RSQE FORECASTS

Research Seminar in Quantitative Economics
The University of Michigan
Ann Arbor, Michigan 48109

Saul H. Hymans
Director

For release: 2/28/90

The Michigan Economic Outlook for 1990–91
February 1990 Forecast Update

Introduction – Current State of the Economy

Economic growth in Michigan faltered in 1989, as job gains were the lowest recorded for any year since 1982. Wage and salary employment grew at an anemic rate of 0.5 percent from 1988.4 to 1989.4 (19,000 jobs), after increasing by about 2 percent in each of the three previous years (an average of 72,000 jobs per year).

In fact, there were 4,200 fewer jobs statewide in December 1989 than existed in January 1989, on a seasonally adjusted basis. Following an increase of 27,000 jobs from December 1988 to January 1989, the number of jobs remained virtually flat during the first six months of 1989, before declining in the third quarter, then showing some rebound in the fourth quarter.

This profile is drawn from the currently available survey on establishment employment. Revised data are about to be released by the Michigan Employment Security Commission which reflect both the normal annual benchmarking procedure and a much more infrequent conversion to an updated set of Standard Industrial Classification (SIC) codes. This information was not available in time for this forecast release, and will be incorporated into the next state forecast in May.

The overall weakness in the current job market derives from a persistent weakness in the manufacturing sector, coupled with a slowing in nonmanufacturing. After adding 13,300 jobs from the third quarter of 1988 to the first quarter of 1989, the manufacturing sector in the remainder of 1989 resumed the downward slide in jobs that had been more characteristic of the previous three years. Over

half of the job decline in manufacturing between the opening and closing quarters of 1989, amounting to 29,600 jobs, can be traced to the motor vehicle industry (down 15,300 jobs). In 1989, car sales totaled 9.9 million units, their lowest annual level since 1983, due in part to an annual pace of 8.7 million units in the closing quarter, the weakest quarter in over six years. There were periodic production cutbacks over the year, most dramatically in the fourth quarter, in an attempt to bring inventories down to more normal levels. Two auto plant closings in the second half of the year also contributed to the malaise in the auto job market in Michigan. Most of the remaining job decline in manufacturing over 1989 was in the rest of durable goods, chiefly the metals industries.

In the private nonmanufacturing sector, the year 1989 fit into the pattern established since the end of 1985, of "growing but slowing." From 1988.4 to 1989.4 employment in this sector grew by 2.2 percent, down from the approximately 4 percent per year growth in 1986 and 1987, and the 3 percent range in 1988. Employment growth was weaker *within* 1989, however, than the annual average of 2.2 percent suggests. Between the first and third quarters of the year, employment increased by only 3,300 workers, the weakest performance over a comparable period since 1982. The sector picked up considerably in the fourth quarter, however, adding 12,000 jobs, almost all of them in wholesale trade, retail trade, and services.

After bouncing around in the range of 6 1/2–7 percent from January to August of 1989, the state unemployment rate took a leap in September and October to about 8 percent. At the time, we projected some reduction in the labor force over November and December, and combined with our forecast of employment, we expected some reduction in the unemployment rate. In fact, this occurred to a greater extent than we anticipated, resulting in unemployment rates of 7.2–7.3 percent for the last two months of 1989. The civilian labor force remained at the December level in January 1990, but because of a very weak employment month, the unemployment rate sprang up to 8.4 percent. Much of the weakness in employment was due to a widespread, but temporary, shutdown of auto facilities for extended vacation, due to domestic production having run too far ahead of the weak sales pace. Most of these plants were back on line in February.

We are currently estimating a slowing in the growth of consumer purchasing power in Michigan from 1988.4 to 1989.4, amounting to an increase of 1.3 percent compared to 3.9 percent in the previous year. This results from both weaker nominal income growth and more local price inflation between the two years.

In sum, the Michigan economy is currently exhibiting a fairly sluggish performance, but with some pick-up in the fourth quarter of 1989. The prospects for continued near-term improvements depend in large part on the performance of the national economy.

Inputs to the Forecast

The economic outlook for Michigan depends on the broader national economic environment as well as conditions specific to the state. The assumptions regarding the national outlook are taken from our most recent U.S. forecast (February 9, 1990).

- Real GNP is forecast to grow at a 2.4 percent annual rate in this quarter, following an increase of only 1/2 of one percent in the final quarter of 1989. A 3.3 percent increase is forecast for the second quarter of 1990, with the second half of the year averaging 2.9 percent growth. During 1991 real GNP is forecast to grow by 2.4 percent, with growth based on calendar year averages of 2.4 percent for 1990 and 2.7 percent for 1991.

- Light vehicle sales are forecast to rebound this quarter to an annualized rate of 14.4 million units from the 13 million unit sales pace posted for 1989.4. Production levels, however, will remain low this quarter as the industry attempts to reduce inventories. For the year as a whole light vehicle sales are forecast to total 14.6 million units, followed by sales of 14.8 million units for 1991.

- The U.S. civilian unemployment rate is forecast to rise to 5 1/2 percent by the end of 1990 and to drift higher during 1991, reaching 5 3/4 percent by year end.

- The inflation rate, as measured by the increase in the U.S. Consumer Price Index, is forecast to decline to 4 percent for 1990, following a 4.9 percent rate for 1989. In our forecast the inflation rate rebounds to 4.8 percent for 1991.

- We are projecting increases in federal spending of 5.5 percent for fiscal 1990 and 4.3 percent for fiscal 1991, following the increase of 7.2 percent posted for fiscal 1989. In the context of our U.S. forecast, with no major tax initiative, this implies a federal budget deficit of $156.6 billion for fiscal 1990 — a slight deterioration compared to the fiscal '89 deficit of $151.3 billion — and a deficit of $132.5 billion for fiscal 1991.

- In January of 1990 the trade-weighted value of the dollar was about 10 percent below its June 1989 level (a local peak). We are forecasting continued decline throughout the forecast horizon, averaging 4.7 percent (annual rate) during the rest of 1990 and 2.5 percent during 1991. The renewed decline in the value of the dollar halts the deterioration in real net exports which occurred during the second half of 1989, and yields a nearly $15 billion improvement in the real trade balance during 1990, followed by a $28 billion improvement during 1991.

- We assume that the Federal Reserve will not alter monetary policy significantly this year for a number of reasons. We do not believe that the federal budget represents any substantial fiscal tightening; the economy does not appear to be headed into a recession; and with foreign interest rates already fairly high relative to ours, a move to push our interest rates lower could generate a precipitous drop in the value of the dollar. Short term interest rates are forecast to remain fairly constant through late 1991, and long term interest rates are forecast to drift up by about 50 basis points from the end of 1989 to the end of 1991.

The second set of input assumptions influencing our state outlook is related to the local economic environment. These inputs concern: scheduled automotive plant closings and openings; future wage and profit-sharing payments to automotive workers; assumptions on strike activity during this year of auto contract negotiations; reductions in the white-collar work force at Michigan Bell; and the hiring of temporary workers to assist on the decennial Census of Population.

Most of the automotive plant closing activity announced over the past three years was completed by the summer of 1989. We have included the effects of two recent plant closings and one plant opening in our current forecast:

- Jefferson Avenue (Chrysler): 1,700 workers laid off starting in February 1990.

- Pontiac Central Truck (General Motors): 800 workers laid off starting in January 1990.

- Willow Run Assembly (General Motors): 4,000 workers brought back starting in January 1990.

We have also incorporated the closing of an auto stamping plant ("other durables" in our classification) in July 1990, with a loss of 600 jobs, and we have accounted for the planned closing of an auto plant in St. Louis, Missouri, in September 1990. Some of the 1,700 jobs lost in St. Louis are expected to be regained in other states, including Michigan.

In the case of the Jefferson Avenue closure, we assumed that there would be indirect job losses as a result of reduced purchases from local vendors. To estimate these indirect job effects, we linked our industrially-detailed input-output model of the state economy (REMI) to the state econometric model (SQEM).

This is a contract year for the auto industry. We assume that qualifying auto workers will receive a 3 percent increase in base pay in the fourth quarter of 1990. In lieu of another increase in base pay the following year, we assume a performance bonus ("lump sum") payment in the fourth quarter of 1991 equivalent to 3 percent of annual pay. We are assuming that profit-sharing payments made in 1991.1, based on profits for calendar year 1990, will be at a rate equivalent to half of Ford's payments just announced for this year.

For lack of better information at this time, we have assumed that there will be no strike in the auto industry during this contract year.

Another employment adjustment (in this case, to the transportation, communications, and public utilities industry) reflects Michigan Bell's reduction in its work force by 1,200 over the course of the first quarter of 1990, in an attempt to improve its competitive position.

In addition to being a contract year for the auto industry, 1990 is also a year for the taking of the decennial Census of Population. We have incorporated into our forecast a pattern of hiring for temporary census workers. The number of these workers rises from 1,500 in the first quarter to 9,500 in the second and third quarters, then dwindles to 100 in the fourth quarter. Our income estimates for 1990 reflect the relatively low wage levels for the census workers.

