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**The Michigan Economic Outlook for 1986-87
August 1986 Forecast Update**

Introduction

Wage and salary employment in Michigan remained at about the same level between the first and second quarters of 1986, coming off of a 4.1 percent (annual rate) increase in jobs in the first quarter. Although there have been some signs of a slowdown in the state economy over the past year, following two years of very robust growth, the second quarter of 1986 is the first time in fourteen quarters that employment in the state has not increased from the previous quarter.

This recent weakness in total jobs activity is a consequence of a declining manufacturing sector, combined with some slowing in the nonmanufacturing sector from its torrid pace of the past few years. There has been a loss of 16,200 manufacturing jobs during the first half of 1986, amounting to a 3.2 percent (annual rate) decline, following a slight increase during the previous year (December to December). Much of this job loss occurred in the auto sector, where employment has declined by 9,200 workers in the first half of 1986, compared to a loss of 2,300 jobs over the entire year of 1985. This was in response, to a large extent, to a 9 percent decline in U.S. vehicle production in the first half of 1986 (fourth quarter to second quarter), which occurred on the heels of a 1.5 percent production decline during 1985.

The private nonmanufacturing sector has continued to be the primary source of employment growth in the first half of 1986, increasing at an annual rate of 3 percent. This growth, however, is down substantially from the 4.9 percent rate registered for the previous year. Moreover, in the

second quarter employment grew only at an annual rate of 1.3 percent, which translated into an increase of 6,400 jobs, including 5,100 construction jobs. After remaining essentially unchanged for six months, government employment picked up in the second quarter of 1986, contributing an additional 3,400 jobs, almost all of which were in the local sector.

While wage and salary employment has remained essentially unchanged between the first and second quarters of 1986, total employment, as measured by the household survey data, has declined by over 50,000 workers and the unemployment rate has risen by 7/10 of a percentage point to a level of 9.5 percent for the second quarter. We continue to regard the patterns in the establishment survey data as providing the more reliable indicator of the state's economic well being.

We are forecasting some leveling off of manufacturing employment for the current quarter, as a higher level of U.S. auto production promotes a modest increase in auto employment. Private non-manufacturing employment is projected to increase by 9,300 jobs in the current quarter, some improvement over the relatively anemic performance in the previous quarter. Local government employment is expected to contribute an additional 4,400 jobs. This results in a projected increase of approximately 13,000 jobs in the third quarter, compared to virtually no movement in the previous quarter.

Inputs to the Forecast

Our national outlook (August 15, 1986) provides the backdrop for our Michigan forecast. The national economy will continue to grow sluggishly for the rest of 1986 with the rate of growth of real GNP averaging just about one percent. Economic activity is forecast to pick up during 1987 with output growth averaging about 4 percent. This is followed during 1988 with a pace of economic growth averaging about 3 percent.

The components of this forecast which are key inputs to our state outlook include the following:

- After totalling 10.8 million units for the 1986 model year, car sales are forecast to weaken slightly to a 10 1/2 million unit pace at the beginning of the '87 model year. Auto sales will recover to a 10 3/4 million unit pace by the second half of calendar year 1987 and remain

at that level for 1988, yielding model-year sales of 10.5 million cars for 1987 and 10.7 million cars for 1988.

- With continued slow growth during the rest of 1986 the civilian unemployment rate is forecast to rise from the 6.9 percent posted for July to 7.3 percent early in 1987. Subsequent improvement in economic growth will bring the unemployment rate back to about 7 percent by the end of 1987 and it will remain at or slightly below 7 percent through 1988.
- We have assumed that oil prices will firm up at about \$13 per barrel in the fourth quarter of 1986 and will rise thereafter by 3 percent per year. We have also assumed that foreign firms will discontinue the practice of cutting their prices (measured in their own currencies) as the value of the dollar falls. This practice resulted in little change in dollar-denominated import prices even while the trade value of the dollar depreciated by more than 25 percent from early '85 to the spring of '86. With more stable oil prices and the onset of increases in import prices we are forecasting some acceleration in inflation over the next two years. Consumer prices, as measured by the U.S. CPI, are forecast to increase at an annualized rate of 3.6 percent during the second half of 1986 followed by increases of 3.8 percent and 4.6 percent for 1987 and 1988, respectively.
- As fiscal '87 draws near it has become apparent that the federal budget deficit for that year will exceed its target contained in the Gramm-Rudman-Hollings Deficit Reduction Act. We have assumed that \$40 billion in government expenditures will be sequestered this fall, contributing to the slow growth for the second half of this year.
- It seems very likely that a tax reform bill will be enacted before the beginning of next year. We have incorporated in our forecast a tax reform package — similar to the one approved by the Conference Committee — which is essentially revenue neutral but which reduces personal taxes and raises corporate taxes. The result is that it has little impact on the level of output but it skews economic activity toward consumption and away from capital formation.
- The reduction in the discount rate to 5.5 percent last week yields short term interest rates which are about 40 basis points lower by the end of the year. Short term interest rates are forecast to remain low over the next two years and long term rates will continue to decline.

The Forecast of the State Economy

As measured by the progress of wage and salary employment, the Michigan economy is forecast to be on a positive growth path from the second half of '86 through the end of 1988. This would constitute six full years of recovery, with wage and salary employment exceeding its historical peak by mid-1988. As would be expected at this stage of the recovery, the growth in jobs is projected to continue to decelerate from prior years (5.0 percent in 1983, 4.3 percent in 1984, and 3.1 percent in 1985, measured fourth quarter to fourth quarter). For 1986 and 1987 we are forecasting growth in wage and salary employment in the area of 1.5 percent, with a further decline to 1.1 percent in 1988.

Approximately 50,000 jobs are expected to be added in each of 1986 and 1987, somewhat less in total than the number of jobs created in 1985 alone, but slightly above the 40,000 jobs predicted for 1988.

The emerging pattern of employment by major sector is expected to continue in the forecast period — modest up-and-down movements in manufacturing employment, steady but slower growth in private nonmanufacturing employment, and more moderate growth in government employment. Employment in the motor vehicle sector is expected to remain fairly stable over the forecast horizon, with a decline of 7,200 jobs over the next two and a half years from its peak level in the current quarter. This pattern corresponds to a projected increase in auto production in the current quarter, followed by a decline in the following two quarters and small changes thereafter. The non-auto manufacturing sector is projected to lose 4,000 additional jobs over this same period, but with more variation than auto employment over the period. This recognizes the larger movements in non-auto production anticipated over the forecast horizon.

As was the case in 1985, the private nonmanufacturing sector is forecast to be the major growth area for the state economy over the next three years. The total increase in jobs of 145 thousand projected from 1985 to 1988 is comprised of 138 thousand jobs in private nonmanufacturing industries, combined with an early offsetting gain of 27,000 government jobs and a loss of 20,000 manufacturing jobs. The rate of job growth in nonmanufacturing will be slowed considerably, however, from recent experience, with a 2.3 percent increase on average from 1985 to 1988, compared to 4.9 percent in 1985. Approximately 80 percent of the additional jobs in the nonmanufacturing sector is projected to be in the largest industries, services and trade. Services in particular are projected to grow at an annual rate of about 3.5 percent over 1987 and 1988, within a much weaker economy overall.

Government employment is forecast to increase by 10,200 jobs during 1986, 8,300 jobs during 1987, and 8,000 jobs during 1988. These increases are well below the 16,800 job gain posted for 1985, but continue an upward momentum that only started last year. Seven out of every ten of these public sector job gains over the forecast horizon emanate from the local government component.

This very uneven growth across sectors implies that changes in the overall employment mix of the state economy will continue the pattern of current history, with losses in the manufacturing share of total wage and salary employment translating into gains for the private nonmanufacturing sector. In the second quarter of 1979, the manufacturing sector comprised 33 percent of all jobs, whereas private nonmanufacturing accounted for 51 percent of the total. In the second quarter of 1988, with virtually identical employment totals, the corresponding percentages are forecast to be 27 and 57 percent, respectively.

The state unemployment rate is projected to vary over the forecast horizon in a narrow range from 9.2 to 9.8 percent. The rate is expected to move upward from 9.2 percent in the current quarter to approximately 9.6 percent over the next three quarters. The rate is then projected to decline again to the 9.2 percent level, followed by another rise in the second half of 1988. This pattern mirrors the movements in wage and salary employment growth, with smaller increases in employment corresponding to the upward swings in the unemployment rate. Monthly variations in the rate can be expected, of course, to be more pronounced.

Personal income, which we estimate grew by 7 percent for calendar 1985, is forecast to increase by 4.1 percent, 3.7 percent, and 5.1 percent in each of the next three years. This slower growth in the forecast period stems from smaller increases in wage and salary income, due to the reduced growth in employment and the rising share of lower-wage nonmanufacturing jobs. There is some rebound in income growth predicted for calendar 1988, a consequence of some improvement in employment growth between calendar 1987 and 1988, with some contribution from the manufacturing sector.

The path of local inflation, as measured by the Detroit CPI, is forecast to track closely the projected path of the U.S. CPI, running slightly below the U.S. projections. The acceleration in prices over the three calendar years of the forecast (1.7 percent, 3.1 percent, and 4.2 percent), combined with a more nearly constant annual growth in disposable income over the same period, results in smaller increases in consumer purchasing power from one year to the next. The level of real dis-

possible income is projected to exceed its historical peak (the fourth quarter of 1978) by the first quarter of 1987.

The State Revenue Outlook

The federal government's tax reform program provides a potential windfall for any state — including Michigan — which bases its income tax on federal adjusted gross income (AGI), since the tax reform legislation broadens the definition of AGI. The state can eliminate this revenue windfall either by reducing the state personal income tax rate or by redefining the state income tax base to be something other than the federal AGI. For this forecast we have assumed that the state will continue to define its tax base as under current (pre-tax reform) federal law and will, therefore, keep its tax rate at 4.6 percent.

Our projection of general-fund-general-purpose income tax revenue for fiscal '85 reflects the reduction in the state income tax to 4.6 percent effective April 1 of this year. Our figure does not include the revenue collected by the state as a result of the tax amnesty program. We are forecasting a 3.2 percent increase in GFGP income tax revenues for fiscal '86 followed by a drop of 5.7 percent for fiscal '87. The decline in revenue for fiscal '87 reflects a full year at the lower effective tax rate, which more than offsets the increase in the tax base due to economic growth. More rapid growth for fiscal '88 and a stable tax rate produce an 8 percent increase in income tax revenues for that year.

Consumption tax revenues are forecast to increase by 14.5 percent this fiscal year. The surge results from the addition to GFGP revenue of part of the cigarette tax which had formerly been designated for the Working Capital Reserve Account. More normal increases in consumption tax revenues of 5.2 percent and 3.9 percent are forecast for fiscal '87 and '88, respectively.

