	22,517	24,029	25,547	27,071
40	CONTROL	11,519	12,998	14,536	16,141	17,787	19,434	21,039	22,606	24,159	25,714	27,270
41	DIFFERENCE	0.0	0.0	0.0	0.001	-0.002	-0.017	-0.048	-0.089	-0.130	-0.166	-0.198
42	% DIFFERENCE	0.0	0.0	0.0	0.01	-0.01	-0.09	-0.23	-0.39	-0.54	-0.65	-0.73
43	LIGHT TRUCKS											
44	EXTEND MPG	31,945	34,700	37,606	40,649	43,732	46,769	49,694	52,497	55,220	57,878	60,437
45	CONTROL	31,945	34,700	37,606	40,645	43,726	46,775	49,735	52,590	55,368	58,077	60,684
46	DIFFERENCE	0.0	0.0	0.0	0.003	0.006	-0.006	-0.041	-0.093	-0.148	-0.199	-0.246
47	% DIFFERENCE	0.0	0.0	0.0	0.01	0.01	-0.01	-0.08	-0.18	-0.27	-0.34	-0.41
48	MEMO TRUCKS AND VANS REG AS AUTOS											
49	EXTEND MPG	11,519	12,998	14,536	16,142	17,785	19,417	20,991	22,517	24,029	25,547	27,071
50	CONTROL	11,519	12,998	14,536	16,141	17,787	19,434	21,039	22,606	24,159	25,714	27,270
51	DIFFERENCE	0.0	0.0	0.0	0.001	-0.002	-0.017	-0.048	-0.089	-0.130	-0.166	-0.198
52	% DIFFERENCE	0.0	0.0	0.0	0.01	-0.01	-0.09	-0.23	-0.39	-0.54	-0.65	-0.73

TABLE 24.00 LIGHT TRUCKS SECTOR (MILL VEHICLES)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
11	NONMEMO TRUCKS											
21	EXTEND MPG	20.427	21.702	23.070	24.507	25.946	27.352	28.703	29.980	31.192	32.331	33.366
31	CONTROL	20.427	21.702	23.070	24.504	25.939	27.341	28.695	29.984	31.210	32.364	33.414
41	DIFFERENCE	0.0	0.0	0.0	0.003	0.008	0.011	0.008	-0.004	-0.018	-0.033	-0.048
51	% DIFFERENCE	0.0	0.0	0.0	0.01	0.03	0.04	0.03	-0.01	-0.06	-0.10	-0.141

TABLE 28.00 PRICES AND CAPITALIZED COSTS (DOLLARS)