The Forecast of the State Economy

After one more quarter of weakness, the current quarter, we are forecasting some improvement in the state job profile over the next two years. Wage and salary employment increases by 1.8 percent (68,000 jobs) from the fourth quarter of 1989 to the fourth quarter of 1990, and by 1.4 percent (56,000

jobs) from the end of 1990 to the end of 1991. These rates of growth are slightly below those realized in the 1986–88 period, but represent a marked improvement over the lull in 1989.

The pattern of local job growth mirrors movements in the national economy over the forecast horizon, modified somewhat by special local events. The weakness in the first quarter is due in large part to the very low employment levels in motor vehicles early in the year, resulting from extended vacations to bring inventories under control. Total job growth in Michigan is expected to rebound sharply in the second and third quarters of 1990, averaging an annual rate of 3 percent. This is consistent with substantial increases in vehicle production and an increase in inflation-adjusted GNP growth from an annual rate of 2.4 percent in the first quarter to an average of 3 percent over the next two quarters. An additional 8,000 temporary census workers also come aboard in the spring and summer of 1990. The fourth quarter of 1990 is weaker locally, with job growth at an annual rate of 1.3 percent. Much of the weakness is due to the completion of duties by 9,400 temporary census workers in that quarter.

In 1991, growth in real GNP declines from an annual rate of nearly 3 percent at the beginning of 1991 to 2 percent at the end of 1991. Wage and salary employment in Michigan also grows more slowly through 1991, starting the year at an annual rate just over 2 percent, and ending the year just under 1 percent.

We are forecasting that the manufacturing sector will lose 15,000 jobs in the first quarter of 1990, over two-thirds of them in motor vehicles. With most of the auto layoffs being temporary, we anticipate that motor vehicle employment will return to the levels of 1989.4 in the second quarter of 1990. An additional 11,000 auto jobs are projected over the next three quarters, benefiting from the sharp rebound in vehicle production. As vehicle production weakens over the remainder of 1991, the number of auto jobs slowly drifts downward. By the end of 1991, we are forecasting that there will be 4,400 fewer manufacturing jobs than at the end of 1989. Although these losses continue Michigan's trend toward an increasingly smaller manufacturing sector, the rate of decline is much more modest than throughout the second half of the 1980s.

After pausing in the first three quarters of 1989, employment in the private nonmanufacturing sector grew by 12,000 jobs in the fourth quarter, to a level 50,000 greater than in the fourth quarter of 1988. We are projecting that employment in this sector will continue to grow by about 50,000 jobs for each of the next two years (47,400 jobs during 1990, 52,900 during 1991). Over this two-year period 6 out of 10 private nonmanufacturing jobs are forecast to come from the service industry, with another 3 in 10 from the trade sector.

The government sector is expected to grow by 19,200 employees from the end of 1989 to the end of 1991, an average annual rate of 1.5 percent. The principal deviation in the quarterly pattern is the large influx of 8,000 temporary census workers in the second quarter of 1990, and the removal of 9,400 of these workers from the government payrolls in the fourth quarter of 1990.

Since we view January 1990 as an unusually weak month for employment, we are expecting some backing off of January's 8.4 percent unemployment rate for the remainder of the quarter, to average 8.0 percent over the three months. The increase in jobs over the next two quarters is sufficient to lower the unemployment rate to 7.7–7.8 percent, where it sits for the remainder of the forecast horizon.

Personal income is estimated to be up by 6.5 percent during 1989 (1988.4 to 1989.4), and in the forecast period to rise by 6.2 percent during 1990 and 6.5 percent during 1991. Included in these forecasts are our estimates of profit-sharing payments to auto workers in Michigan in the first quarter of 1990, and our projection of these payments (half the Ford payments this year) in the first quarter of 1991.

The local rate of inflation, as measured by the Detroit CPI, is forecast to accelerate from 3.4 percent in the current quarter to 5 percent in the third quarter of 1990, where it holds, with minor wiggles, for the remainder of the forecast horizon. This pattern of price increase follows the path of national inflation. Lower consumer price inflation overall in 1990 compared to 1989 yields an increase in purchasing power of 1.7 percent during 1990 (1989.4 to 1990.4), compared to 1.3 percent during 1989. Larger price increases between 1990 and 1991 result in a 1.5 percent increase in purchasing power during 1991, down slightly from the previous year.

The State Revenue Outlook

The economic outlook for Michigan suggests that state tax revenue growth will be more modest in fiscal 1990 than in either fiscal '89 or fiscal '91. In addition, there are non-economic factors which exaggerate the irregularity in the revenue growth pattern over the three fiscal years. In 1986 the federal government redefined the tax base for the personal income tax, generating a windfall for those states which adopted the new definition for state tax purposes. While adopting the new definition, the Michigan legislature instituted a series of increases in the personal exemption to mitigate the effects of the base redefinition. The last scheduled increase in the exemption from $2,000 to $2,100 occurred January 1, 1990. In addition, recent legal settlements will reduce the growth of single business tax (SBT) revenues in fiscal '90.

As we noted in November, several aspects of the state's tax laws are under either legislative or judicial review. We assume, however, that current tax law will remain in effect throughout our forecast horizon.

Our forecast of General Fund General Purpose tax revenue is presented in Table 1. Income tax revenues are forecast to increase by 4.2 percent for fiscal 1990 and by 7.2 percent for fiscal '91, following an increase of 5.9 percent for fiscal '89. The slower growth in fiscal '90 derives from several factors. First, slower wage income growth in fiscal '90 — 4.8 percent compared to 7.2 percent for fiscal '89 — along with the increase in the personal exemption slows the growth in withholding. Second, non-wage income, which grew by over 12 percent in 1989 grows by 7 1/2 percent in 1990, slowing the growth in quarterly estimated payments. And annual payments which increased by nearly 19 percent for fiscal '89 grow more in line with the tax base over the forecast period. The renewed strength in income tax revenues for fiscal '91 derives mainly from the acceleration in wage income growth in fiscal '91 and slower growth in income tax refunds than in either fiscal '89 or '90.

Consumption tax revenues reflect primarily the state's economic growth, rising by 4.2 percent for fiscal '90 and 6 percent for fiscal '91. All of the increase stems from the sales and use taxes which are the

TABLE 1

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

	Actual	RSQE Forecast	
	1989	1990	1991
Income Tax	3442	3585	3844
(% Change)	(5.9)	(4.2)	(7.2)
Consumption Taxes	1330	1386	1470
(% Change)	(5.8)	(4.2)	(6.0)
Sales	600	631	677
Use	457	485	522
Other Consumption	273	271	271
Business Taxes	1671	1683	1888
(% Change)	(1.5)	(0.7)	(12.2)
Single Business	1551	1554	1756
Other Business	120	129	132
Property Taxes	346	353	373
(% Change)	(18.0)	(2.1)	(5.4)
Other GFGP Tax Revenue	60	60	62
GFGP Tax Revenue	6848	7068	7637
(% Change)	(5.2)	(3.2)	(8.1)
Addenda			
Personal Income Adjusted (billions of $)	145.4	153.6	164.0
Wages and Salaries (billions of $)	97.8	102.5	109.0
Wage and Salary Employment (thousands)	3858	3879	3953

source of over 80 percent of GFGP consumption tax revenues. The revenues from the cigarette excise, beer and wine, and liquor specific taxes all exhibit little or no growth — a continuation of the pattern in recent years.

Business taxes are forecast to increase by 7/10 of one percent for fiscal '90 and by 12.2 percent for fiscal '91, following an increase of 1.5 percent for fiscal '89. SBT revenues, which comprise over 90 percent of business tax revenues, declined on an accrual basis for fiscal '89 and are forecast to increase only slightly in fiscal '90 before rebounding sharply in fiscal '91.

Much of the uneven movement in SBT revenues can be traced to economic factors. Even though the SBT is in principle a value added tax, it contains provisions which make it respond to swings in corporate profits. At the national level we are forecasting an almost 8 percent decline in pre-tax profits for fiscal '90, followed by a rebound of 11 percent in fiscal '91. In addition, the motor vehicle sector is considerably weaker in fiscal '90 than in either fiscal '89 or '91, and in our model that weakness lowers fiscal '90 SBT revenue by about 3 percent.

Non-economic factors contribute to the pattern as well. A one-time transfer of insurance premium tax revenues raised SBT revenues in fiscal '88. A change in SBT liability for small business reduced revenues beginning in fiscal '89. In addition, legal settlements resulted in unusually large refunds in fiscal '89 and will continue to have an impact on SBT revenues through fiscal '91.

State property tax revenues (inheritance, intangibles, and utility property) are forecast to increase by 2.1 percent for fiscal '90 and 5.4 percent for fiscal '91, compared to an 18 percent increase for fiscal '89. Part of the large drop in revenue growth from fiscal '89 to fiscal '90 can be attributed to a one-time collection of approximately $15 million in intangibles tax revenue in fiscal '89.

In sum, total GFGP tax revenues are forecast to increase by a modest 3.2 percent ($220 million) to $7.1 billion for the current fiscal year, and to rise by 8.1 percent ($569 million) to $7.6 billion for fiscal '91, following an increase of 5.2 percent ($337 million) for fiscal '89.