We are forecasting an increase in business tax revenues of 6.2 percent for the current fiscal year, followed by increases of 5.1 percent for fiscal '87 and 8.1 percent for fiscal '88. The sharp decline in oil prices produced a substantial drop in oil and gas severance tax revenues beginning early in calendar 1986. We are forecasting that revenues will stabilize at about this new lower level throughout

TABLE 1

**RSQE Forecast - General Fund General Purpose State
Tax Revenues for Fiscal Year
(accrual basis, millions of dollars except as noted)**

	Estimate	RSQE Forecast		
	1985	1986	1987	1988
Income Tax	2819	2910	2745	2965
(% Change)	(-1.8)	(3.2)	(-5.7)	(8.0)
Consumption Taxes	1012	1159	1220	1267
(% Change)	(7.7)	(14.5)	(5.2)	(3.9)
Sales	493	519	540	565
Use	347	372	385	405
Cigarette, Liquor Specific & Beer and Wine	172	268	294	298
Business Taxes	1378	1464	1539	1664
(% Change)	(6.4)	(6.2)	(5.1)	(8.1)
Single Business	1177	1271	1350	1462
Other Business	201	194	188	202
Property Taxes	228	245	232	230
(% Change)	(6.5)	(7.7)	(-5.2)	(-1.2)
Other GFGP Tax Revenue	45	41	39	40
Total GFGP Tax Revenue	5482	5820	5775	6165
(% Change)	(2.1)	(6.2)	(-0.8)	(6.8)
Addenda				
Personal Income Adjusted (billions of \$'s)	108.13	113.17	116.73	122.60
Wages and Salaries (billions of \$'s)	74.45	78.43	81.29	85.88
Wage and Salary Employment (thousands)	3478	3567	3605	3662

1987, yielding a further revenue decline for fiscal '87. Rising energy prices in fiscal '88 will generate an increase in tax revenues for that year. Single business tax revenues (shown on an accrual basis in Table 1) are forecast to increase for both fiscal '87 and '88, but the somewhat weaker position of the motor vehicle sector in fiscal '87 will retard SBT growth in that year.

Total GFGP tax revenues are forecast to decline slightly (0.8 percent) for fiscal '87 following a 6.2 percent increase for fiscal '86. The drop in revenue results from the lower level of income tax revenue and a decline in state property revenues. GFGP tax revenues are forecast to increase by 6.8 percent for fiscal '88.

Payments are to be made into the Budget Stabilization Fund whenever real personal income less transfer payments increases by more than 2 percent for a given year. Our calculations based on our control forecast indicate that economic growth is not sufficient to require any payment into the BSF in either fiscal '87 or fiscal '88.

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RSQE FORECAST FOR 1986-87
STATE OF MICHIGAN
August 27, 1986

I N D E X O F T A B L E S

TABLE 1 : MICHIGAN PERSONAL INCOME IN CURRENT DOLLARS

TABLE 2 : EMPLOYMENT IN MICHIGAN

TABLE 3 : MICHIGAN STATE GFQP TAX REVENUES

TABLE 4 : SELECTED MICHIGAN STATE TAX REVENUES

COMPLETE MODEL OUTPUT

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EXOGENOUS VARIABLES

ENDOGENOUS VARIABLES

GROWTH RATES OF ENDOGENOUS VARIABLES

FORECAST BASED ON
THE ECONOMETRIC MODEL OF THE STATE OF MICHIGAN

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Table 1: R.S.Q.E. Forecast
Michigan Personal Income
(Millions of Current Dollars,
Seasonally Adjusted at Quarterly Rates)

	1986:2 Actual	1986:3	1986:4	1987:1	1987:2	1987:3	1987:4	1988:1	1988:2
Personal Income	31774.30	31999.70	32234.30	32546.30	32831.80	33178.10	33714.50	34187.90	34570.80
Wage and Salary	19705.00	19883.10	20005.90	20198.80	20418.00	20667.40	21042.60	21354.30	21621.60
Manufacturing	7797.10	7801.63	7773.01	7780.95	7832.47	7913.01	8101.39	8190.31	8264.65
NonManufacturing	8864.30	8992.49	9108.50	9233.29	9367.49	9501.18	9646.23	9800.73	9953.76
Government	2933.60	2977.42	3011.18	3069.72	3101.64	3135.24	3175.38	3242.06	3280.43
Other	110.00	111.60	113.20	114.80	116.40	118.00	119.60	121.20	122.80
Other Labor Income	2463.10	2500.71	2534.74	2577.71	2625.40	2678.29	2746.42	2810.48	2872.21
Property and Proprietor Inc	6077.50	6072.49	6065.02	6050.75	6048.18	6062.15	6090.62	6117.65	6143.33
Transfer Payment	4724.90	4750.26	4842.43	4957.53	4992.32	5037.84	5122.54	5272.98	5316.83
Residence Adjust.	192.50	194.50	196.50	198.50	200.50	202.50	204.50	206.50	208.50
LESS:									
Social Ins Contrib	1388.70	1401.44	1410.24	1436.90	1452.60	1470.12	1492.15	1573.98	1591.72
Federal Pers Taxes	3170.71	3195.64	3210.03	3028.05	3073.93	3126.78	3195.13	3279.69	3334.29
Mich Withholding	853.22	861.53	867.25	876.25	886.49	898.14	915.69	930.26	942.75
Disp Personal Income	27750.40	27942.50	28157.10	28642.00	28871.40	29153.20	29603.70	29978.00	30293.70

ADDENDA:

Consumer Price Index Detroit 1967=100	320.46	322.21	325.99	328.71	331.44	334.47	337.76	341.30	344.97
Real Disp Income Millions of 1967 \$	8659.54	8672.16	8637.32	8713.37	8710.98	8716.10	8764.68	8783.34	8781.54

	1988:3 -----	1988:4 -----	1986 Average	1987 Average	1988 Average	85-86 %Change	86-87 %Change	87-88 %Change
Personal Income	34954.60	35357.00	127566.00	132271.00	139070.00	4.10	3.69	5.14
Wage and Salary	21865.80	22079.80	79196.20	82326.70	86921.60	4.68	3.95	5.58
Manufacturing	8316.27	8339.18	31251.60	31627.80	33110.40	1.20	1.20	4.69
NonManufacturing	10105.00	10253.80	35691.60	37748.20	40113.30	7.76	5.76	6.27
Government	3320.16	3360.88	11809.80	12482.00	13203.50	5.13	5.69	5.78
Other	124.40	126.00	443.15	468.80	494.40	6.21	5.79	5.46
Other Labor Income	2933.69	2994.02	9942.65	10627.80	11610.40	5.68	6.89	9.25
Property and Proprietor Inc	6169.95	6198.76	24214.80	24251.70	24629.70	1.52	0.15	1.56
Transfer Payment	5382.81	5494.79	19026.10	20110.20	21467.40	4.77	5.70	6.75
Residence Adjust.	210.50	212.50	774.00	806.00	838.00	4.56	4.13	3.97
LESS:								
Social Ins Contrib	1608.13	1622.93	5587.68	5851.77	6396.76	5.86	4.73	9.31
Federal Pers Taxes	3386.63	3434.19	12758.10	12423.90	13434.80	0.91	-2.62	8.14
Mich Withholding	954.16	964.15	3537.64	3576.58	3791.32	-6.00	1.10	6.00
Disp Personal Income	30613.90	30958.60	111270.00	116270.00	121844.00	4.84	4.49	4.79

ADDENDA:

Consumer Price Index Detroit 1967=100	348.81	352.82	323.10	333.10	346.98	1.70	3.09	4.17
Real Disp Income Millions of 1967 \$	8776.65	8774.50	34438.90	34905.10	35116.00	3.09	1.35	0.60

8/27/86 : RSQE Forecast

Table 2: R.S.Q.E. Forecast
Employment in Michigan
(Thousands of Persons, Seasonally Adjusted)

	1986:2 Actual	1986:3	1986:4	1987:1	1987:2	1987:3	1987:4	1988:1	1988:2
Total Employment	3931.00	3950.36	3939.58	3948.62	3969.02	3995.49	4017.37	4036.46	4049.67
Wage and Salary	3572.88	3585.77	3589.07	3597.05	3610.13	3625.29	3641.92	3657.33	3669.54
Manufacturing	978.31	977.32	971.63	968.76	969.40	972.63	976.32	977.40	976.32
Motor Vehicle	327.80	330.71	330.65	329.62	329.28	329.59	329.95	329.27	328.28
Other Durable	433.56	429.99	424.83	423.23	424.22	426.97	429.98	431.53	431.41
Nondurable	216.95	216.62	216.14	215.91	215.90	216.07	216.39	216.60	216.63
Private Nonmfg	2005.49	2014.75	2021.45	2030.08	2040.52	2050.50	2061.34	2073.54	2084.75
Construction	112.87	114.84	115.24	114.58	113.51	112.25	111.40	110.94	110.69
Trans. Com + Ut	144.65	144.68	145.02	145.55	146.39	147.53	148.92	150.08	151.15
Whl + Ret Trade	799.06	802.21	804.83	808.69	811.93	814.52	816.51	819.34	821.69
Fin, Ins + R.E.	167.34	170.17	171.75	172.91	173.98	175.07	176.20	177.37	178.57
Services	770.64	771.94	773.76	777.55	783.94	790.39	797.58	805.10	811.98
Mining	10.93	10.91	10.85	10.80	10.76	10.74	10.72	10.70	10.66
Government	589.07	593.70	596.00	598.21	600.21	602.15	604.26	606.39	608.48
Federal	59.84	60.10	60.40	60.70	61.00	61.30	61.60	61.90	62.20
State	146.58	146.58	146.88	147.20	147.45	147.73	148.03	148.35	148.75
Local	382.65	387.01	388.72	390.32	391.76	393.12	394.63	396.15	397.52
Non Wage and Salary	358.12	364.59	350.50	351.57	358.88	370.21	375.45	379.13	380.13
Labor Force	4341.33	4349.16	4358.63	4371.37	4388.18	4408.35	4426.64	4447.32	4467.00
Unemployment	410.33	398.80	419.05	422.75	419.16	412.86	409.28	410.86	417.34
Unemployment Rate (%)	9.45	9.17	9.61	9.67	9.55	9.37	9.25	9.24	9.34

ADDENDA: U.S. DATA
(Billions of 1982 \$,
except where noted)