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1												
2	CAPITALIZED COST PER MILE											
3	PERSONAL VEHICLES											
4	EXTEND MPG	0.3027	0.3270	0.3538	0.3814	0.4094	0.4375	0.4672	0.4966	0.5269	0.5588	0.5919
5	CONTROL	0.3027	0.3270	0.3538	0.3818	0.4102	0.4387	0.4684	0.4979	0.5283	0.5603	0.5935
6	DIFFERENCE	0.0	0.0	0.0	-0.0004	-0.0008	-0.0012	-0.0013	-0.0013	-0.0014	-0.0015	-0.0016
7	% DIFFERENCE	0.0	0.0	0.0	-0.10	-0.19	-0.27	-0.27	-0.27	-0.27	-0.27	-0.27
8	AUTOMOBILES											
9	EXTEND MPG	0.2997	0.3237	0.3504	0.3779	0.4057	0.4337	0.4629	0.4920	0.5220	0.5534	0.5860
10	CONTROL	0.2997	0.3237	0.3504	0.3779	0.4057	0.4337	0.4629	0.4920	0.5220	0.5534	0.5860
11	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	PERSONAL TRUCKS											
14	EXTEND MPG	0.3267	0.3535	0.3813	0.4103	0.4394	0.4685	0.5010	0.5336	0.5667	0.6018	0.6384
15	CONTROL	0.3267	0.3535	0.3813	0.4140	0.4468	0.4798	0.5129	0.5461	0.5800	0.6157	0.6530
16	DIFFERENCE	0.0	0.0	0.0	-0.0037	-0.0075	-0.0113	-0.0119	-0.0125	-0.0132	-0.0139	-0.0146
17	% DIFFERENCE	0.0	0.0	0.0	-0.90	-1.67	-2.35	-2.32	-2.30	-2.28	-2.26	-2.24
18	COMMERCIAL TRUCKS											
19	EXTEND MPG	0.2545	0.2749	0.2961	0.3183	0.3406	0.3629	0.3879	0.4131	0.4388	0.4658	0.4941
20	CONTROL	0.2545	0.2749	0.2961	0.3214	0.3469	0.3725	0.3981	0.4238	0.4500	0.4776	0.5065
21	DIFFERENCE	0.0	0.0	0.0	-0.0031	-0.0063	-0.0096	-0.0101	-0.0107	-0.0113	-0.0118	-0.0124
22	% DIFFERENCE	0.0	0.0	0.0	-0.97	-1.82	-2.58	-2.58	-2.52	-2.50	-2.48	-2.45
23	GVW 1											
24	EXTEND MPG	0.2627	0.2832	0.3047	0.3274	0.3503	0.3731	0.3990	0.4250	0.4515	0.4794	0.5086
25	CONTROL	0.2627	0.2832	0.3047	0.3308	0.3571	0.3835	0.4100	0.4365	0.4636	0.4922	0.5220
26	DIFFERENCE	0.0	0.0	0.0	-0.0034	-0.0069	-0.0104	-0.0109	-0.0115	-0.0122	-0.0128	-0.0134
27	% DIFFERENCE	0.0	0.0	0.0	-1.03	-1.92	-2.70	-2.67	-2.64	-2.62	-2.60	-2.57
28	GVW 2											
29	EXTEND MPG	0.2463	0.2670	0.2883	0.3101	0.3320	0.3537	0.3781	0.4026	0.4276	0.4540	0.4816
30	CONTROL	0.2463	0.2670	0.2883	0.3129	0.3378	0.3626	0.3875	0.4125	0.4381	0.4650	0.4931
31	DIFFERENCE	0.0	0.0	0.0	-0.0028	-0.0058	-0.0089	-0.0094	-0.0099	-0.0105	-0.0110	-0.0116
32	% DIFFERENCE	0.0	0.0	0.0	-0.90	-1.72	-2.46	-2.43	-2.41	-2.39	-2.37	-2.35