The Budget Stabilization Fund was designed to provide a source of additional funds to be used in less prosperous years. Pay-ins to the fund are required in any year when inflation adjusted non-transfer income increases by more than 2 percent. Based on revised estimates for income growth in 1989 and our forecast of economic activity, a payment of about $11 million could be made in fiscal '90, but no payment would be required in fiscal '91.

Prepared by
Joan P. Crary
George A. Fulton
Saul H. Hymans

RSQE FORECAST FOR 1990-91
STATE OF MICHIGAN
February 28, 1990

INDEX OF TABLES

TABLE 1 : MICHIGAN PERSONAL INCOME IN CURRENT DOLLARS

TABLE 2 : EMPLOYMENT IN MICHIGAN

TABLE 3 : MICHIGAN STATE GFGP TAX REVENUES

TABLE 4 : SELECTED MICHIGAN STATE TAX REVENUES

COMPLETE MODEL OUTPUT
- NON-ZERO ADJUSTMENT CONSTANTS
- EXOGENOUS VARIABLES
- ENDOGENOUS VARIABLES
- GROWTH RATES OF ENDOGENOUS VARIABLES

FORECAST BASED ON
THE ECONOMETRIC MODEL OF THE STATE OF MICHIGAN

Research Seminar in Quantitative Economics
The University of Michigan
Ann Arbor, Michigan 48109

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

	1989:4 Actual	1990:1	1990:2	1990:3	1990:4	1991:1	1991:2	1991:3	1991:4
Personal Income	42135.50	42446.60	43091.90	43847.40	44736.00	45504.00	46161.70	46786.40	47638.20
Wage and Salary	25316.20	25319.90	25687.50	26135.60	26667.50	27113.60	27463.10	27788.00	28297.20
Manufacturing	8763.82	8529.76	8623.77	8805.53	9059.36	9203.83	9252.32	9282.36	9498.76
NonManufacturing	12797.20	12985.20	13190.60	13414.00	13672.90	13931.80	14186.30	14434.00	14682.70
Government	3628.36	3676.60	3743.24	3784.57	3802.19	3843.42	3888.37	3933.96	3976.56
Other	126.80	128.35	129.90	131.45	133.00	134.55	136.10	137.65	139.20
Other Labor Income	2834.90	2848.59	2897.59	2948.02	2989.47	3033.78	3074.57	3095.81	3153.30
Property and Proprietor Inc	9385.33	9564.25	9737.52	9930.84	10126.10	10313.80	10503.20	10699.10	10852.20
Transfer Payment	6431.65	6646.77	6715.19	6796.18	6938.50	7134.86	7224.27	7316.29	7469.37
Residence Adjust.	245.75	250.25	254.75	259.25	263.75	268.25	272.75	277.25	281.75
LESS:									
Social Ins Contrib	2078.30	2183.20	2200.68	2222.49	2249.25	2360.22	2376.17	2390.07	2415.69
Federal Pers Taxes	4300.46	4285.08	4372.77	4471.53	4579.37	4611.21	4697.61	4779.63	4881.38
Mich Withholding	1065.40	1022.29	1038.96	1059.30	1092.20	1112.45	1128.31	1143.05	1166.17
Disp Personal Income	36769.70	37139.20	37680.10	38316.50	39064.40	39780.40	40335.80	40863.70	41590.60
ADDENDA:									
Consumer Price Index									
Detroit 1982-84=100	124.42	125.46	126.88	128.43	129.92	131.50	133.09	134.69	136.33
Real Disp Income									
Millions of 1982-84 $	29552.90	29602.00	29697.40	29834.80	30067.90	30250.30	30307.40	30338.80	30506.60

	1989 Average	1990 Average	1991 Average	88-89 %Change	89-90 %Change	90-91 %Change
Personal Income	164478.00	174122.00	186090.00	7.55	5.86	6.87
Wage and Salary	98859.70	103810.00	110662.00	6.03	5.01	6.60
Manufacturing	35077.80	35018.40	37237.30	4.66	-0.17	6.34
NonManufacturing	48831.90	53262.80	57234.80	6.99	9.07	7.46
Government	14454.60	15006.60	15642.30	6.24	3.82	4.24
Other	495.30	522.70	547.50	4.05	5.53	4.74
Other Labor Income	11190.10	11683.70	12357.50	6.47	4.41	5.77
Property and Proprietor Inc	36576.10	39358.70	42368.30	12.54	7.61	7.65
Transfer Payment	25081.90	27096.60	29144.80	7.56	8.03	7.56
Residence Adjust.	950.75	1028.00	1100.00	8.29	8.13	7.00
LESS:						
Social Ins Contrib	8180.55	8855.61	9542.14	8.88	8.25	7.75
Federal Pers Taxes	16816.10	17708.80	18969.80	10.00	5.31	7.12
Mich Withholding	4047.00	4212.75	4549.98	4.22	4.10	8.00
Disp Personal Income	143615.00	152200.00	162570.00	7.37	5.98	6.81
ADDENDA:						
Consumer Price Index Detroit 1982-84=100	122.30	127.67	133.90	5.34	4.39	4.88
Real Disp Income Millions of 1982-84 $	117419.00	119202.00	121403.00	1.93	1.52	1.85

2/28/90 : RSQE Forecast

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

	1989:4 Actual	1990:1	1990:2	1990:3	1990:4	1991:1	1991:2	1991:3	1991:4
Total Employment	4294.00	4280.79	4305.66	4322.86	4337.04	4358.31	4376.20	4391.72	4403.94
Wage and Salary	3858.41	3856.42	3889.22	3913.41	3926.33	3946.79	3962.57	3974.47	3982.38
Manufacturing	925.43	910.55	921.65	930.92	937.22	940.90	940.40	936.76	929.85
Motor Vehicle	277.90	267.35	278.23	284.92	288.02	289.46	289.17	287.24	283.88
Other Durable	425.34	422.33	423.16	425.04	427.09	428.25	427.34	425.37	422.01
Nondurable	222.19	220.86	220.26	220.97	222.11	223.20	223.89	224.14	223.97
Private Nonmfg	2297.53	2306.90	2317.88	2330.65	2344.94	2359.79	2373.35	2385.82	2397.87
Construction	134.97	135.91	135.59	135.69	136.11	136.60	136.74	136.59	136.57
Trans, Com + Ut	153.98	153.69	153.78	154.19	154.71	155.29	155.78	156.14	156.33
Wholesale Trade	199.32	200.06	200.81	201.69	202.56	203.29	203.81	204.21	204.46
Retail Trade	720.99	722.97	726.06	729.44	733.08	736.75	739.96	742.84	745.40
Fin, Ins + R.E.	189.40	190.49	191.47	192.35	193.27	194.28	195.29	196.28	197.27
Services	888.68	893.57	899.96	907.10	915.05	923.48	931.70	939.78	947.93
Mining	10.20	10.22	10.22	10.19	10.15	10.11	10.05	9.98	9.91
Government	635.44	638.97	649.70	651.84	644.17	646.10	648.82	651.90	654.66
Federal	60.42	62.30	70.30	70.30	60.90	60.80	60.80	60.80	60.80
State	164.31	165.11	165.95	166.76	167.55	168.36	169.34	170.41	171.51
Local	410.72	411.56	413.45	414.78	415.72	416.94	418.68	420.69	422.35
Non Wage and Salary	435.59	424.37	416.43	409.45	410.72	411.52	413.63	417.25	421.56
Labor Force	4643.00	4652.32	4669.80	4685.36	4701.84	4720.82	4741.67	4762.37	4782.19
Unemployment	349.00	371.52	364.15	362.50	364.79	362.51	365.47	370.65	378.25
Unemployment Rate (%)	7.51	7.99	7.80	7.74	7.76	7.68	7.71	7.78	7.91
ADDENDA: U.S. DATA (Billions of 1982 $, except where noted)									
Gross Nat'l Product	4168.10	4192.91	4227.25	4255.45	4288.93	4319.24	4342.80	4368.89	4390.27
Business Fixed Invest	514.00	520.43	522.56	525.69	529.01	532.39	534.62	538.57	541.99
Gross Auto Product	103.50	103.90	106.60	114.31	118.38	120.21	120.80	120.68	120.14
Personal Cons Expend New Autos	72.90	84.93	84.81	87.62	89.52	88.75	88.54	88.50	87.91
Unit Car Sales (mil)	8.74	9.88	9.89	10.09	10.22	10.06	9.99	9.96	9.89
Unemployment Rate (%)	5.33	5.39	5.36	5.45	5.52	5.55	5.61	5.68	5.77
Personal Consumption Deflator 1982=100	131.91	133.56	134.86	136.46	137.97	139.56	141.16	142.78	144.43
Consumer Price Index 1982-84=100	125.90	126.85	128.22	129.73	131.20	132.79	134.38	136.00	137.65