Gross Nat'l Product	3665.70	3674.84	3682.15	3718.52	3755.01	3794.87	3833.25	3866.47	3893.98
Business Fixed Invest	454.80	449.42	445.26	444.58	447.40	452.89	459.66	467.51	474.87
Gross Auto Product	98.40	101.14	96.68	93.02	93.00	94.28	95.62	96.09	97.00
Personal Cons Expend	79.70	76.62	73.15	72.62	73.97	75.07	75.48	75.19	75.76
New Autos	11.20	10.87	10.46	10.41	10.59	10.72	10.73	10.66	10.70
Unit Car Sales (mil)									
Unemployment Rate (%)	7.18	7.02	7.23	7.30	7.26	7.14	7.02	6.92	6.88
Personal Consumption									
Deflator 1982=100	113.42	113.88	115.12	116.13	117.19	118.33	119.52	120.78	122.09
Consumer Price Index									
1967=100	326.50	328.39	332.34	335.25	338.16	341.38	344.86	348.59	352.46

	1988:3	1988:4	1986	1987	1988	85-86	86-87	87-88
	-----	-----	Average	Average	Average	%Change	%Change	%Change
Total Employment	4058.48	4063.23	3950.82	3982.62	4051.96	0.78	0.81	1.74
Wage and Salary	3678.06	3682.42	3580.32	3618.59	3671.84	2.14	1.07	1.47
Manufacturing	972.65	966.05	978.99	971.78	973.10	-0.54	-0.74	0.14
Motor Vehicle	326.49	323.47	330.39	329.61	326.88	-0.96	-0.24	-0.83
Other Durable	429.74	426.66	431.67	426.10	429.84	-1.19	-1.29	0.88
Nondurable	216.42	215.92	216.94	216.07	216.39	1.42	-0.40	0.15
Private Nonmfg	2094.95	2104.08	2010.21	2045.61	2089.33	3.57	1.76	2.14
Construction	110.58	110.51	112.70	112.94	110.68	14.50	0.21	-2.00
Trans, Com + Ut	152.17	153.15	145.18	147.10	151.64	2.11	1.32	3.09
Whl + Ret Trade	823.34	823.96	801.24	812.91	822.09	2.30	1.46	1.13
Fin, Ins + R.E.	179.76	180.92	168.66	174.54	179.15	4.54	3.49	2.64
Services	818.49	824.99	771.53	787.37	815.14	3.51	2.05	3.53
Mining	10.61	10.54	10.90	10.75	10.63	5.54	-1.35	-1.17
Government	610.46	612.29	591.12	601.21	609.40	1.90	1.71	1.36
Federal	62.50	62.80	59.97	61.15	62.35	4.03	1.97	1.96
State	149.20	149.64	146.67	147.60	148.98	2.52	0.64	0.94
Local	398.75	399.85	384.49	392.46	398.07	1.35	2.07	1.43
Non Wage and Salary	380.42	380.81	370.49	364.03	380.12	-10.70	-1.74	4.42
Labor Force	4485.63	4502.90	4353.20	4398.63	4475.71	0.02	1.04	1.75
Unemployment	427.16	439.67	402.38	416.01	423.76	-6.96	3.39	1.86
Unemployment Rate (%)	9.52	9.76	9.24	9.46	9.47	NA	NA	NA

ADDENDA: U.S. DATA
(Billions of 1982 \$,
except where noted)

Gross Nat'l Product	3918.45	3939.76	3669.65	3775.41	3904.66	2.36	2.88	3.42
Business Fixed Invest	481.18	486.42	451.82	451.13	477.49	-2.08	-0.15	5.84
Gross Auto Product	97.18	96.33	99.86	93.98	96.65	-4.51	-5.88	2.84
Personal Cons Expend								
New Autos	75.77	75.57	76.67	74.28	75.57	-4.25	-3.11	1.74
Unit Car Sales (mil)	10.66	10.60	10.80	10.61	10.65	-2.13	-1.76	0.38
Unemployment Rate (%)	6.88	6.91	7.12	7.18	6.90	NA	NA	NA
Personal Consumption								
Deflator 1982=100	123.45	124.86	114.03	117.79	122.79	1.94	3.30	4.25
Consumer Price Index								
1967=100	356.54	360.82	328.63	339.91	354.60	2.00	3.43	4.32

8/27/86 : RSQE Forecast

Table 3: R.S.Q.E. Forecast
Michigan State GFGP Tax Revenues by Fiscal Years
(Millions of Current Dollars, Not Seasonally Adjusted)

	1986:2 Actual	1986:3	1986:4	1987:1	1987:2	1987:3	1987:4	1988:1	1988:2
NET PERS INCOME TAX	636.20	882.80	864.04	463.94	791.38	899.01	910.06	533.47	854.25
LESS: Local Dist	95.20	45.39	62.70	63.38	66.23	78.04	65.22	66.82	70.00
Camp Fund	0.00	1.80	0.00	0.00	0.00	1.80	0.00	0.00	0.00
Acc Fisc Rsp	2.50	2.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00
GFGP INCOME TAX	538.50	833.61	799.64	400.56	725.15	819.18	844.84	466.65	784.25
CONSUMPTION TAXES									
Sales	133.23	131.97	141.04	124.37	138.10	136.98	147.12	129.99	144.25
Cigarette Excise	54.00	57.12	56.42	50.82	56.41	58.63	57.37	51.45	56.92
Beer and Wine	14.90	14.40	11.43	10.77	13.94	14.65	11.66	10.97	14.20
Liquor Specific	5.00	5.43	6.06	4.51	4.77	5.53	6.20	4.60	4.88
Use	98.30	98.90	94.91	89.94	98.28	101.95	99.40	94.51	103.39
GFGP CONSUM TAXES	305.42	307.83	309.86	280.41	311.51	317.75	321.77	291.52	323.65
BUSINESS TAXES									
Single Business	366.70	330.68	300.64	295.77	389.41	347.81	323.87	318.54	422.12
Insur Co Premium	0.00	130.00	0.00	0.00	0.00	136.00	0.00	0.00	0.00
Horse Race Wagering	0.00	4.49	0.00	0.00	0.00	1.42	0.00	0.00	0.00
Oil + Gas Severance	11.60	11.86	12.37	12.34	12.87	13.54	13.72	13.94	14.77
GFGP BUSINESS TAXES	378.30	477.02	313.00	308.12	402.28	498.77	337.58	332.48	436.90
PROPERTY TAXES									
Inheritance	19.80	14.65	14.24	14.55	16.10	12.58	12.39	12.93	14.56
Utility Property	0.00	58.90	57.57	0.00	0.00	61.71	60.48	0.00	0.00
Intangibles	58.60	0.00	0.00	0.00	55.72	0.00	0.00	0.00	53.11
GFGP PROPERTY TAXES	78.40	73.56	71.81	14.55	71.82	74.29	72.88	12.93	67.67
OTHER GFGP TAXES	0.00	40.90	0.00	0.00	0.00	39.00	0.00	0.00	0.00
TOTAL GFGP TAXES	1300.62	1732.92	1494.32	1003.64	1510.76	1748.98	1577.07	1103.58	1612.46
ADDENDA									
Pers Income Adjust	28438.10	28650.80	28802.20	29025.70	29292.10	29610.40	30084.10	30488.90	30845.70
Total Employment	3931.00	3950.36	3939.58	3948.62	3969.02	3995.49	4017.37	4036.46	4049.67
Wage + Sal Income	19705.00	19883.10	20005.90	20198.80	20418.00	20667.40	21042.60	21354.30	21621.60

	1988:3 -----	1988:4 -----	Fiscal 1986	Fiscal 1987	Fiscal 1988	85-86 %Change	86-87 %Change	87-88 %Change
NET PERS INCOME TAX	952.86	956.93	3215.40	3018.37	3250.65	-0.83	-6.13	7.70
LESS: Local Dist	82.23	69.01	257.89	270.34	284.27	7.27	4.83	5.15
Camp Fund	1.80	0.00	1.80	1.80	1.80	0.00	0.00	0.00
Acc Fisc Rsp	0.00	0.00	45.40	1.70	0.00	-74.86	-96.26	NA
GFGP INCOME TAX	868.83	887.92	2910.31	2744.53	2964.58	3.22	-5.70	8.02
CONSUMPTION TAXES								
Sales	143.24	153.20	518.92	540.50	564.61	5.25	4.16	4.46
Cigarette Excise	59.04	57.67	197.12	222.29	224.79	89.73	12.77	1.12
Beer and Wine	14.94	11.88	50.10	50.79	51.77	0.60	1.38	1.93
Liquor Specific	5.64	6.35	20.83	20.87	21.33	11.39	0.18	2.22
Use	107.33	104.47	372.40	385.08	404.63	7.38	3.40	5.08
GFGP CONSUM TAXES	330.20	333.56	1159.38	1219.53	1267.13	14.54	5.19	3.90
BUSINESS TAXES								
Single Business	374.98	355.34	1236.87	1333.64	1439.52	4.83	7.82	7.94
Insur Co Premium	142.00	0.00	130.00	136.00	142.00	11.11	4.62	4.41
Horse Race Wagering	1.41	0.00	4.49	1.42	1.41	-48.41	-68.39	-0.61
Oil + Gas Severance	15.81	16.33	59.26	51.12	58.24	-21.72	-13.74	13.93
GFGP BUSINESS TAXES	534.21	371.67	1430.62	1522.17	1641.17	3.57	6.40	7.82
PROPERTY TAXES								
Inheritance	11.69	11.66	72.75	57.47	51.58	13.85	-21.01	-10.25
Utility Property	64.60	63.44	113.90	119.28	125.08	0.71	4.72	4.87
Intangibles	0.00	0.00	58.60	55.72	53.11	15.35	-4.91	-4.69
GFGP PROPERTY TAXES	76.29	75.10	245.26	232.47	229.77	7.66	-5.21	-1.16
OTHER GFGP TAXES	40.00	0.00	40.90	39.00	40.00	-8.71	-4.65	2.56
TOTAL GFGP TAXES	1849.53	1668.25	5786.46	5757.70	6142.64	5.49	-0.50	6.69
ADDENDA								
Pers Income Adjust	31180.00	31485.10	113167.00	116730.00	123599.00	4.66	3.15	5.03
Total Employment	4058.48	4063.23	3965.17	3963.17	4040.49	1.76	-0.05	1.95
Wage + Sal Income	21865.80	22079.80	78425.70	81290.10	85884.30	5.35	3.65	5.65

8/27/86 : RSQE Forecast

Table 4: R S Q E Forecast
Selected Michigan State Tax Revenues by Fiscal Years
(Millions of Current Dollars, Not Seasonally Adjusted)