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	OVERALL FLEET MILES PER GALLON												
2	AUTOMOBILES												
3	EXTEND MPG		14.2	14.5	15.1	15.7	16.4	17.1	17.8	18.5	19.2	19.8	20.3
4	CONTROL		14.2	14.5	15.1	15.7	16.4	17.1	17.8	18.5	19.2	19.8	20.3
5	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	PERSONAL TRUCKS												
8	EXTEND MPG		11.2	11.6	12.0	12.5	13.0	13.6	14.1	14.6	15.0	15.4	15.8
9	CONTROL		11.2	11.6	12.0	12.4	12.8	13.1	13.4	13.7	13.9	14.1	14.3
10	DIFFERENCE		0.0	0.0	0.0	0.1	0.2	0.5	0.7	0.9	1.1	1.3	1.5
11	% DIFFERENCE		0.0	0.0	0.0	0.63	1.82	3.47	5.02	6.49	7.87	9.17	10.37
12	COMMERCIAL TRUCKS												
13	EXTEND MPG		11.2	11.3	11.6	11.9	12.2	12.5	12.9	13.2	13.5	13.7	14.0
14	CONTROL		11.2	11.3	11.6	11.8	12.0	12.2	12.4	12.6	12.8	12.9	13.1
15	DIFFERENCE		0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.7	0.8	0.9
16	% DIFFERENCE		0.0	0.0	0.0	0.41	1.18	2.28	3.33	4.34	5.31	6.24	7.12
17													
18	TOTAL FUEL CONSUMPTION	BILL GAL											
19	EXTEND MPG		115,585	117,128	118,170	119,042	119,983	120,858	121,777	122,638	123,684	124,989	126,267
20	CONTROL		115,585	117,128	118,170	119,146	120,242	121,512	122,794	124,033	125,460	127,160	128,821
21	DIFFERENCE		0.0	0.0	0.0	-0.104	-0.319	-0.654	-1.017	-1.398	-1.784	-2.171	-2.555
22	% DIFFERENCE		0.0	0.0	0.0	-0.09	-0.27	-0.54	-0.83	-1.13	-1.42	-1.71	-1.98
23	AUTOMOBILES												
24	EXTEND MPG		83,957	83,668	82,663	81,464	80,313	79,286	78,274	77,331	76,612	76,061	75,517
25	CONTROL		83,957	83,668	82,663	81,464	80,313	79,286	78,274	77,331	76,612	76,061	75,517
26	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	PERSONAL TRUCKS												
29	EXTEND MPG		10,825	11,934	12,996	14,028	15,013	15,903	16,723	17,491	18,246	19,016	19,795
30	CONTROL		10,825	11,934	12,996	14,092	15,212	16,315	17,367	18,378	19,380	20,395	21,418
31	DIFFERENCE		0.0	0.0	0.0	-0.063	-0.199	-0.412	-0.644	-0.887	-1.134	-1.379	-1.623
32	% DIFFERENCE		0.0	0.0	0.0	-0.45	-1.31	-2.52	-3.71	-4.83	-5.85	-6.76	-7.58
33	COMMERCIAL TRUCKS												
34	EXTEND MPG		20,803	21,527	22,511	23,550	24,596	25,669	26,780	27,816	28,826	29,912	30,954
35	CONTROL		20,803	21,527	22,511	23,590	24,717	25,911	27,152	28,326	29,476	30,704	31,886
36	DIFFERENCE		0.0	0.0	0.0	-0.040	-0.120	-0.242	-0.373	-0.510	-0.650	-0.792	-0.932
37	% DIFFERENCE		0.0	0.0	0.0	-0.17	-0.49	-0.93	-1.37	-1.80	-2.21	-2.58	-2.92
38													
39	AVERAGE AGE												
40	PERSONAL VEHICLES												
41	EXTEND MPG		5,628	5,638	5,639	5,616	5,582	5,569	5,596	5,641	5,681	5,720	5,762
42	CONTROL		5,628	5,638	5,639	5,616	5,582	5,570	5,597	5,642	5,683	5,721	5,764
43	DIFFERENCE		0.0	0.0	0.0	-0.000	-0.000	-0.001	-0.001	-0.001	-0.002	-0.002	-0.002
44	% DIFFERENCE		0.0	0.0	0.0	-0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.03
45	AUTOMOBILES												
46	EXTEND MPG		5,743	5,758	5,758	5,727	5,677	5,648	5,658	5,687	5,710	5,728	5,749
47	CONTROL		5,743	5,758	5,758	5,727	5,677	5,648	5,658	5,687	5,710	5,728	5,749
48	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	TRUCKS												
51	EXTEND MPG		4,597	4,672	4,770	4,878	4,993	5,119	5,260	5,401	5,540	5,681	5,821
52	CONTROL		4,597	4,672	4,770	4,879	4,996	5,125	5,268	5,411	5,550	5,692	5,831
53	DIFFERENCE		0.0	0.0	0.0	-0.001	-0.003	-0.006	-0.008	-0.009	-0.010	-0.010	-0.010
54	% DIFFERENCE		0.0	0.0	0.0	-0.02	-0.06	-0.11	-0.15	-0.17	-0.18	-0.18	-0.17