	1989 Average	1990 Average	1991 Average	88-89 %Change	89-90 %Change	90-91 %Change
Total Employment	4266.00	4311.59	4382.54	1.63	1.07	1.65
Wage and Salary	3863.08	3896.34	3966.55	1.73	0.86	1.80
Manufacturing	943.29	925.08	936.98	-0.41	-1.93	1.29
Motor Vehicle	287.92	279.63	287.44	-2.47	-2.88	2.79
Other Durable	432.08	424.40	425.74	0.91	-1.78	0.32
Nondurable	223.30	221.05	223.80	-0.23	-1.01	1.24
Private Nonmfg	2286.99	2325.09	2379.21	2.78	1.67	2.33
Construction	136.51	135.83	136.62	2.50	-0.50	0.59
Trans, Com + Ut	154.47	154.09	155.88	-0.18	-0.24	1.16
Wholesale Trade	196.59	201.28	203.94	4.49	2.38	1.32
Retail Trade	718.49	727.89	741.24	2.63	1.31	1.83
Fin, Ins + R.E.	188.21	191.89	195.78	1.50	1.95	2.03
Services	882.10	903.92	935.72	3.39	2.47	3.52
Mining	10.60	10.19	10.01	1.00	-3.89	-1.77
Government	632.80	646.17	650.37	1.24	2.11	0.65
Federal	60.39	65.95	60.80	-0.64	9.21	-7.81
State	163.19	166.34	169.91	3.12	1.93	2.14
Local	409.23	413.88	419.67	0.79	1.14	1.40
Non Wage and Salary	402.92	415.24	415.99	0.73	3.06	0.18
Labor Force	4591.75	4677.33	4751.76	1.10	1.86	1.59
Unemployment	325.50	365.74	369.22	-5.58	12.36	0.95
Unemployment Rate (%)	7.08	7.82	7.77	NA	NA	NA
ADDENDA: U.S. DATA (Billions of 1982 $, except where noted)						
Gross Nat'l Product	4142.57	4241.13	4355.30	2.94	2.38	2.69
Business Fixed Invest	511.07	524.42	536.89	3.50	2.61	2.38
Gross Auto Product	108.92	110.80	120.46	-0.02	1.72	8.72
Personal Cons Expend						
New Autos	82.02	86.72	88.43	-2.81	5.72	1.97
Unit Car Sales (mil)	9.92	10.02	9.98	-6.76	0.98	-0.42
Unemployment Rate (%)	5.27	5.43	5.65	NA	NA	NA
Personal Consumption Deflator 1982=100	130.03	135.71	141.98	4.45	4.36	4.62
Consumer Price Index 1982-84=100	124.00	129.00	135.20	4.86	4.03	4.81

2/28/90 : RSQE Forecast

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

	1989:4 Actual	1990:1	1990:2	1990:3	1990:4	1991:1	1991:2	1991:3	1991:4
NET PERS INCOME TAX	888.80	906.12	1239.71	891.88	913.98	990.47	1334.46	967.82	981.23
LESS: Local Dist	75.70	78.03	108.31	77.61	79.78	81.21	114.90	84.88	85.81
Camp Fund	0.00	0.00	0.00	1.80	0.00	0.00	0.00	1.80	0.00
Acc Fisc Rsp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GFGP INCOME TAX	813.10	828.09	1131.40	812.47	834.20	909.27	1219.56	881.14	895.42
CONSUMPTION TAXES									
Sales	166.95	139.66	163.04	161.11	178.67	150.83	174.81	172.83	190.15
Cigarette Excise	49.30	45.26	51.72	53.83	49.69	44.96	51.35	53.46	49.29
Beer and Wine	12.20	11.73	11.23	14.94	12.35	11.87	11.41	15.11	12.48
Liquor Specific	6.10	4.39	4.93	5.05	6.20	4.51	5.06	5.17	6.36
Use	114.70	112.46	128.78	129.02	123.38	121.61	138.42	138.57	132.69
GFGP CONSUM TAXES	349.25	313.51	359.70	363.95	370.30	333.79	381.06	385.15	390.98
BUSINESS TAXES									
Single Business	364.70	340.00	443.02	379.51	399.01	383.04	507.01	429.45	443.66
Insur Co Premium	0.00	0.00	0.00	80.00	0.00	0.00	0.00	82.50	0.00
Horse Race Wagering	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oil + Gas Severance	12.50	12.10	11.93	12.28	12.44	12.21	12.41	12.79	12.98
GFGP BUSINESS TAXES	377.20	352.10	454.95	471.79	411.44	395.24	519.42	524.74	456.63
PROPERTY TAXES									
Inheritance	28.20	27.13	22.76	27.07	28.99	27.88	23.34	28.19	30.52
Utility Property	69.40	0.00	0.00	75.90	74.79	0.00	0.00	81.20	80.07
Intangibles	0.00	0.00	102.95	0.00	0.00	0.00	108.16	0.00	0.00
GFGP PROPERTY TAXES	97.60	27.13	125.71	102.97	103.78	27.88	131.50	109.39	110.59
OTHER GFGP TAXES	0.00	0.00	0.00	60.00	0.00	0.00	0.00	62.50	0.00
TOTAL GFGP TAXES	1637.15	1520.83	2071.76	1811.17	1719.72	1666.18	2251.54	1962.93	1853.62
ADDENDA									
Pers Income Adjust	37782.20	37983.00	38577.40	39273.70	40046.80	40729.40	41313.60	41860.10	42584.50
Total Employment	4294.00	4280.79	4305.66	4322.86	4337.04	4358.31	4376.20	4391.72	4403.94
Wage + Sal Income	25316.20	25319.90	25687.50	26135.60	26667.50	27113.60	27463.10	27788.00	28297.20

	Fiscal 1989	Fiscal 1990	Fiscal 1991	88-89 %Change	89-90 %Change	90-91 %Change
NET PERS INCOME TAX	3771.40	3926.50	4206.73	6.05	4.11	7.14
LESS: Local Dist	327.50	339.64	360.77	7.62	3.71	6.22
Camp Fund	1.60	1.80	1.80	-11.11	12.50	0.00
Acc Fisc Rsp	0.00	0.00	0.00	0.00	0.00	0.00
GFGP INCOME TAX	3442.30	3585.06	3844.17	5.91	4.15	7.23
CONSUMPTION TAXES						
Sales	599.70	630.76	677.15	4.67	5.18	7.36
Cigarette Excise	203.40	200.12	199.47	-2.16	-1.61	-0.32
Beer and Wine	49.60	50.09	50.75	-2.36	0.99	1.31
Liquor Specific	20.02	20.47	20.94	0.58	2.28	2.29
Use	457.20	484.97	521.99	12.75	6.07	7.63
GFGP CONSUM TAXES	1329.91	1386.41	1470.29	5.80	4.25	6.05
BUSINESS TAXES						
Single Business	1616.00	1527.23	1718.50	7.62	-5.49	12.52
Insur Co Premium	76.60	80.00	82.50	74.49	4.44	3.13
Horse Race Wagering	1.30	0.00	0.00	-38.10	NA	0.00
Oil + Gas Severance	41.90	48.81	49.85	-6.05	16.49	2.12
GFGP BUSINESS TAXES	1735.80	1656.04	1850.85	9.02	-4.59	11.76
PROPERTY TAXES						
Inheritance	102.60	105.16	108.40	9.62	2.50	3.08
Utility Property	135.10	145.30	155.99	6.55	7.55	7.36
Intangibles	108.60	102.95	108.16	48.77	-5.20	5.06
GFGP PROPERTY TAXES	346.30	353.41	372.55	18.03	2.05	5.42
OTHER GFGP TAXES	59.80	60.00	62.50	-2.45	0.33	4.17
TOTAL GFGP TAXES	6914.11	7040.91	7600.36	7.13	1.83	7.95
ADDENDA						
Pers Income Adjust	145396.00	153616.00	163950.00	8.22	5.65	6.73
Total Employment	4255.00	4300.82	4365.82	1.98	1.08	1.51
Wage + Sal Income	97771.70	102459.00	109032.00	7.22	4.79	6.42