	1986:2 Actual	1986:3	1986:4	1987:1	1987:2	1987:3	1987:4	1988:1	1988:2
NET PERS INCOME TAX	636.20	882.80	864.04	463.94	791.38	899.01	910.06	533.47	854.25
Withheld	854.90	840.67	892.06	871.25	888.27	876.41	941.89	924.95	944.64
Quarterly	109.20	67.20	23.37	73.66	101.27	66.49	23.11	72.09	101.41
Annual	168.80	16.23	16.91	26.22	154.04	13.21	14.06	26.43	155.21
LESS: Refunds	496.70	41.30	68.30	507.20	352.20	57.10	69.00	490.00	347.00
LESS: Local Dist	95.20	45.39	62.70	63.38	66.23	78.04	65.22	66.82	70.00
Camp Fund	0.00	1.80	0.00	0.00	0.00	1.80	0.00	0.00	0.00
Acc + Fisc Rsp	2.50	2.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00
GFGP INCOME TAX	538.50	833.61	799.64	400.56	725.15	819.18	844.84	466.65	784.25
GROSS SALES TAX	584.10	573.61	608.25	539.56	601.90	595.30	633.71	563.25	627.71
Auto Sales	173.00	163.98	158.01	150.80	177.36	169.78	162.08	155.15	181.73
Other Sales	411.10	409.63	450.24	388.76	424.53	425.52	471.64	408.10	445.98
LESS: Local Dist	87.61	86.04	91.24	80.93	90.28	89.30	95.06	84.49	94.16
School Aid	350.46	344.17	364.95	323.74	361.14	357.18	380.23	337.95	376.63
Comp Trans	12.80	11.44	11.02	10.52	12.37	11.84	11.30	10.82	12.68
GFGP SALES TAX	133.23	131.97	141.04	124.37	138.10	136.98	147.12	129.99	144.25
GROSS CIGARETTE TAX	59.70	63.12	62.35	56.16	62.33	64.79	63.40	56.85	62.90
LESS: School Aid	5.70	6.00	5.92	5.34	5.92	6.15	6.02	5.40	5.98
Cash Restor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GFGP CIGARETTE TAX	54.00	57.12	56.42	50.82	56.41	58.63	57.37	51.45	56.92
GROSS SINGLE BUS TAX	448.70	373.86	384.25	373.00	481.34	394.18	407.53	398.96	517.87
LESS: Refunds	11.60	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Net Single Bus Tax	437.10	358.86	369.25	358.00	466.34	379.18	392.53	383.96	502.87
LESS: Local Dist	70.40	28.18	68.62	62.23	76.92	31.37	68.67	65.42	80.75
GFGP SINGLE BUS TAX	366.70	330.68	300.64	295.77	389.41	347.81	323.87	318.54	422.12
HORSE RACE WAGERING	0.00	17.95	0.00	0.00	0.00	14.19	0.00	0.00	0.00
LESS: Local Dist	0.00	13.46	0.00	0.00	0.00	12.77	0.00	0.00	0.00
GFGP HORSE RACE WAGE	0.00	4.49	0.00	0.00	0.00	1.42	0.00	0.00	0.00
GROSS INTANGIBLES TAX	68.10	0.00	0.00	0.00	65.22	0.00	0.00	0.00	62.61
LESS: Local Dist	9.50	0.00	0.00	0.00	9.50	0.00	0.00	0.00	9.50
GFGP INTANGIBLES TAX	58.60	0.00	0.00	0.00	55.72	0.00	0.00	0.00	53.11

	1988:3	1988:4	Fiscal 1986	Fiscal 1987	Fiscal 1988	85-86 %Change	86-87 %Change	87-88 %Change
NET PERS INCOME TAX	952.86	956.93	3215.40	3018.37	3250.65	-0.83	-6.13	7.70
Withheld	931.07	991.74	3638.57	3527.99	3742.55	-1.41	-3.04	6.08
Quarterly	66.58	23.14	291.80	264.79	263.20	5.65	-9.25	-0.60
Annual	13.21	14.04	237.03	210.39	208.91	-0.62	-11.24	-0.70
LESS: Refunds	58.00	72.00	952.00	984.80	964.00	-1.15	3.45	-2.11
LESS: Local Dist	82.23	69.01	257.89	270.34	284.27	7.27	4.83	5.15
Camp Fund	1.80	0.00	1.80	1.80	1.80	0.00	0.00	0.00
Acc + Fisc Rsp	0.00	0.00	45.40	1.70	0.00	-74.86	-96.26	NA
GFGP INCOME TAX	868.83	887.92	2910.31	2744.53	2964.58	3.22	-5.70	8.02
GROSS SALES TAX	621.47	658.89	2255.01	2345.01	2446.15	5.44	3.99	4.31
Auto Sales	173.83	165.24	614.58	655.95	672.78	0.57	6.73	2.57
Other Sales	447.64	493.65	1640.43	1689.06	1773.36	7.39	2.96	4.99
LESS: Local Dist	93.22	98.83	338.25	351.75	366.92	5.44	3.99	4.31
School Aid	372.88	395.33	1353.01	1407.01	1467.69	5.44	3.99	4.31
Comp Trans	12.12	11.53	44.84	45.75	46.93	7.68	2.04	2.57
GFGP SALES TAX	143.24	153.20	518.92	540.50	564.61	5.25	4.16	4.46
GROSS CIGARETTE TAX	65.24	63.72	239.12	245.63	248.38	-1.43	2.72	1.12
LESS: School Aid	6.20	6.05	22.70	23.33	23.60	-2.17	2.81	1.12
Cash Restor	0.00	0.00	19.30	0.00	0.00	-83.29	NA	0.00
GFGP CIGARETTE TAX	59.04	57.67	197.12	222.29	224.79	89.73	12.77	1.12
GROSS SINGLE BUS TAX	425.78	439.06	1546.96	1632.78	1750.14	8.06	5.55	7.19
LESS: Refunds	15.00	15.00	86.30	60.00	60.00	71.91	-30.48	0.00
Net Single Bus Tax	410.78	424.06	1460.66	1572.78	1690.14	5.74	7.68	7.46
LESS: Local Dist	35.79	68.72	223.78	239.14	250.62	11.06	6.86	4.80
GFGP SINGLE BUS TAX	374.98	355.34	1236.87	1333.64	1439.52	4.83	7.82	7.94
HORSE RACE WAGERING	14.10	0.00	17.95	14.19	14.10	-18.02	-20.98	-0.61
LESS: Local Dist	12.69	0.00	13.46	12.77	12.69	2.01	-5.18	-0.61
GFGP HORSE RACE WAGE	1.41	0.00	4.49	1.42	1.41	-48.41	-68.39	-0.61
GROSS INTANGIBLES TAX	0.00	0.00	68.10	65.22	62.61	12.94	-4.22	-4.01
LESS: Local Dist	0.00	0.00	9.50	9.50	9.50	0.00	0.00	0.00
GFGP INTANGIBLES TAX	0.00	0.00	58.60	55.72	53.11	15.35	-4.91	-4.69

8/27/86 : RSQE Forecast

SIMULATION OUTPUT BY DSET

NON-ZERO ADJUSTMENT CONSTANTS

	A.AEQGM	A.AFDCR	A.AFDCU	A.ECCM	A.EFIREM	A.EGLM	A.EMDOM	A.EMDVM	A.EMIM	A.EMNDM
1986 3	-19.	-4.	2.5	-1.	1.5	-1.5	1.	0.	0.5	4.7
1986 4	-19.	0.	3.	-1.6	0.	-3.5	1.	0.5	0.5	4.7
1987 1	-19.	0.	3.	-2.2	0.	-3.5	1.	1.	0.5	4.7
1987 2	-19.	0.	3.	-2.8	0.	-3.5	1.	1.5	0.5	4.7
1987 3	-19.	0.	3.	-3.5	0.	-3.5	1.	1.5	0.5	4.7
1987 4	-19.	0.	3.	-3.5	0.	-3.5	1.	1.5	0.5	4.7
1988 1	-19.	0.	3.	-3.5	0.	-3.5	1.	1.5	0.5	4.7
1988 2	-19.	0.	3.	-3.5	0.	-3.5	1.	1.5	0.5	4.7
1988 3	-19.	0.	3.	-3.5	0.	-3.5	1.	1.5	0.5	4.7
1988 4	-19.	0.	3.	-3.5	0.	-3.5	1.	1.5	0.5	4.7

	A.ESM	A.ETCM	A.ETRM	A.GA	A.GASVAL	A.LFM	A.OILVAL	A.RUMICH	A.TBWMNS	A.TCIGMN
1986 3	-7.	-0.2	3.4	-5.5	-7.	-22.	20.	-2.2	-0.5	-5.4
1986 4	-4.	-0.2	4.4	1.5	-7.	-13.	0.	-2.3	-0.9	-1.8
1987 1	-2.	-0.2	4.4	5.	-6.	-13.	0.	-2.3	-0.9	-4.8
1987 2	0.	-0.2	4.4	0.	-15.	-13.	0.	-2.3	-0.3	-4.3
1987 3	0.	-0.2	4.4	0.	-7.	-13.	0.	-2.3	-0.5	-5.4
1987 4	0.	-0.2	4.4	1.5	-7.	-13.	0.	-2.3	-0.9	-1.8
1988 1	0.	-0.2	4.4	5.	-6.	-13.	0.	-2.3	-0.9	-4.8
1988 2	0.	-0.2	4.4	0.	-15.	-13.	0.	-2.3	-0.3	-4.3
1988 3	0.	-0.2	4.4	0.	-7.	-13.	0.	-2.3	-0.5	-5.4
1988 4	0.	-0.2	4.4	1.5	-7.	-13.	0.	-2.3	-0.9	-1.8

	A.THORSE	A.TINHNM	A.TINTMN	A.TLIQMN	A.TOILMN	A.TRSAMN	A.TRSAMT	A.TRSOMN	A.TSBQAM	A.TSIM
1986 3	3.	2.7	0.	0.35	0.4	-0.5	6.7	-1.7	24.	0.
1986 4	0.	2.7	0.	-0.6	0.4	-0.5	6.7	-1.7	24.	1.
1987 1	0.	2.7	0.	-0.2	0.4	-0.5	6.7	-1.7	24.	1.
1987 2	0.	2.7	4.	-0.35	0.4	-0.5	6.7	-1.7	24.	1.
1987 3	3.	2.7	0.	0.35	0.4	-0.5	6.7	-1.7	24.	1.
1987 4	0.	2.7	0.	-0.6	0.4	-0.5	6.7	-1.7	24.	1.
1988 1	0.	2.7	0.	-0.2	0.4	-0.5	6.7	-1.7	24.	1.
1988 2	0.	2.7	2.	-0.35	0.4	-0.5	6.7	-1.7	24.	1.
1988 3	3.	2.7	0.	0.35	0.4	-0.5	6.7	-1.7	24.	1.
1988 4	0.	2.7	0.	-0.6	0.4	-0.5	6.7	-1.7	24.	1.