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	COMMERCIAL TRUCKS											
2	EXTEND MPG	6.188	6.211	6.224	6.230	6.242	6.268	6.306	6.354	6.410	6.473	6.544
3	CONTROL	6.188	6.211	6.224	6.230	6.243	6.270	6.309	6.358	6.414	6.477	6.547
4	DIFFERENCE	0.0	0.0	0.0	-0.000	-0.001	-0.002	-0.003	-0.004	-0.004	-0.004	-0.003
5	% DIFFERENCE	0.0	0.0	0.0	-0.01	-0.02	-0.04	-0.05	-0.06	-0.06	-0.06	-0.05
6												
7	MILES PER VEHICLE											
8	PERSONAL VEHICLES											
9	EXTEND MPG	11.410	11.509	11.638	11.781	11.924	12.042	12.156	12.261	12.356	12.444	12.522
10	CONTROL	11.410	11.509	11.638	11.779	11.917	12.027	12.132	12.229	12.315	12.394	12.464
11	DIFFERENCE	0.0	0.0	0.0	0.002	0.008	0.016	0.024	0.032	0.041	0.050	0.059
12	% DIFFERENCE	0.0	0.0	0.0	0.02	0.06	0.13	0.20	0.27	0.33	0.40	0.47
13	AUTOMOBILES											
14	EXTEND MPG	11.506	11.618	11.762	11.921	12.078	12.206	12.331	12.447	12.552	12.648	12.736
15	CONTROL	11.506	11.618	11.762	11.921	12.078	12.206	12.331	12.447	12.552	12.648	12.736
16	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	TRUCKS											
19	EXTEND MPG	10.546	10.628	10.735	10.851	10.978	11.106	11.214	11.312	11.405	11.493	11.576
20	CONTROL	10.546	10.628	10.735	10.832	10.924	11.002	11.064	11.118	11.169	11.219	11.265
21	DIFFERENCE	0.0	0.0	0.0	0.019	0.054	0.104	0.150	0.194	0.236	0.274	0.311
22	% DIFFERENCE	0.0	0.0	0.0	0.17	0.50	0.94	1.36	1.75	2.11	2.45	2.76
23	COMMERCIAL TRUCKS											
24	EXTEND MPG	11.374	11.258	11.306	11.402	11.545	11.752	11.990	12.216	12.444	12.719	12.999
25	CONTROL	11.374	11.258	11.306	11.376	11.470	11.604	11.769	11.921	12.076	12.277	12.482
26	DIFFERENCE	0.0	0.0	0.0	0.026	0.076	0.148	0.222	0.295	0.368	0.442	0.516
27	% DIFFERENCE	0.0	0.0	0.0	0.23	0.66	1.28	1.88	2.47	3.05	3.60	4.14
28												
29	NEW REGISTRATIONS TO BEGINNING STOCK											
30	PERSONAL VEHICLES											
31	EXTEND MPG	0.110	0.109	0.112	0.114	0.116	0.113	0.109	0.109	0.109	0.107	0.106
32	CONTROL	0.110	0.109	0.112	0.114	0.116	0.112	0.109	0.109	0.109	0.107	0.106
33	DIFFERENCE	0.0	0.0	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	% DIFFERENCE	0.0	0.0	0.0	0.05	0.08	0.12	0.14	0.16	0.19	0.21	0.23
35	AUTOMOBILES											
36	EXTEND MPG	0.103	0.102	0.105	0.108	0.111	0.107	0.103	0.103	0.104	0.102	0.101
37	CONTROL	0.103	0.102	0.105	0.108	0.111	0.107	0.103	0.103	0.104	0.102	0.101
38	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	TRUCKS											
41	EXTEND MPG	0.176	0.165	0.160	0.155	0.151	0.145	0.139	0.139	0.136	0.134	0.132
42	CONTROL	0.176	0.165	0.160	0.155	0.150	0.144	0.138	0.138	0.135	0.132	0.130
43	DIFFERENCE	0.0	0.0	0.0	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002
44	% DIFFERENCE	0.0	0.0	0.0	0.27	0.46	0.63	0.73	0.86	1.01	1.10	1.17
45	COMMERCIAL TRUCKS											
46	EXTEND MPG	0.115	0.116	0.119	0.119	0.117	0.115	0.113	0.112	0.111	0.110	0.109
47	CONTROL	0.115	0.116	0.119	0.119	0.117	0.115	0.113	0.112	0.111	0.110	0.109
48	DIFFERENCE	0.0	0.0	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	% DIFFERENCE	0.0	0.0	0.0	0.10	0.17	0.22	0.18	0.17	0.19	0.20	0.20
50												
51	SCRAPPAGE TO BEGINNING STOCK											