2/28/90 : RSQE Forecast

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

	1989:4 Actual	1990:1	1990:2	1990:3	1990:4	1991:1	1991:2	1991:3	1991:4
NET PERS INCOME TAX	888.80	906.12	1239.71	891.88	913.98	990.47	1334.46	967.82	981.23
Withheld	1095.90	1016.46	1041.04	1033.67	1123.45	1106.10	1130.57	1115.39	1199.55
Quarterly	39.20	124.59	170.85	112.28	48.43	130.55	181.07	119.12	50.93
Annual	17.00	41.27	320.31	22.03	16.60	42.73	328.92	22.01	16.45
LESS: Refunds	263.30	276.20	292.50	276.10	274.50	288.90	306.10	288.70	285.70
LESS: Local Dist	75.70	78.03	108.31	77.61	79.78	81.21	114.90	84.88	85.81
Camp Fund	0.00	0.00	0.00	1.80	0.00	0.00	0.00	1.80	0.00
Acc + Fisc Rsp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GFGP INCOME TAX	813.10	828.09	1131.40	812.47	834.20	909.27	1219.56	881.14	895.42
GROSS SALES TAX	715.20	607.40	709.74	699.74	768.38	655.30	759.45	749.50	816.64
Auto Sales	137.50	142.51	174.17	165.98	160.16	154.04	183.53	176.21	168.61
Other Sales	577.70	464.89	535.58	533.76	608.23	501.26	575.92	573.29	648.03
LESS: Local Dist	107.28	91.11	106.46	104.96	115.26	98.30	113.92	112.43	122.50
School Aid	429.12	364.44	425.85	419.85	461.03	393.18	455.67	449.70	489.98
Comp Trans	9.60	9.94	12.15	11.58	11.17	10.74	12.80	12.29	11.76
Health Init	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
GFGP SALES TAX	166.95	139.66	163.04	161.11	178.67	150.83	174.81	172.83	190.15
GROSS CIGARETTE TAX	64.80	59.56	68.05	70.83	65.38	59.16	67.57	70.34	64.85
LESS: School Aid	5.10	4.76	5.44	5.67	5.23	4.73	5.41	5.63	5.19
Health + Safe	10.40	9.53	10.89	11.33	10.46	9.47	10.81	11.25	10.38
GFGP CIGARETTE TAX	49.30	45.26	51.72	53.83	49.69	44.96	51.35	53.46	49.29
GROSS SINGLE BUS TAX	455.30	451.64	565.15	454.24	491.82	499.40	627.79	504.44	538.52
LESS: Refunds	19.50	33.00	25.50	30.00	24.00	37.60	24.00	24.40	26.00
Net Single Bus Tax	435.80	418.64	539.65	424.24	467.82	461.80	603.79	480.04	512.52
LESS: Local Dist	71.10	78.64	96.63	44.72	68.82	78.77	96.78	50.59	68.87
GFGP SINGLE BUS TAX	364.70	340.00	443.02	379.51	399.01	383.04	507.01	429.45	443.66
HORSE RACE WAGERING	0.00	0.00	0.00	21.23	0.00	0.00	0.00	21.30	0.00
LESS: Local Dist	0.00	0.00	0.00	21.23	0.00	0.00	0.00	21.30	0.00
GFGP HORSE RACE WAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GROSS INTANGIBLES TAX	0.00	0.00	112.45	0.00	0.00	0.00	117.66	0.00	0.00
LESS: Local Dist	0.00	0.00	9.50	0.00	0.00	0.00	9.50	0.00	0.00
GFGP INTANGIBLES TAX	0.00	0.00	102.95	0.00	0.00	0.00	108.16	0.00	0.00

	Fiscal 1989	Fiscal 1990	Fiscal 1991	88-89 %Change	89-90 %Change	90-91 %Change
NET PERS INCOME TAX	3771.40	3926.50	4206.73	6.05	4.11	7.14
Withheld	4006.00	4187.07	4475.51	5.31	4.52	6.89
Quarterly	418.10	446.92	479.17	11.64	6.89	7.21
Annual	383.80	400.61	410.26	18.71	4.38	2.41
LESS: Refunds	1036.50	1108.10	1158.20	9.62	6.91	4.52
LESS: Local Dist	327.50	339.64	360.77	7.62	3.71	6.22
Camp Fund	1.60	1.80	1.80	-11.11	12.50	0.00
Acc + Fisc Rsp	0.00	0.00	0.00	0.00	0.00	0.00
GFGP INCOME TAX	3442.30	3585.06	3844.17	5.91	4.15	7.23
GROSS SALES TAX	2613.20	2732.09	2932.63	5.85	4.55	7.34
Auto Sales	644.50	620.16	673.95	5.97	-3.78	8.67
Other Sales	1968.80	2111.93	2258.69	5.82	7.27	6.95
LESS: Local Dist	391.98	409.81	439.89	5.85	4.55	7.34
School Aid	1567.92	1639.25	1759.58	5.85	4.55	7.34
Comp Trans	44.60	43.27	47.01	6.19	-2.99	8.65
Health Init	9.00	9.00	9.00	300.00	0.00	0.00
GFGP SALES TAX	599.70	630.76	677.15	4.67	5.18	7.36
GROSS CIGARETTE TAX	267.60	263.24	262.46	1.36	-1.63	-0.30
LESS: School Aid	21.30	20.98	21.00	-2.74	-1.52	0.10
Health + Safe	42.90	42.15	41.99	25.44	-1.75	-0.37
GFGP CIGARETTE TAX	203.40	200.12	199.47	-2.16	-1.61	-0.32
GROSS SINGLE BUS TAX	1973.30	1926.33	2123.46	9.65	-2.38	10.23
LESS: Refunds	89.20	108.00	110.00	-14.23	21.08	1.85
Net Single Bus Tax	1884.10	1818.33	2013.46	11.12	-3.49	10.73
LESS: Local Dist	267.10	291.09	294.95	7.70	8.98	1.33
GFGP SINGLE BUS TAX	1616.00	1527.23	1718.50	7.62	-5.49	12.52
HORSE RACE WAGERING	21.10	21.23	21.30	5.50	0.63	0.31
LESS: Local Dist	19.80	21.23	21.30	10.61	7.24	0.31
GFGP HORSE RACE WAGE	1.30	0.00	0.00	-38.10	NA	0.00
GROSS INTANGIBLES TAX	118.10	112.45	117.66	43.15	-4.79	4.63
LESS: Local Dist	9.50	9.50	9.50	0.00	0.00	0.00
GFGP INTANGIBLES TAX	108.60	102.95	108.16	48.77	-5.20	5.06

2/28/90 : RSQE Forecast

SIMULATION OUTPUT BY DSET

NON-ZERO ADJUSTMENT CONSTANTS

		A.AEQGM	A.AEQPNM	A.AFDCR	A.AFDCU	A.ECCM	A.EFIREM	A.EGLM	A.EGSM	A.EMDOM	A.EMDVM
1990	1	57.28	-16.2	1.2	-1.2	4.985	0.163	-15.	1.7	-17.273	-20.639
1990	2	22.74	-8.8	-2.	0.	5.135	0.063	-14.5	1.5	-16.659	-7.084
1990	3	56.7	-9.	-3.	-0.4	5.285	-0.037	-14.	1.3	-17.149	-6.943
1990	4	104.15	-9.	0.8	-0.3	5.285	-0.037	-14.	1.1	-16.925	-7.223
1991	1	63.66	-12.5	1.2	-0.9	5.3	0.	-14.	1.	-16.95	-7.16
1991	2	63.22	-9.	-2.	-0.05	5.3	0.	-14.	1.	-16.95	-7.16
1991	3	63.22	-9.	-3.	-0.4	5.3	0.	-14.	1.	-16.95	-7.36
1991	4	63.22	-27.	0.8	-0.3	5.3	0.	-14.	1.	-16.95	-8.06

		A.EMICH	A.EMIM	A.EMNDM	A.ERTRM	A.ESM	A.ETCM	A.EWTRM	A.GA	A.HRSM	A.OILVAL
1990	1	-10.	0.206	7.648	4.881	-12.311	0.69	0.738	3.	0.4	13.
1990	2	0.	0.206	7.48	4.88	-12.313	0.69	0.425	-1.9	0.5	0.
1990	3	0.	0.206	7.4	4.88	-12.314	0.69	0.535	-6.5	0.6	0.
1990	4	0.	0.206	7.4	4.881	-12.313	0.689	0.535	-1.5	0.7	0.
1991	1	0.	0.2	7.4	4.9	-12.3	0.7	0.51	1.2	0.7	0.
1991	2	0.	0.2	7.4	4.9	-12.3	0.7	0.51	-1.93	0.7	0.
1991	3	0.	0.2	7.4	4.9	-12.3	0.7	0.51	-6.53	0.7	0.
1991	4	0.	0.2	7.4	4.9	-12.3	0.7	0.51	-1.53	0.7	0.

		A.PCPID	A.RUMICH	A.TBWMNS	A.TCIGMN	A.THORSE	A.TINHMN	A.TINTMN	A.TLIQMN	A.TOILMN	A.TRSAMN
1990	1	0.1	0.15	-0.6	-15.	0.	11.6	0.	-0.5	0.3	-0.5
1990	2	0.1	0.	-3.8	-13.	0.	5.8	32.	-0.4	0.3	-0.5
1990	3	0.1	-0.15	-1.3	-13.	8.7	12.5	0.	-0.4	0.3	-0.5
1990	4	0.1	-0.15	-0.7	-15.	0.	15.3	0.	-0.9	0.3	-0.5
1991	1	0.1	-0.15	-0.6	-16.	0.	12.4	0.	-0.5	0.3	-0.5
1991	2	0.1	-0.15	-3.8	-14.	0.	6.2	32.	-0.4	0.3	-0.5
1991	3	0.1	-0.15	-1.3	-14.	8.7	13.3	0.	-0.4	0.3	-0.5
1991	4	0.1	-0.15	-0.7	-16.	0.	16.4	0.	-0.9	0.3	-0.5

		A.TRSAMT	A.TRSOMN	A.TRSOMT	A.TSBQAM	A.TSIM	A.TUPMNS	A.TUSEMN	A.TYAMNS	A.TYQMNS	A.TYWBAS
1990	1	-8.	-1.7	-48.	45.	50.	0.	-1.7	3.	37.	-1115.
1990	2	6.	-1.7	0.	38.	-11.	0.	3.7	150.	32.	-1115.
1990	3	0.	-1.7	-20.	27.5	-11.	-5.7	-3.3	11.	22.	-1115.
1990	4	0.	-1.7	3.	46.	-11.	-7.	-5.5	8.	17.	-925.
1991	1	0.	-1.7	-48.	62.	50.	0.	-1.7	3.	37.	-925.
1991	2	0.	-1.7	0.	46.	-11.	0.	3.7	150.	32.	-925.
1991	3	0.	-1.7	-20.	28.5	-11.	-5.7	-3.3	11.	22.	-925.
1991	4	0.	-1.7	3.	46.	-11.	-7.	-5.5	8.	17.	-925.