	A.TUPMNS	A.TUSEMN	A.TYAMNS	A.TYDLNS	A.TYQMNS	A.TYWBAS	A.WM	A.WSMFM	A.WSPNMF	A.YENTM
1986 3	-5.	2.5	4.8	-27.4	6.6	265.	-0.04	70.	-85.	15.
1986 4	-6.	2.5	7.6	0.	2.8	265.	-0.02	70.	-85.	20.
1987 1	0.	2.5	-4.1	0.	14.6	265.	-0.02	70.	-85.	20.
1987 2	0.	2.5	17.5	0.	7.8	265.	-0.02	70.	-85.	20.
1987 3	-5.	2.5	4.8	0.	6.6	265.	-0.02	70.	-85.	20.
1987 4	-6.	2.5	7.6	0.	2.8	265.	-0.02	70.	-85.	20.
1988 1	0.	2.5	-4.1	0.	14.6	265.	-0.02	70.	-85.	20.
1988 2	0.	2.5	17.5	0.	7.8	265.	-0.02	70.	-85.	20.
1988 3	-5.	2.5	4.8	0.	6.6	265.	-0.02	70.	-85.	20.
1988 4	-6.	2.5	7.6	0.	2.8	265.	-0.02	70.	-85.	20.

	A. YOLM	A. YPRM	A. VSSTRM	A. YUCTRM
1986 3	-45.	-35.	-28.	-53.
1986 4	-45.	-25.	-28.	-53.
1987 1	-45.	-15.	-28.	-53.
1987 2	-45.	-5.	-28.	-53.
1987 3	-45.	-5.	-28.	-53.
1987 4	-45.	-5.	-28.	-53.
1988 1	-45.	-5.	-28.	-53.
1988 2	-45.	-5.	-28.	-53.
1988 3	-45.	-5.	-28.	-53.
1988 4	-45.	-5.	-28.	-53.

SIMULATION OUTPUT BY DSET

EXOGENOUS VARIABLES

	ADJRS	AUTOS	AV.POILM	BLDPERM	CDAN82	DASTRIKE	DATE	DAUCON	DAUTO	DCS
1986 2	192.5	11.203	22.052	11.92	79.7	0.	1986.2	0.	1.	0.
1986 3	194.5	10.874	12.46	10.835	76.623	0.	1986.3	0.	1.	0.
1986 4	196.5	10.464	11.64	10.913	73.154	0.	1986.4	0.	1.	0.
1987 1	198.5	10.411	12.66	11.012	72.62	0.	1987.1	0.	1.09	0.
1987 2	200.5	10.591	12.75	11.217	73.969	0.	1987.2	0.	1.09	0.
1987 3	202.5	10.718	12.84	11.444	75.066	0.	1987.3	0.	1.09	0.
1987 4	204.5	10.732	12.94	11.505	75.484	0.	1987.4	0.74	1.09	0.
1988 1	206.5	10.658	13.04	11.35	75.194	0.	1988.1	0.	1.09	0.
1988 2	208.5	10.696	13.13	11.121	75.76	0.	1988.2	0.	1.09	0.
1988 3	210.5	10.661	13.23	10.932	75.77	0.	1988.3	0.	1.09	0.
1988 4	212.5	10.599	13.33	10.789	75.574	0.	1988.4	0.	1.09	0.

	DDVSTK	DEATHDUM	DFOOD	DGPAY	DISC.T	DMIS1	DMIS2	DRUMICH	DSEAS1	DSEAS2
1986 2	0.	0.	1.	0.	1.	0.	0.	0.	0.	1.
1986 3	0.	0.	1.	0.	1.	0.	0.	0.	0.	0.
1986 4	0.	0.	1.	0.	1.	0.	0.	0.	-1.	-1.
1987 1	0.	0.	1.	1.	1.	0.	0.	0.	1.	0.
1987 2	0.	0.	1.	0.	1.	0.	0.	0.	0.	1.
1987 3	0.	0.	1.	0.	1.	0.	0.	0.	0.	0.
1987 4	0.	0.	1.	0.	1.	0.	0.	0.	-1.	-1.
1988 1	0.	0.	1.	1.	1.	0.	0.	0.	1.	0.
1988 2	0.	0.	1.	0.	1.	0.	0.	0.	0.	1.
1988 3	0.	0.	1.	0.	1.	0.	0.	0.	0.	0.
1988 4	0.	0.	1.	0.	1.	0.	0.	0.	-1.	-1.

	DSEAS3	DTCS	DTIME	DTREND	DTSALES	DTSI	D1	D2	D3	D4
1986 2	0.	0.	122.	0.	1.	0.	0.	1.	0.	0.
1986 3	1.	0.	123.	30.	1.	0.	0.	0.	1.	0.
1986 4	-1.	0.	124.	0.	1.	0.	0.	0.	0.	1.
1987 1	0.	0.	125.	0.	1.	1.5	1.	0.	0.	0.
1987 2	0.	0.	126.	0.	1.	0.	0.	1.	0.	0.
1987 3	1.	0.	127.	31.	1.	0.	0.	0.	1.	0.
1987 4	-1.	0.	128.	0.	1.	0.	0.	0.	0.	1.
1988 1	0.	0.	129.	0.	1.	15.5	1.	0.	0.	0.
1988 2	0.	0.	130.	0.	1.	0.	0.	1.	0.	0.
1988 3	1.	0.	131.	32.	1.	0.	0.	0.	1.	0.
1988 4	-1.	0.	132.	0.	1.	0.	0.	0.	0.	1.

	D57.69	D67.73	D70.1	D70.4	D70.82	D71.3	D71.82	D72.76	D74.2	D74.3
1986 2	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1986 3	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1986 4	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1987 1	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1987 2	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1987 3	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1987 4	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1988 1	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1988 2	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1988 3	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.
1988 4	0.	0.	0.	0.	1.	0.	1.	0.	0.	1.

	D74.79	D75.1	D75.76	D76	D77	D77.82	D78	D78TINP	D79.4	D79.82
1986 2	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1986 3	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1986 4	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1987 1	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1987 2	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1987 3	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1987 4	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1988 1	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1988 2	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1988 3	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.
1988 4	0.	0.	0.	0.	1.	1.	1.	0.	1.	1.

	D80.2	D81.1	D82.1	D82TINP	EGFM	GAUTO82	GNP82	GTRF	GTRSL	IBF82
1986 2	1.	0.	0.	1.	59.84	98.4	3665.7	365.3	105.1	454.8
1986 3	1.	0.	0.	1.	60.1	101.145	3674.84	369.3	106.6	449.416
1986 4	1.	0.	0.	1.	60.4	96.679	3682.15	373.3	108.1	445.258
1987 1	1.	0.	0.	1.	60.7	93.017	3718.52	380.9	109.6	444.575
1987 2	1.	0.	0.	1.	61.	93.004	3755.01	384.9	110.1	447.405
1987 3	1.	0.	0.	1.	61.3	94.277	3794.87	388.9	111.6	452.885
1987 4	1.	0.	0.	1.	61.6	95.623	3833.25	387.5	113.1	459.657
1988 1	1.	0.	0.	1.	61.9	96.095	3866.47	391.7	114.6	467.513
1988 2	1.	0.	0.	1.	62.2	96.996	3893.98	390.3	116.1	474.865
1988 3	1.	0.	0.	1.	62.5	97.176	3918.45	388.9	117.6	481.181
1988 4	1.	0.	0.	1.	62.8	96.33	3939.76	387.5	119.1	486.419

	IPDAU82	IPD082	JCMH	JSSBENLV	JUCBENLV	MICHFRAC	MPOP	PC	PCDA	PCPI
1986 2	41.1	237.424	179.3	468.03	262.	0.389	9131.	113.423	110.573	326.5
1986 3	41.561	240.277	180.263	468.03	264.	0.395	9142.	113.875	111.718	328.389
1986 4	41.531	240.864	181.686	468.03	266.	0.399	9153.	115.121	112.603	332.344
1987 1	41.136	240.788	183.612	477.39	268.	0.403	9163.	116.126	113.487	335.246
1987 2	40.716	240.746	185.402	477.39	270.	0.403	9174.	117.189	114.379	338.16
1987 3	40.539	242.465	186.991	477.39	272.	0.403	9185.	118.326	115.327	341.384
1987 4	40.483	245.202	188.71	477.39	274.	0.403	9196.	119.522	116.301	344.855
1988 1	40.469	248.727	191.521	496.29	276.	0.403	9207.	120.779	117.293	348.59
1988 2	40.483	251.872	193.507	496.29	278.	0.403	9218.	122.09	118.344	352.465
1988 3	40.514	254.393	195.594	496.29	280.	0.403	9229.	123.447	119.412	356.54
1988 4	40.558	256.219	197.79	496.29	282.	0.403	9240.	124.86	120.523	360.822

		PCPIB	PCRUDE	PGAS	PGAS.C	PLIQUOR	POIL.C	PPNF	RAAA	RCPCD	RGAS
1986	2	263.89	428.467	285.9	3.634	239.7	14.255	113.2	9.	6.66	0.05
1986	3	265.39	422.545	251.063	3.652	241.18	10.667	113.666	8.746	6.171	0.05
1986	4	266.91	424.312	276.552	3.679	242.68	12.606	114.133	8.448	5.762	0.05
1987	1	268.43	426.941	275.989	3.706	244.18	12.699	115.004	8.205	5.484	0.05
1987	2	269.96	430.191	275.994	3.734	245.69	12.796	115.879	8.	5.643	0.05
1987	3	271.5	433.88	276.308	3.762	247.21	12.889	116.854	7.823	5.757	0.05
1987	4	273.05	437.898	276.902	3.789	248.74	12.986	117.889	7.687	5.779	0.05
1988	1	274.94	442.161	277.656	3.818	250.59	13.083	118.959	7.579	5.613	0.05
1988	2	276.84	446.605	278.517	3.846	252.45	13.18	120.132	7.498	5.8	0.05
1988	3	278.76	451.194	279.451	3.874	254.32	13.276	121.348	7.443	5.921	0.05
1988	4	280.69	455.905	280.474	3.903	256.21	13.376	122.646	7.409	5.934	0.05