TABLE 30.00 MISCELLANEOUS ENDOGENOUS VARIABLES

LINE	ITEM	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1	PERSONAL VEHICLES											
2	EXTEND MPG	0.085	0.086	0.086	0.089	0.088	0.084	0.082	0.084	0.085	0.086	0.087
3	CONTROL	0.085	0.086	0.086	0.089	0.088	0.084	0.081	0.083	0.085	0.085	0.087
4	DIFFERENCE	0.0	0.0	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	% DIFFERENCE	0.0	0.0	0.0	0.04	0.17	0.38	0.53	0.58	0.55	0.52	0.49
6	AUTOMOBILES											
7	EXTEND MPG	0.089	0.091	0.092	0.094	0.093	0.089	0.085	0.086	0.088	0.089	0.090
8	CONTROL	0.089	0.091	0.092	0.094	0.093	0.089	0.085	0.086	0.088	0.089	0.090
9	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	TRUCKS											
12	EXTEND MPG	0.040	0.043	0.045	0.049	0.054	0.058	0.063	0.070	0.071	0.072	0.074
13	CONTROL	0.040	0.043	0.045	0.048	0.052	0.056	0.060	0.067	0.068	0.070	0.071
14	DIFFERENCE	0.0	0.0	0.0	0.000	0.001	0.002	0.003	0.003	0.003	0.002	0.002
15	% DIFFERENCE	0.0	0.0	0.0	0.60	2.15	3.88	4.66	4.39	3.98	3.54	3.13
16	COMMERCIAL TRUCKS											
17	EXTEND MPG	0.053	0.054	0.055	0.058	0.061	0.063	0.066	0.070	0.073	0.075	0.079
18	CONTROL	0.053	0.054	0.055	0.058	0.061	0.063	0.066	0.069	0.072	0.075	0.078
19	DIFFERENCE	0.0	0.0	0.0	-0.000	-0.000	0.000	0.001	0.001	0.001	0.001	0.001
20	% DIFFERENCE	0.0	0.0	0.0	-0.16	-0.02	0.36	0.81	0.99	0.92	0.88	0.84
21												
22	ACTIVITIES AS SHARE OF INCOME %											
23	EXTEND MPG	27.9	28.0	28.0	28.1	28.3	28.5	28.6	28.8	29.1	29.3	29.5
24	CONTROL	27.9	28.0	28.0	28.1	28.3	28.5	28.6	28.8	29.1	29.3	29.5
25	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27												
28	FARM PROPRIETOR'S INCOME BILL $											
29	EXTEND MPG	28.081	30.081	32.081	34.081	36.081	38.081	40.081	42.081	44.532	47.265	50.151
30	CONTROL	28.081	30.081	32.081	34.081	36.081	38.081	40.081	42.081	44.532	47.265	50.151
31	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	EMPLOYEE COMPENSATION											
34	AGRICULTURE											
35	EXTEND MPG	15.583	17.223	18.931	20.797	22.569	24.225	25.749	27.415	29.202	30.888	32.634
36	CONTROL	15.583	17.223	18.931	20.797	22.569	24.225	25.749	27.415	29.202	30.888	32.634
37	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	CONTRACT CONSTRUCTION											
40	EXTEND MPG	74.001	80.756	88.811	97.070	105.456	113.895	122.077	131.352	142.042	151.373	161.054
41	CONTROL	74.001	80.756	88.811	97.070	105.456	113.895	122.077	131.352	142.042	151.373	161.054
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	SERVICES											
45	EXTEND MPG	227.209	253.393	283.896	318.412	355.562	394.044	433.549	476.854	525.792	575.751	629.798
46	CONTROL	227.209	253.393	283.896	318.412	355.562	394.044	433.549	476.854	525.792	575.751	629.798
47	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	WHOLESALE AND RETAIL TRADE											
50	EXTEND MPG	240.921	264.515	290.891	319.996	350.551	381.187	411.800	444.411	480.553	516.776	555.324
51	CONTROL	240.921	264.515	290.891	319.996	350.551	381.187	411.800	444.411	480.553	516.776	555.324
52	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

APPENDIX D

REPORT OF NEW TECHNOLOGY APPENDIX

Contract DOT-TSC-1435

The Wharton EFA, Inc. Motor Vehicle Demand Model

The work performed under this contract has not led to any new inventions. The resulting econometric model is, however, both innovative and state-of-the-art. It provides long-run policy analysis and forecasting of annual trends in the U.S. motor vehicle market, given various policy options and alternative socio-economic futures.

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