		A.WM	A.WSMFM	A.WUS	A.YENTM	A.YDLM	A.YPRM	A.YUCTRM
1990	1	-0.03	-126.6	-0.06	8.	32.4	20.	17.5
1990	2	-0.045	-83.4	-0.06	8.	23.7	27.	17.5
1990	3	-0.045	0.	-0.06	8.	13.	35.	17.5
1990	4	-0.045	0.	-0.06	8.	13.	35.	17.5
1991	1	-0.045	39.	-0.06	8.	8.	35.	17.5
1991	2	-0.045	-39.	-0.06	8.	18.	35.	17.5
1991	3	-0.045	0.	-0.06	8.	0.	35.	17.5
1991	4	-0.045	220.	-0.06	8.	8.7	35.	17.5

SIMULATION OUTPUT BY DSET

EXOGENOUS VARIABLES

		ADJRS	AUTOS	AV.POILM	BLDPERM	CS82	DASTRIKE	DATE	DATT	DAUCON	DAUTO
1989	4	245.75	8.744	19.33	13.925	1350.3	0.	1989.4	1.	0.	1.09
1990	1	250.25	9.877	21.25	11.3	1362.57	0.	1990.1	1.	0.	1.09
1990	2	254.75	9.888	21.28	11.5	1373.89	0.	1990.2	1.	0.	1.09
1990	3	259.25	10.088	20.88	11.8	1384.13	0.	1990.3	1.	0.	1.09
1990	4	263.75	10.216	21.13	12.	1394.38	0.	1990.4	1.	0.75	1.09
1991	1	268.25	10.059	21.39	12.2	1406.02	0.	1991.1	1.	0.	1.09
1991	2	272.75	9.989	21.66	12.	1415.97	0.	1991.2	1.	0.	1.09
1991	3	277.25	9.964	21.92	12.2	1425.72	0.	1991.3	1.	0.	1.09
1991	4	281.75	9.888	22.19	12.2	1434.95	0.	1991.4	1.	0.	1.09

		DCETA	DEATHDUM	DEMDOM83	DERS	DFOOD	DGMSTK	DISC.T	DSAMPLE	DSEAS1	DSEAS2
1989	4	0.	0.	1.	1.	1.	0.	1.	1.	-1.	-1.
1990	1	0.	0.	1.	1.	1.	0.	1.	1.	1.	0.
1990	2	0.	0.	1.	1.	1.	0.	1.	1.	0.	1.
1990	3	0.	0.	1.	1.	1.	0.	1.	1.	0.	0.
1990	4	0.	0.	1.	1.	1.	0.	1.	1.	-1.	-1.
1991	1	0.	0.	1.	1.	1.	0.	1.	1.	1.	0.
1991	2	0.	0.	1.	1.	1.	0.	1.	1.	0.	1.
1991	3	0.	0.	1.	1.	1.	0.	1.	1.	0.	0.
1991	4	0.	0.	1.	1.	1.	0.	1.	1.	-1.	-1.

		DSEAS3	DSTKGL	DSTKGS	DSTKMI	DSTKTCU	DSTKTOT	DSTK371	DTIME	DTREND	DTSALES
1989	4	-1.	0.	0.	0.	0.	0.	0.	136.	0.	1.
1990	1	0.	0.	0.	0.	0.	0.	0.	137.	0.	1.
1990	2	0.	0.	0.	0.	0.	0.	0.	138.	0.	1.
1990	3	1.	0.	0.	0.	0.	0.	0.	139.	34.	1.
1990	4	-1.	0.	0.	0.	0.	0.	0.	140.	0.	1.
1991	1	0.	0.	0.	0.	0.	0.	0.	141.	0.	1.
1991	2	0.	0.	0.	0.	0.	0.	0.	142.	0.	1.
1991	3	1.	0.	0.	0.	0.	0.	0.	143.	35.	1.
1991	4	-1.	0.	0.	0.	0.	0.	0.	144.	0.	1.

		DTSI	DYFP	DYOUTH1	DYOUTH2	D1	D2	D3	D4	D57.69	D70.73
1989	4	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
1990	1	9.7	0.	0.	0.	1.	0.	0.	0.	0.	0.
1990	2	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
1990	3	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.
1990	4	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
1991	1	3.3	0.	0.	0.	1.	0.	0.	0.	0.	0.
1991	2	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
1991	3	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.
1991	4	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.

		D71.82	D72.76	D74.2	D75.1	D75.76	D76	D77	D77.82	D78	D79.4
1989	4	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1990	1	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1990	2	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1990	3	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1990	4	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1991	1	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1991	2	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1991	3	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1991	4	1.	0.	0.	0.	0.	0.	1.	1.	1.	1.

		D79.82	D80.2	D81.1	D81.3	D82.1	D82.23	D82.4	D83.1	EGFM	GAUTO82
1989	4	1.	1.	0.	1.	0.	0.	0.	0.	60.42	103.5
1990	1	1.	1.	0.	1.	0.	0.	0.	0.	62.3	103.896
1990	2	1.	1.	0.	1.	0.	0.	0.	0.	70.3	106.6
1990	3	1.	1.	0.	1.	0.	0.	0.	0.	70.3	114.313
1990	4	1.	1.	0.	1.	0.	0.	0.	0.	60.9	118.381
1991	1	1.	1.	0.	1.	0.	0.	0.	0.	60.8	120.212
1991	2	1.	1.	0.	1.	0.	0.	0.	0.	60.8	120.796
1991	3	1.	1.	0.	1.	0.	0.	0.	0.	60.8	120.681
1991	4	1.	1.	0.	1.	0.	0.	0.	0.	60.8	120.142

		GNP82	GTROF	GTRSL	GTRUCK82	IBFNC82	IPDONA82	IPDQ82	JCMH	JSSBENLV	JUCBENLV
1989	4	4168.1	454.4	146.7	49.8	120.8	258.453	83.06	214.6	513.78	277.
1990	1	4192.91	469.6	149.55	49.049	120.346	260.802	84.101	217.851	537.93	278.
1990	2	4227.25	472.9	152.46	48.153	119.424	262.016	84.781	221.119	537.93	279.
1990	3	4255.45	476.9	155.42	50.425	119.324	263.571	85.694	224.04	537.93	280.
1990	4	4288.93	479.3	157.34	52.343	119.416	265.151	86.649	227.019	537.93	281.
1991	1	4319.24	491.9	160.39	54.85	119.637	267.737	87.632	230.302	559.5	282.
1991	2	4342.8	493.6	163.51	56.569	118.736	269.915	88.455	233.76	559.5	283.
1991	3	4368.89	495.4	166.68	57.089	118.982	272.207	89.302	236.963	559.5	284.
1991	4	4390.27	498.8	169.92	57.075	119.201	274.264	90.059	240.212	559.5	285.

		MICHFRAC	MNOIL82	MPOP	PC	PCDV	PCPI	PCPIB	PGAS	PGAS.C	PLIQUOR
1989	4	0.336	566.	9333.	131.912	120.48	125.9	136.01	87.3	2.98	125.43
1990	1	0.338	577.587	9348.	133.556	120.521	126.852	137.51	92.994	2.99	126.82
1990	2	0.338	590.908	9363.	134.857	121.11	128.217	139.04	88.595	2.97	128.22
1990	3	0.338	600.01	9373.	136.456	121.877	129.734	140.57	91.658	2.98	129.64
1990	4	0.339	609.294	9383.	137.971	122.812	131.203	142.13	92.534	3.	131.07
1991	1	0.339	617.535	9393.	139.556	123.748	132.786	143.7	94.11	3.01	132.52
1991	2	0.339	624.521	9403.	141.161	124.648	134.382	145.29	95.494	3.03	133.99
1991	3	0.339	630.239	9413.	142.784	125.564	135.997	146.9	96.965	3.04	135.47
1991	4	0.339	634.989	9423.	144.431	126.482	137.646	148.53	98.44	3.06	136.97

		POIL.C	PPNF	RAAA	RCPCD	RGAS	RHORSEM	RIRCO	RIRCV	RIRT	RLFSEC
1989	4	20.68	126.1	8.89	8.44	0.05	1.	0.626	1.803	0.443	48.56
1990	1	21.81	127.083	9.073	8.259	0.05	1.	0.626	1.803	0.443	48.56
1990	2	20.75	128.497	9.128	8.428	0.05	1.	0.626	1.803	0.443	48.56
1990	3	21.	129.643	9.171	8.634	0.05	0.04	0.626	1.803	0.443	48.56
1990	4	21.26	130.802	9.213	8.708	0.05	1.	0.626	1.803	0.443	48.56
1991	1	21.52	132.086	9.255	8.563	0.05	1.	0.626	1.803	0.443	48.56
1991	2	21.79	133.276	9.295	8.758	0.05	1.	0.626	1.803	0.443	48.56
1991	3	22.05	134.475	9.328	8.877	0.05	0.04	0.626	1.803	0.443	48.56
1991	4	22.33	135.662	9.153	8.086	0.05	1.	0.626	1.803	0.443	48.56

		ROIL	RTYAM	RTYQM	RTYWM	RUG	RUM	STRPFRAC	STRSMNS	TCIGNRT	TCIGRT
1989	4	0.066	4.6	4.6	4.6	5.33	4.55	0.167	2.25	0.76	25.
1990	1	0.066	4.6	4.6	4.6	5.392	4.744	0.24	2.25	0.76	25.
1990	2	0.066	4.6	4.6	4.6	5.364	4.811	0.24	2.25	0.76	25.
1990	3	0.066	4.6	4.6	4.6	5.448	4.843	0.24	2.25	0.76	25.
1990	4	0.066	4.6	4.6	4.6	5.519	4.854	0.24	2.25	0.76	25.
1991	1	0.066	4.6	4.6	4.6	5.55	4.875	0.24	2.25	0.76	25.
1991	2	0.066	4.6	4.6	4.6	5.61	4.938	0.24	2.25	0.76	25.
1991	3	0.066	4.6	4.6	4.6	5.68	5.02	0.24	2.25	0.76	25.
1991	4	0.066	4.6	4.6	4.6	5.767	5.13	0.24	2.25	0.76	25.