	RHORSEM	RIRCO	RIRCV	RIRT	ROIL	RTB	RTYAM	RTYQM	RTYWM	RUG	
1986	2	1.	0.626	1.803	0.443	0.066	6.14	5.33	4.725	4.6	7.178
1986	3	0.05	0.626	1.803	0.443	0.066	5.673	5.33	4.725	4.6	7.019
1986	4	1.	0.626	1.803	0.443	0.066	5.33	5.33	4.725	4.6	7.234
1987	1	1.	0.626	1.803	0.443	0.066	5.227	4.725	4.6	4.6	7.305
1987	2	1.	0.626	1.803	0.443	0.066	5.211	4.725	4.6	4.6	7.261
1987	3	0.04	0.626	1.803	0.443	0.066	5.224	4.725	4.6	4.6	7.141
1987	4	1.	0.626	1.803	0.443	0.066	5.276	4.725	4.6	4.6	7.017
1988	1	1.	0.626	1.803	0.443	0.066	5.313	4.6	4.6	4.6	6.92
1988	2	1.	0.626	1.803	0.443	0.066	5.338	4.6	4.6	4.6	6.875
1988	3	0.04	0.626	1.803	0.443	0.066	5.361	4.6	4.6	4.6	6.875
1988	4	1.	0.626	1.803	0.443	0.066	5.409	4.6	4.6	4.6	6.91

	RUOLDM	STRPFRAC	TBWRT	TCIGNRT	TCIGRT	TCIGSRT	TCIFR	TEXEMPT	THORSER	TINTDLM	
1986	2	0.	0.236	6.3	0.905	21.	0.	0.279	1500.	0.	9.5
1986	3	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.25	0.
1986	4	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.	0.
1987	1	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.	0.
1987	2	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.	9.5
1987	3	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.1	0.
1987	4	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.	0.
1988	1	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.	0.
1988	2	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.	9.5
1988	3	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.1	0.
1988	4	0.	0.22	6.3	0.905	21.	0.	0.279	1500.	0.	0.

	TIRCA	TOTHMNS	TP	TPSL	TSBRMNS	TSIP	TSBASE	TSRATE	TUPRT	TYCFMNS
1986	2	0.	0.	149.3	11.6	159.4	4.20E+04	0.072	53.66	0.
1986	3	0.	40.9	150.599	15.	160.952	4.20E+04	0.072	53.66	1.8
1986	4	1.6	0.	152.369	15.	162.071	4.20E+04	0.072	53.66	0.
1987	1	0.	0.	157.65	15.	165.432	4.35E+04	0.072	53.66	0.
1987	2	0.	0.	159.963	15.	167.421	4.35E+04	0.072	53.66	0.
1987	3	0.	39.	162.385	15.	169.499	4.35E+04	0.072	53.66	1.8
1987	4	1.65	0.	164.813	15.	171.662	4.35E+04	0.072	53.66	0.
1988	1	0.	0.	167.338	15.	181.281	4.50E+04	0.075	53.66	0.
1988	2	0.	0.	169.801	15.	183.49	4.50E+04	0.075	53.66	0.
1988	3	0.	40.	172.307	15.	185.67	4.50E+04	0.075	53.66	1.8
1988	4	1.7	0.	174.797	15.	187.822	4.50E+04	0.075	53.66	0.

		TYCRM	TYRMNS	UMICHOLD	WSAGM	WSOM	YAVAFDCR	YAVAFDCU	YAVGA	YCP	YOTRM
1986	2	675.7	496.7	0.	66.5	43.5	1238.18	1497.89	623.14	310.6	2133.74
1986	3	675.7	41.3	0.	67.1	44.5	1230.	1485.	621.	288.61	2170.14
1986	4	675.7	68.3	0.	67.7	45.5	1320.	1595.	666.	275.585	2207.16
1987	1	700.7	507.2	0.	68.3	46.5	1380.	1665.	696.	277.85	2244.81
1987	2	700.7	352.2	0.	68.9	47.5	1305.	1580.	661.	287.016	2283.1
1987	3	700.7	57.1	0.	69.5	48.5	1290.	1560.	651.	300.366	2322.05
1987	4	700.7	69.	0.	70.1	49.5	1385.	1675.	704.	316.056	2361.66
1988	1	710.	490.	0.	70.7	50.5	1455.	1755.	744.	320.271	2401.95
1988	2	710.	347.	0.	71.3	51.5	1370.	1655.	694.	328.652	2442.92
1988	3	710.	58.	0.	71.9	52.5	1350.	1635.	684.	334.436	2484.59
1988	4	710.	72.	0.	72.5	53.5	1450.	1755.	745.	340.567	2526.97

		YP	YPDIV	YPINT	YPRENT	YUNB
1986	2	3480.	81.1	480.5	15.1	16.4
1986	3	3498.56	82.433	478.819	16.1	16.538
1986	4	3535.56	83.478	480.152	16.41	17.674
1987	1	3593.68	83.88	483.102	16.73	18.185
1987	2	3647.34	84.379	488.485	17.06	18.158
1987	3	3705.5	85.366	495.972	17.39	17.771
1987	4	3758.39	86.541	503.077	17.73	17.38
1988	1	3813.11	87.792	509.4	18.07	17.14
1988	2	3867.64	89.128	516.789	18.42	17.156
1988	3	3923.96	90.521	525.814	18.78	17.404
1988	4	3979.96	91.972	534.065	19.14	17.841

SIMULATION OUTPUT BY DSET

ENDOGENOUS VARIABLES

	AEQGM	AEQMFM	AEQPMF	AFDCR	AFDCU	ECCM	EFIREM	EGLM	EGM	EGSM
1986	2	4980	NA	190.395	31.792	112.87	167.34	382.65	589.07	146.58
1986	3	5015.05	4463.33	186.593	28.901	114.837	170.168	387.014	593.698	146.584
1986	4	5052.32	8000.01	184.273	29.285	115.239	171.753	388.723	596	146.877
1987	1	5131.5	8031.87	183.234	34.355	114.576	172.91	390.315	598.212	147.197
1987	2	5167.55	8079.71	182.69	34.284	113.51	173.982	391.762	600.214	147.453
1987	3	5206.71	8135.66	182.801	31.184	112.254	175.068	393.12	602.154	147.734
1987	4	5255.02	8297.88	183.297	30.226	111.402	176.198	394.629	604.257	148.028
1988	1	5346.5	8379.68	184.079	33.784	110.937	177.374	396.145	606.39	148.345
1988	2	5391.21	8465.11	185.111	32.616	110.694	178.569	397.523	608.477	148.754
1988	3	5438.82	8550.09	186.392	29.326	110.577	179.756	398.754	610.456	149.202
1988	4	5489.02	8632.27	187.938	28.615	110.508	180.92	399.854	612.292	149.638

	EMDOM	EMDVM	EMFM	EMICH	EMIM	EMNDM	EMRESM	EPNMFM	ESM	ETCM
1986	2	433.56	327.8	978.31	10.93	216.95	358.12	2005.49	770.64	144.65
1986	3	429.995	330.706	977.321	10.914	216.621	364.592	2014.75	771.941	144.675
1986	4	424.835	330.649	971.625	10.849	216.141	350.503	2021.45	773.756	145.022
1987	1	423.232	329.616	968.759	10.8	215.911	351.568	2030.08	777.549	145.553
1987	2	424.223	329.277	969.4	10.761	215.9	358.883	2040.52	783.94	146.392
1987	3	426.967	329.591	972.632	10.736	216.074	370.206	2050.5	790.39	147.532
1987	4	429.981	329.952	976.32	10.718	216.388	375.452	2061.34	797.585	148.925
1988	1	431.529	329.27	977.4	10.695	216.602	379.134	2073.54	805.103	150.085
1988	2	431.412	328.277	976.318	10.66	216.629	380.128	2084.75	811.984	151.147
1988	3	429.744	326.49	972.653	10.61	216.419	380.421	2094.95	818.49	152.173
1988	4	426.661	323.469	966.047	10.545	215.918	380.81	2104.08	824.991	153.154

	ETRM	EWSM	GA	GASVAL	GTRUCK82	HRSM	LFM	NTCIGMNS	NTHORSEM	NTSEMNS
1986	2	799.06	3572.88	118.278	48.8	42.14	4341.33	54	0	366.7
1986	3	802.215	3585.77	111.241	49.776	41.954	4349.16	57.125	4.488	330.675
1986	4	804.829	3589.07	113.597	51.142	41.701	4358.63	56.425	0	300.639
1987	1	808.688	3597.05	119.027	52.395	41.522	4371.37	50.824	0	295.772
1987	2	811.932	3610.13	118.148	53.852	41.574	4388.18	56.411	0	389.415
1987	3	814.521	3625.29	116.905	55.192	41.686	4408.35	58.634	1.419	347.81
1987	4	816.513	3641.92	116.98	56.216	41.793	4426.64	57.374	0	323.869
1988	1	819.344	3657.33	120.334	56.87	41.883	4447.32	51.448	0	318.544
1988	2	821.691	3669.54	118.135	57.211	41.956	4467	56.922	0	422.122
1988	3	823.343	3678.06	116.666	57.301	41.971	4485.63	59.042	1.41	374.983
1988	4	823.962	3682.42	117.426	57.205	41.94	4502.9	57.668	0	355.339

	NTYMS	OILVAL	PCPID	RUMICH	STCIGMNS	TBMVNS	TCIGMNS	TCIF	THORSEM	TINHMS
1986	2	538.5	79.895	320.46	9.45	0.	14.9	59.7	12.8	19.8
1986	3	833.612	80.659	322.209	9.17	0.	14.401	63.121	11.438	17.953
1986	4	799.641	87.463	325.993	9.614	0.	11.431	62.348	11.021	14.243
1987	1	400.563	83.856	328.713	9.671	0.	10.766	56.159	10.518	14.549
1987	2	725.147	88.204	331.437	9.552	0.	13.941	62.333	12.371	16.098
1987	3	819.178	91.222	334.475	9.365	0.	14.655	64.789	11.842	12.578
1987	4	844.842	89.881	337.761	9.246	0.	11.663	63.397	11.305	12.394
1988	1	466.652	86.773	341.305	9.238	0.	10.966	56.849	10.822	12.929
1988	2	784.254	90.568	344.97	9.343	0.	14.205	62.897	12.676	14.558
1988	3	868.83	93.647	348.81	9.523	0.	14.939	65.239	12.125	11.694
1988	4	887.92	92.262	352.825	9.764	0.	11.877	63.721	11.526	11.665

	TINPMNS	TINTMNS	TLIQMNS	TOILMNS	TRESM	TRSMNS	TRSAMNST	TRSAMN8T	TRSAMN82	TRSAM82
1986	2	0.	68.1	11.6	3170.71	173.	NA	156.924	156.458	141.457
1986	3	130.	0.	5.43	3195.64	163.983	164.483	147.231	146.783	141.032
1986	4	0.	0.	6.062	3210.03	158.01	158.51	140.769	140.325	149.792
1987	1	0.	0.	4.507	3028.05	150.796	151.296	133.316	132.875	144.16
1987	2	0.	65.225	4.77	3073.93	177.364	177.864	155.503	155.066	140.065
1987	3	136.	0.	5.53	3126.78	169.783	170.283	147.653	147.219	141.468
1987	4	0.	0.	6.203	3195.13	162.075	162.575	139.788	139.358	148.826
1988	1	0.	0.	4.603	3279.69	155.147	155.647	132.699	132.273	143.557
1988	2	0.	62.611	4.881	3334.29	181.729	182.229	153.983	153.561	138.56
1988	3	142.	0.	5.645	3386.63	173.831	174.331	145.991	145.573	139.822
1988	4	0.	0.	6.349	3434.19	165.243	165.743	137.52	137.105	146.573

	TRSM	TRSMNS	TRSMNST	TRSMT	TRSM67	TRSM67T	TRSMNS	TRSMNST	TSBDLNS	TSBQAMNS
1986	2	571.024	584.1	NA	178.189	NA	411.1	412.8	70.4	448.7
1986	3	573.018	573.615	575.216	177.841	178.523	409.632	411.332	28.182	373.858
1986	4	564.747	608.251	566.79	173.239	173.866	450.241	451.941	68.616	384.254
1987	1	595.048	539.559	541.76	181.023	181.762	388.763	390.464	62.23	373.002
1987	2	588.422	601.896	590.573	177.537	178.186	424.532	426.232	76.925	481.34
1987	3	594.685	595.304	597.504	177.797	178.454	425.52	427.22	31.368	394.179
1987	4	588.389	633.715	590.432	174.203	174.807	471.64	473.34	68.666	407.534
1988	1	621.17	563.245	623.597	181.999	182.71	408.098	409.798	65.416	398.96
1988	2	613.66	627.712	629.912	177.888	178.511	445.983	447.683	80.748	517.871
1988	3	620.827	621.473	623.673	177.984	178.614	447.643	449.343	35.795	425.778
1988	4	611.762	658.888	613.805	173.39	173.969	493.645	495.345	68.716	439.055

	TSIM	TUPMNS	TUSEMNS	TYAMNS	TYAMNT	TYDLNS	TYFISONS	TYMNS	TYQMNS	TYQMNT
1986	2	1388.7	0.	98.3	168.8	95.2	2.5	636.2	109.2	NA
1986	3	1401.44	58.905	98.905	16.226	45.386	2.	882.799	67.198	65.604
1986	4	1410.24	57.568	94.905	16.908	62.699	1.7	864.04	23.368	22.785
1987	1	1436.9	0.	89.945	26.225	63.377	0.	463.939	73.661	72.132
1987	2	1452.6	0.	98.281	154.043	66.232	0.	791.379	101.27	101.27
1987	3	1470.12	61.709	101.948	13.213	78.036	0.	899.015	66.494	66.494
1987	4	1492.15	60.485	99.403	14.06	65.221	0.	910.063	23.11	23.11
1988	1	1573.98	0.	94.514	26.425	66.82	0.	533.472	72.095	72.095
1988	2	1591.72	0.	103.386	155.208	69.997	0.	854.25	101.406	101.406
1988	3	1608.13	64.599	107.331	13.215	82.234	0.	952.865	66.585	66.585
1988	4	1622.93	63.436	104.471	14.043	69.011	0.	956.931	23.143	23.143

	TYWM	TYWMNS	TYWMNST	TYWMT	UMICH	WM	WSGM	WSM	WSMFM	WSPNMF
1986	2	853.22	854.9	NA	410.33	12.74	2933.6	1.97E+04	7797.1	8864.3
1986	3	861.525	840.675	861.526	398.802	12.796	2977.42	1.99E+04	7801.63	8992.49
1986	4	867.245	892.065	867.246	419.055	12.874	3011.18	2.00E+04	7773.01	9108.5
1987	1	876.252	871.254	872.998	876.252	12.979	3069.72	2.02E+04	7780.95	9233.29
1987	2	886.491	888.266	886.491	886.491	13.088	3101.64	2.04E+04	7832.47	9367.49
1987	3	898.145	876.408	886.145	412.86	13.188	3135.24	2.07E+04	7913.01	9501.18
1987	4	915.688	941.894	915.688	409.276	13.447	3175.38	2.10E+04	8101.39	9646.23
1988	1	930.258	924.952	926.804	410.86	13.568	3242.06	2.14E+04	8190.31	9800.73
1988	2	942.75	944.637	942.75	417.337	13.69	3280.43	2.16E+04	8264.65	9953.76
1988	3	954.158	931.066	954.159	427.156	13.816	3320.16	2.19E+04	8316.27	1.01E+04
1988	4	964.152	991.745	964.152	439.672	13.944	3360.88	2.21E+04	8339.18	1.03E+04

	WUS	YA	YAFDCR	YAFDCU	YAT	YDM	YDM67	YENTM	YGA	YOLM
1986	2	9.713	5600.86	235.744	47.621	2.78E+04	8659.54	1094.8	73.704	2463.1
1986	3	9.76	5679.34	229.51	42.917	2.79E+04	8672.16	1103.59	69.081	2500.71
1986	4	9.83	5744.25	243.24	46.709	2.82E+04	8637.32	1113.23	75.655	2534.74
1987	1	9.922	5119.1	252.863	57.201	2.86E+04	8713.37	1122.07	82.843	2577.71
1987	2	10.009	5164.32	238.411	54.169	2.89E+04	8710.98	1131.82	78.096	2625.4
1987	3	10.087	5205.37	235.814	48.646	2.92E+04	8716.1	1143.24	76.105	2678.29
1987	4	10.171	5250.97	253.866	50.629	2.95E+04	8764.68	1156.5	82.354	2746.42
1988	1	10.284	5165.59	267.835	59.292	3.00E+04	8783.34	1168.89	89.528	2810.48
1988	2	10.381	5232.76	253.602	53.98	3.03E+04	8781.54	1181.36	81.986	2872.21
1988	3	10.482	5304.14	251.629	47.948	3.06E+04	8776.65	1193.36	79.799	2933.69
1988	4	10.589	5376.3	272.51	50.22	3.10E+04	8774.5	1205.01	87.482	2994.02

	YPADM	YPERM	YPERM67	YPM	YPM67	YPRM	YQ	YSSTRM	YTM67	YTRM
1986	2	2.84E+04	2.71E+04	8463.98	3.18E+04	9915.21	4982.7	2038.88	195.555	4724.9
1986	3	2.87E+04	2.74E+04	8534.64	3.20E+04	9931.34	4968.9	2055.51	137.519	4750.26
1986	4	2.88E+04	2.77E+04	8573.33	3.22E+04	9888.04	4951.79	2072.5	63.988	4842.43
1987	1	2.90E+04	2.80E+04	8622.35	3.25E+04	9901.12	4928.68	2117.33	91.02	4957.53
1987	2	2.93E+04	2.83E+04	8666.19	3.28E+04	9905.91	4916.36	2135.67	44.789	4992.32
1987	3	2.96E+04	2.86E+04	8693.65	3.32E+04	9919.46	4918.92	2154.42	22.448	5037.84
1987	4	3.01E+04	2.89E+04	8715.33	3.37E+04	9981.75	4934.11	2173.58	49.342	5122.54
1988	1	3.05E+04	2.93E+04	8736.83	3.42E+04	1.00E+04	4948.77	2249.99	46.51	5272.98
1988	2	3.08E+04	2.96E+04	8756.01	3.46E+04	1.00E+04	4961.97	2271.23	25.533	5316.83
1988	3	3.12E+04	3.00E+04	8764.63	3.50E+04	1.00E+04	4976.59	2292.95	12.018	5382.81
1988	4	3.15E+04	3.03E+04	8771.12	3.54E+04	1.00E+04	4993.76	2315.14	3.384	5494.79

YUCTRM

1986	2	195.2
1986	3	183.11
1986	4	197.169
1987	1	202.485
1987	2	202.879
1987	3	200.806
1987	4	200.46
1988	1	204.389
1988	2	213.113
1988	3	225.901
1988	4	242.469

PERCENT CHANGES AT ANNUAL RATES

AEQGM	AEQMF	AEQPNMF	AFDCR	AFDCU	ECOM	EFIREM	EGLM	EGM	EGSM
1986 3	2.845	NA	-7.751	-31.711	7.154	6.932	4.64	3.179	0.01
1986 4	3.006	0.872	-4.883	5.424	1.408	3.78	1.778	1.56	0.802
1987 1	6.417	1.602	-2.235	89.413	-2.282	2.722	1.648	1.492	0.874
1987 2	2.839	2.404	-1.182	-0.824	-3.669	2.503	1.49	1.345	0.695
1987 3	3.066	2.799	0.243	-31.558	-4.353	2.519	1.394	1.298	0.765
1987 4	3.763	8.217	1.088	-11.729	-3.002	2.606	1.544	1.404	0.798
1988 1	7.147	4.002	1.719	56.079	-1.659	2.698	1.546	1.42	0.861
1988 2	3.387	4.14	2.261	-13.131	-0.875	2.723	1.398	1.383	1.106
1988 3	3.579	4.076	2.797	-34.643	-0.42	2.685	1.244	1.307	1.209
1988 4	3.743	3.9	3.358	-9.35	-0.25	2.615	1.108	1.208	1.174

EMDOM	EMDVM	EMFM	EMICH	EMIM	EMNDM	ENRESM	EPNMF	ESM	ETCM
1986 3	-3.249	3.593	1.984	-0.586	-0.605	7.426	1.859	0.677	0.07
1986 4	-4.714	-0.068	-1.087	-2.348	-0.883	-14.584	1.336	0.944	0.961
1987 1	-1.501	-1.244	0.92	-1.812	-0.426	1.221	1.718	1.975	1.474
1987 2	0.94	-0.411	2.082	-1.419	-0.019	8.585	2.073	3.328	2.324
1987 3	2.612	0.381	2.695	-0.934	0.323	13.23	1.971	3.332	3.152
1987 4	2.853	0.439	2.208	-0.685	0.581	5.79	2.131	3.691	3.829
1988 1	1.448	-0.825	1.914	-0.836	0.397	3.98	2.388	3.824	3.152
1988 2	-0.108	-1.2	1.315	-1.308	0.05	1.052	2.179	3.463	2.861
1988 3	-1.538	-2.16	0.873	-1.85	-0.388	0.308	1.972	3.243	2.744
1988 4	-2.839	-3.65	0.468	-2.444	-0.923	0.409	1.754	3.215	2.604