		TCIGSRT	TCTFR	TEXEMPT	THORSER	TINPMNS	TINTDLM	TIRCA	TOTHMNS	TP	TPSL
1989	4	0.16	0.279	2000.	0.	0.	0.	1.75	0.	665.	193.4
1990	1	0.16	0.279	2100.	0.	0.	0.	0.	0.	673.499	196.815
1990	2	0.16	0.279	2100.	0.	0.	9.5	0.	0.	687.604	200.059
1990	3	0.16	0.279	2100.	0.	80.	0.	0.	60.	700.896	203.155
1990	4	0.16	0.279	2100.	0.	0.	0.	1.8	0.	714.651	206.335
1991	1	0.16	0.279	2100.	0.	0.	0.	0.	0.	723.1	210.709
1991	2	0.16	0.279	2100.	0.	0.	9.5	0.	0.	736.971	213.911
1991	3	0.16	0.279	2100.	0.	82.5	0.	0.	62.5	750.844	217.113
1991	4	0.16	0.279	2100.	0.	0.	0.	1.85	0.	763.679	220.125

		TSBRMNS	TSIP	TSSBASE	TSSRATE	TUPRT	TYCFMNS	TYCRM	TYRMNS	WSAGM	WSOM
1989	4	19.5	218.5	4.80E+04	0.075	53.66	0.	766.7	263.3	46.8	80.
1990	1	33.	229.488	5.13E+04	0.076	53.66	0.	853.6	276.2	47.1	81.25
1990	2	25.5	232.592	5.13E+04	0.076	53.66	0.	853.6	292.5	47.4	82.5
1990	3	30.	235.303	5.13E+04	0.076	53.66	1.8	853.6	276.1	47.7	83.75
1990	4	24.	238.17	5.13E+04	0.076	53.66	0.	853.6	274.5	48.	85.
1991	1	37.6	245.872	5.43E+04	0.076	53.66	0.	923.6	288.9	48.3	86.25
1991	2	24.	248.854	5.43E+04	0.076	53.66	0.	923.6	306.1	48.6	87.5
1991	3	24.4	251.758	5.43E+04	0.076	53.66	1.8	923.6	288.7	48.9	88.75
1991	4	26.	254.562	5.43E+04	0.076	53.66	0.	923.6	285.7	49.2	90.

		X82	YAVAFDCR	YAVAFDCU	YAVGA	YFP	YNFP	YOL	YOTRM	YP	YPDIV
1989	4	600.2	1399.36	1712.6	722.1	38.8	312.	255.3	3314.17	4540.9	115.7
1990	1	612.373	1431.	1746.	737.	36.518	319.336	259.724	3370.7	4631.12	117.961
1990	2	625.359	1321.	1612.	695.	34.147	324.178	264.279	3428.2	4710.77	120.247
1990	3	638.834	1266.	1545.	675.	33.643	328.91	268.704	3486.68	4786.19	122.602
1990	4	652.386	1390.	1699.	727.	34.747	334.905	273.218	3546.16	4861.81	125.052
1991	1	666.001	1434.	1752.	744.	36.501	340.44	277.809	3606.65	4950.92	127.546
1991	2	679.645	1349.	1650.	713.	36.928	345.272	282.516	3668.18	5027.87	130.002
1991	3	693.34	1293.	1581.	693.	37.173	350.531	287.263	3730.75	5105.16	132.457
1991	4	707.089	1422.	1740.	732.	37.528	356.271	291.997	3794.39	5177.48	134.963

		YPINT	YPRENT	YPWS	YUNB
1989	4	679.5	5.1	2216.9	15.
1990	1	690.914	12.6	2253.9	16.116
1990	2	706.039	12.75	2295.4	16.801
1990	3	722.421	12.91	2331.44	17.49
1990	4	737.693	13.07	2370.39	18.102
1991	1	751.572	13.23	2409.23	18.711
1991	2	766.466	13.39	2449.04	19.506
1991	3	782.375	13.56	2487.46	20.397
1991	4	792.326	13.72	2524.23	21.437

SIMULATION OUTPUT BY DSET

ENDOGENOUS VARIABLES

		AEQGM	AEQMFM	AEQPNMF	AFDCR	AFDCU	ECCM	EFIREM	EGLM	EGM	EGSM
1989	4	5710.	NA	5570.	188.572	23.147	134.97	189.4	410.72	635.44	164.31
1990	1	5753.92	9367.73	5628.87	191.86	25.073	135.91	190.493	411.562	638.973	165.111
1990	2	5761.54	9356.93	5690.8	192.889	25.275	135.592	191.467	413.447	649.695	165.949
1990	3	5805.98	9458.92	5755.49	191.595	23.941	135.693	192.346	414.776	651.84	166.765
1990	4	5902.49	9666.21	5830.82	192.613	24.01	136.111	193.268	415.717	644.168	167.552
1991	1	5948.67	9781.9	5903.81	194.968	26.069	136.596	194.278	416.938	646.098	168.36
1991	2	5992.94	9838.75	5977.35	195.042	26.059	136.74	195.294	418.684	648.825	169.341
1991	3	6034.62	9909.05	6049.92	192.856	24.478	136.59	196.282	420.69	651.899	170.41
1991	4	6074.21	1.02E+04	6123.22	193.137	24.392	136.567	197.269	422.35	654.662	171.512

		EMDOM	EMDVM	EMFM	EMICH	EMIM	EMNDM	EMRESM	EPNMFM	ERTRM	ESM
1989	4	425.34	277.9	925.43	4294.	10.2	222.19	435.59	2297.53	720.99	888.68
1990	1	422.33	267.352	910.547	4280.79	10.218	220.865	424.373	2306.9	722.967	893.568
1990	2	423.158	278.226	921.646	4305.66	10.216	220.262	416.432	2317.88	726.063	899.956
1990	3	425.04	284.917	930.924	4322.86	10.185	220.967	409.445	2330.65	729.44	907.105
1990	4	427.089	288.017	937.219	4337.04	10.152	222.114	410.717	2344.94	733.084	915.05
1991	1	428.25	289.456	940.904	4358.31	10.106	223.198	411.516	2359.79	736.753	923.479
1991	2	427.343	289.166	940.396	4376.2	10.047	223.886	413.632	2373.35	739.964	931.705
1991	3	425.368	287.244	936.756	4391.72	9.984	224.144	417.25	2385.82	742.837	939.778
1991	4	422.007	283.877	929.849	4403.94	9.91	223.965	421.56	2397.87	745.402	947.935

		ETCM	ETRM	EWSM	EWTRM	GA	GASVAL	HRSM	LFM	NTCIGMNS	NTHORSEM
1989	4	153.98	920.3	3858.41	199.32	102.691	114.5	42.45	4643.	49.3	0.
1990	1	153.687	923.025	3856.42	200.058	109.688	113.5	42.057	4652.32	45.263	0.
1990	2	153.777	926.875	3889.22	200.812	110.883	110.5	42.064	4669.8	51.721	0.
1990	3	154.186	931.132	3913.41	201.693	107.279	112.8	42.469	4685.36	53.831	0.
1990	4	154.714	935.645	3926.33	202.56	108.844	117.6	42.88	4701.84	49.69	0.
1991	1	155.287	940.046	3946.79	203.293	112.758	116.7	43.122	4720.82	44.964	0.
1991	2	155.783	943.778	3962.57	203.815	113.291	114.8	43.246	4741.67	51.352	0.
1991	3	156.137	947.046	3974.47	204.209	109.088	117.5	43.271	4762.37	53.459	0.
1991	4	156.326	949.864	3982.38	204.463	110.245	122.4	43.237	4782.19	49.285	0.