ETRM	EWSM	GA	GASVAL	GTRUCK82	HRSM	LFM	NTCIGMNS	NTHORSEM	NTSBMNS
1986 3	1.588	1.45	22.201	8.241	-1.757	0.723	25.232	4.05E+04	-33.875
1986 4	1.31	0.369	6.017	11.436	-2.39	0.873	-4.812	-100.	-31.676
1987 1	1.931	0.891	12.265	10.17	-1.705	1.174	-34.172	-100.	-6.319
1987 2	1.614	1.463	15.967	11.597	0.5	1.546	51.766	-100.	200.482
1987 3	1.281	1.689	30.551	10.326	1.083	1.852	16.718	304.933	-36.361
1987 4	0.982	1.847	14.046	7.628	1.034	1.67	-8.32	-100.	-24.819
1988 1	1.394	1.703	22.264	4.736	0.859	1.881	-35.344	-100.	-6.415
1988 2	1.15	1.342	32.687	2.425	0.7	1.782	49.843	-100.	208.37
1988 3	0.806	0.932	44.319	0.63	0.145	1.678	15.747	295.102	-37.728
1988 4	0.301	0.475	26.664	-0.673	-0.298	1.548	-8.989	-100.	-19.364

NTYMS	OILVAL	PCPID	RUMICH	STCIGMNS	TBMVNS	TCIGMNS	TCTF	THORSEM	TINHMNS
1986 3	474.267	3.882	-11.35	-100.	-12.741	24.968	-36.242	1.04E+07	-70.007
1986 4	-15.331	38.254	20.858	-100.	-60.3	-4.812	-13.793	-100.	-10.735
1987 1	-93.703	-15.505	3.374	-100.	-21.327	-34.172	-17.049	-100.	8.895
1987 2	974.042	22.415	-4.827	-100.	181.232	51.766	91.381	-100.	49.868
1987 3	62.857	14.402	3.717	-100.	22.087	16.718	-16.03	4.05E+06	-62.731
1987 4	13.132	-5.752	-5.014	-100.	-59.875	-8.32	-16.961	-100.	-5.729
1988 1	-90.692	-13.131	-0.318	-100.	-21.857	-35.344	-16.033	-100.	18.43
1988 2	697.727	18.678	4.592	-100.	181.529	49.843	88.245	-100.	60.767
1988 3	50.63	14.307	7.936	-100.	22.347	15.747	-16.285	3.95E+06	-58.37
1988 4	9.083	-5.786	10.534	-100.	-60.054	-8.989	-18.345	-100.	-0.994

	TRMPMS	TINTMS	TLIQMS	TOILMS	TRSM	TRSAMNS	TRSAMNST	TRSAMNBT	TRSAMN82	TRSAM82
1986 3	2.86E+10	-100.	39.141	9.221	3.182	-19.274	NA	-22.512	-22.534	-1.195
1986 4	-100.	-100.	55.312	18.237	1.813	-13.793	-13.754	-16.434	-16.472	27.257
1987 1	-100.	-100.	-69.459	-0.679	-20.82	-17.049	-16.999	-19.554	-19.602	-14.213
1987 2	-100.	1.81E+09	25.537	18.021	6.201	91.381	91.002	85.11	85.477	-10.887
1987 3	3.42E+10	-100.	80.534	22.681	7.056	-16.03	-15.988	-18.716	-18.756	4.068
1987 4	-100.	-100.	58.34	5.254	9.033	-16.961	-16.914	-19.663	-19.708	22.483
1988 1	-100.	-100.	-69.685	6.562	11.014	-16.032	-15.986	-18.794	-18.838	-13.427
1988 2	-100.	1.54E+09	26.479	26.286	6.827	88.245	87.891	81.31	81.651	-13.215
1988 3	4.07E+10	-100.	78.889	31.333	6.429	-16.285	-16.243	-19.2	-19.24	3.693
1988 4	-100.	-100.	60.057	13.571	5.736	-18.345	-18.296	-21.268	-21.315	20.756

	TRSM	TRSMNS	TRSMNST	TRSMT	TRSM67	TRSM67T	TRSMNS	TRSMNST	TSBDLNS	TSBQAMNS
1986 3	1.404	-6.989	NA	NA	-0.78	NA	-1.421	-1.415	-97.432	-51.805
1986 4	-5.65	26.43	26.32	-5.732	-9.955	-10.034	45.95	45.733	3413.79	11.596
1987 1	23.252	-38.081	-37.967	23.478	19.222	19.44	-44.415	-44.282	-32.344	-11.209
1987 2	-4.381	54.855	54.595	-4.541	-7.485	-7.64	42.2	41.991	133.488	177.305
1987 3	4.326	-4.309	-4.294	4.343	0.587	0.603	0.934	0.93	-97.235	-55.026
1987 4	-4.168	28.416	28.302	-4.253	-7.844	-7.926	50.924	50.69	2196.13	14.257
1988 1	24.217	-37.596	-37.488	24.433	19.138	19.345	-43.945	-43.819	-17.629	-8.154
1988 2	-4.749	54.259	54.012	-4.901	-8.733	-8.879	42.631	42.43	132.17	183.9
1988 3	4.754	-3.917	-3.903	4.768	0.217	0.231	1.497	1.491	-96.139	-54.307
1988 4	-5.714	26.344	26.243	-5.79	-9.933	-10.005	47.888	47.68	1258.15	13.069

	TSIM	TUPMNS	TUSEMNS	TYAMNS	TYAMNT	TYDLNS	TYFISCNS	TYMNS	TYQMNS	TYQMNT
1986 3	3.72	1.20E+09	2.483	-99.991	NA	-94.834	-59.04	270.741	-85.66	NA
1986 4	2.536	-8.769	-15.221	17.891	61.782	264.188	-47.799	-8.233	-98.538	-98.545
1987 1	7.778	-100.	-19.323	478.749	1912.07	4.396	-100.	-91.688	9773.74	9944.53
1987 2	4.442	-100.	42.553	1.19E+05	1.34E+05	19.277	-100.	746.628	257.259	288.524
1987 3	4.913	1.45E+09	15.781	-99.995	-99.997	92.714	-100.	66.543	-81.413	-81.413
1987 4	6.129	-7.704	-9.618	28.197	56.562	-51.207	-100.	5.007	-98.541	-98.541
1988 1	23.807	-100.	-18.27	1147.77	2237.21	10.172	-100.	-88.192	9371.31	9371.31
1988 2	4.586	-100.	43.171	1.19E+05	1.23E+05	20.415	-100.	557.497	291.411	291.411
1988 3	4.186	1.74E+09	16.161	-99.995	-99.997	90.505	-100.	54.804	-81.411	-81.411
1988 4	3.733	-7.012	-10.242	27.548	49.677	-50.404	-100.	1.718	-98.54	-98.54

	TYWM	TYWMNS	TYWMNST	TYWMT	UMICH	WM	WSGM	WSM	WSMFM	WSPNMF
1986 3	3.951	-6.492	NA	NA	-10.773	1.776	6.11	3.665	0.232	5.911
1986 4	2.682	26.787	26.788	2.682	21.914	2.466	4.613	2.492	-1.459	5.261
1987 1	4.219	-9.01	-8.28	4.219	3.575	3.305	8.006	3.912	0.409	5.593
1987 2	4.756	8.042	6.327	4.756	-3.355	3.4	4.223	4.413	2.675	5.941
1987 3	5.363	-5.234	-4.473	5.363	-5.878	3.085	4.404	4.976	4.176	5.832
1987 4	8.045	33.408	33.409	8.045	-3.428	8.089	5.22	7.461	9.868	6.248
1988 1	6.518	-7.003	-6.257	6.518	1.557	3.631	8.668	6.058	4.463	6.562
1988 2	5.48	8.788	7.062	5.48	6.457	3.665	4.818	5.102	3.68	6.393
1988 3	4.929	-5.624	-4.866	4.929	9.748	3.715	4.933	4.595	2.521	6.218
1988 4	4.255	28.729	28.73	4.255	12.246	3.775	4.996	3.972	1.106	6.019

	WUS	YA	YAFDCR	YAFDCU	YAT	YDM	YDM67	YENTM	YGA	YOLM
1986 3	1.952	5.723	-10.166	-34.032	NA	2.798	0.584	3.251	-22.828	6.249
1986 4	2.888	4.65	26.164	40.305	3.996	3.107	-1.598	3.538	43.857	5.555
1987 1	3.798	-36.927	16.789	124.918	2.361	7.069	3.568	3.216	43.767	6.955
1987 2	3.577	3.58	-20.976	-19.577	2.192	3.241	-0.11	3.521	-21.025	7.608
1987 3	3.139	3.218	-4.286	-34.958	3.091	3.961	0.235	4.095	-9.812	8.304
1987 4	3.371	3.55	34.319	17.321	3.506	6.326	2.248	4.723	37.113	10.57
1988 1	4.525	-6.347	23.895	88.103	4.703	5.153	0.854	4.351	39.671	9.661
1988 2	3.81	5.303	-19.621	-31.301	5.303	4.28	-0.082	4.338	-29.674	9.08
1988 3	3.967	5.568	-3.076	-37.745	5.568	4.294	-0.223	4.125	-10.249	8.84
1988 4	4.132	5.554	37.557	20.338	5.554	4.581	-0.098	3.961	44.439	8.483

YPADJM	YPERM	YPERM67	YPM	YPM67	YPRM	YQ	YSSTRM	YTM67	YTRM
1986 3	3.026	4.531	3.381	2.867	0.652	-1.103	3.302	-75.544	2.164
1986 4	2.129	3.978	1.825	2.965	-1.733	-1.37	3.348	-95.313	7.99
1987 1	3.141	5.015	2.306	3.928	0.53	-1.854	8.936	309.408	9.852
1987 2	3.721	4.584	2.049	3.554	0.193	-0.996	3.51	-94.136	2.837
1987 3	4.417	4.168	1.274	4.286	0.548	0.208	3.557	-93.69	3.697
1987 4	6.555	4.713	1.001	6.626	2.536	1.241	3.604	2234.3	6.897
1988 1	5.492	4.966	0.99	5.736	1.412	1.193	14.82	-21.051	12.274
1988 2	4.762	4.902	0.881	4.555	0.181	1.071	3.831	-90.917	3.368
1988 3	4.406	4.588	0.394	4.516	-0.01	1.183	3.879	-95.093	5.057
1988 4	3.972	4.678	0.296	4.683	0.	1.387	3.927	-99.372	8.584

YUCTRM

1986 3	-22.567
1986 4	34.435
1987 1	11.228
1987 2	0.779
1987 3	-4.024
1987 4	-0.687
1988 1	8.072
1988 2	18.198
1988 3	26.25
1988 4	32.725