		NTSBMNS	NTYMNS	OILVAL	PCPID	RUMICH	STCIGMNS	TBWMNS	TCIGMNS	TCTF	THORSEM
1989	4	364.7	813.1	87.8	124.42	7.51	10.4	12.2	64.8	9.6	0.
1990	1	340.	828.092	102.488	125.462	7.986	9.529	11.725	59.557	9.94	0.
1990	2	443.021	1131.4	102.187	126.88	7.798	10.889	11.229	68.054	12.148	0.
1990	3	379.515	812.468	106.061	128.429	7.737	11.333	14.938	70.83	11.577	21.233
1990	4	399.005	834.2	104.712	129.921	7.759	10.461	12.354	65.382	11.171	0.
1991	1	383.035	909.266	101.587	131.504	7.679	9.466	11.875	59.163	10.745	0.
1991	2	507.011	1219.56	106.584	133.089	7.708	10.811	11.412	67.569	12.801	0.
1991	3	429.45	881.143	110.755	134.691	7.783	11.255	15.107	70.341	12.291	21.299
1991	4	443.657	895.416	109.707	136.333	7.91	10.376	12.483	64.849	11.761	0.

		TINHMNS	TINTMNS	TLIQMNS	TOILMNS	TRESM	TRSAMNS	TRSAMNST	TRSAMN8T	TRSAMN82	TRSAM82
1989	4	28.2	0.	6.1	12.5	4300.46	137.5	NA	114.5	114.127	123.594
1990	1	27.129	0.	4.395	12.1	4285.08	142.514	143.014	118.663	118.248	129.532
1990	2	22.764	112.448	4.93	11.932	4372.77	174.166	174.666	144.222	143.809	128.807
1990	3	27.071	0.	5.048	12.278	4471.53	165.98	166.48	136.597	136.186	130.436
1990	4	28.989	0.	6.202	12.438	4579.37	160.157	160.657	130.815	130.408	139.876
1991	1	27.881	0.	4.51	12.206	4611.21	154.045	154.545	124.887	124.483	135.767
1991	2	23.344	117.657	5.057	12.409	4697.61	183.533	184.033	147.641	147.24	132.239
1991	3	28.19	0.	5.173	12.794	4779.63	176.213	176.713	140.735	140.337	134.586
1991	4	30.521	0.	6.364	12.976	4881.38	168.615	169.115	133.706	133.311	142.778

		TRSM	TRSMNS	TRSMNST	TRSMT	TRSM824	TRSM824T	TRSOMNS	TRSOMNST	TSBDLNS	TSBQAMNS
1989	4	664.046	715.2	NA	NA	533.713	NA	577.7	579.4	71.1	455.3
1990	1	669.871	607.405	609.605	672.297	533.924	535.858	464.891	466.592	78.644	451.644
1990	2	693.855	709.744	711.944	696.006	546.857	548.553	535.577	537.278	96.625	565.146
1990	3	699.015	699.743	701.943	701.213	544.281	545.993	533.763	535.464	44.721	454.236
1990	4	713.424	768.382	770.582	715.467	549.123	550.696	608.225	609.925	68.816	491.821
1991	1	722.694	655.302	657.502	725.12	549.56	551.405	501.257	502.957	78.769	499.404
1991	2	742.448	759.448	761.649	744.599	557.859	559.475	575.916	577.616	96.775	627.786
1991	3	748.722	749.502	751.702	750.92	555.881	557.513	573.289	574.989	50.594	504.445
1991	4	758.232	816.641	818.841	760.275	556.162	557.66	648.026	649.727	68.866	538.523

		TSIM	TUPMNS	TUSEMNS	TYAMNS	TYAMNT	TYDLNS	TYFISCNS	TYMNS	TYQMNS	TYQMNT
1989	4	2078.3	69.4	114.7	17.	NA	75.7	0.	888.8	39.2	NA
1990	1	2183.2	0.	112.464	41.269	41.932	78.026	0.	906.117	124.586	124.586
1990	2	2200.68	0.	128.783	320.308	323.553	108.306	0.	1239.71	170.855	170.855
1990	3	2222.49	75.895	129.022	22.03	20.592	77.611	0.	891.88	112.283	112.283
1990	4	2249.25	74.793	123.379	16.602	15.518	79.781	0.	913.981	48.427	48.427
1991	1	2360.22	0.	121.611	42.726	42.726	81.208	0.	990.474	130.547	130.547
1991	2	2376.17	0.	138.425	328.921	330.081	114.898	0.	1334.46	181.071	181.071
1991	3	2390.07	81.201	138.573	22.011	20.202	84.879	0.	967.822	119.124	119.124
1991	4	2415.69	80.073	132.694	16.451	15.023	85.811	0.	981.227	50.929	50.929

		TYWM	TYWMNS	TYWMNST	TYWMT	UMICH	WM	WSGM	WSM	WSMFM	WSPNMF
1989	4	1065.4	1095.9	NA	NA	349.	13.75	3628.36	2.53E+04	8763.82	1.28E+04
1990	1	1022.29	1016.46	1018.5	1022.29	371.524	13.812	3676.6	2.53E+04	8529.76	1.30E+04
1990	2	1038.96	1041.04	1038.96	1038.96	364.148	13.904	3743.24	2.57E+04	8623.77	1.32E+04
1990	3	1059.3	1033.67	1033.67	1059.3	362.5	13.995	3784.57	2.61E+04	8805.53	1.34E+04
1990	4	1092.2	1123.45	1123.46	1092.2	364.793	14.239	3802.19	2.67E+04	9059.36	1.37E+04
1991	1	1112.45	1106.1	1108.32	1112.45	362.512	14.302	3843.42	2.71E+04	9203.83	1.39E+04
1991	2	1128.31	1130.57	1128.31	1128.31	365.465	14.408	3888.37	2.75E+04	9252.32	1.42E+04
1991	3	1143.05	1115.39	1115.39	1143.05	370.653	14.483	3933.96	2.78E+04	9282.36	1.44E+04
1991	4	1166.17	1199.55	1199.55	1166.17	378.25	14.562	3976.56	2.83E+04	9498.76	1.47E+04

		WUS	YA	YAFDCR	YAFDCU	YAT	YDM	YDM824	YENTM	YGA	YOLM
1989	4	10.57	6271.	263.879	39.641	NA	3.68E+04	2.96E+04	2262.66	74.153	2834.9
1990	1	10.641	6363.55	274.551	43.778	6432.04	3.71E+04	2.96E+04	2290.45	80.84	2848.59
1990	2	10.726	6444.61	254.807	40.743	6480.19	3.77E+04	2.97E+04	2314.82	77.064	2897.59
1990	3	10.795	6523.9	242.559	36.989	6535.34	3.83E+04	2.98E+04	2341.32	72.413	2948.02
1990	4	10.865	6610.19	267.732	40.793	6610.19	3.91E+04	3.01E+04	2377.15	79.13	2989.47
1991	1	10.943	6708.4	279.584	45.674	6708.4	3.98E+04	3.03E+04	2415.84	83.892	3033.78
1991	2	11.032	6824.52	263.112	42.998	6824.52	4.03E+04	3.03E+04	2449.83	80.777	3074.57
1991	3	11.109	6943.54	249.362	38.699	6943.54	4.09E+04	3.03E+04	2483.44	75.598	3095.81
1991	4	11.187	7060.02	274.64	42.441	7060.02	4.16E+04	3.05E+04	2519.02	80.699	3153.3

		YPADJM	YPERM	YPERM824	YPM	YPM824	YPRM	YQ	YSSTRM	YTM824	YTRM
1989	4	3.78E+04	3.57E+04	2.93E+04	4.21E+04	3.39E+04	7122.67	9385.33	2442.55	202.887	6431.65
1990	1	3.80E+04	3.62E+04	2.94E+04	4.24E+04	3.38E+04	7273.8	9564.25	2558.17	152.148	6646.77
1990	2	3.86E+04	3.67E+04	2.95E+04	4.31E+04	3.40E+04	7422.7	9737.52	2600.53	167.875	6715.19
1990	3	3.93E+04	3.73E+04	2.96E+04	4.38E+04	3.41E+04	7589.52	9930.84	2643.58	186.496	6796.18
1990	4	4.00E+04	3.79E+04	2.98E+04	4.47E+04	3.44E+04	7748.94	1.01E+04	2687.35	272.926	6938.5
1991	1	4.07E+04	3.85E+04	2.99E+04	4.55E+04	3.46E+04	7897.97	1.03E+04	2802.48	322.355	7134.86
1991	2	4.13E+04	3.91E+04	3.01E+04	4.62E+04	3.47E+04	8053.34	1.05E+04	2848.89	250.039	7224.27
1991	3	4.19E+04	3.97E+04	3.02E+04	4.68E+04	3.47E+04	8215.67	1.07E+04	2896.05	172.824	7316.29
1991	4	4.26E+04	4.04E+04	3.03E+04	4.76E+04	3.49E+04	8333.23	1.09E+04	2944.	215.016	7469.37

		YUCTRM
1989	4	297.253
1990	1	318.733
1990	2	313.853
1990	3	313.958
1990	4	317.333
1991	1	316.58
1991	2	320.327
1991	3	325.826
1991	4	333.201

PERCENT CHANGES AT ANNUAL RATES

	AEQGM	AEQMFM	AEQPNMF	AFDCR	AFDCU	ECCM	EFIREM	EGLM	EGM	EGSM
1990 1	3.113	NA	4.294	7.158	37.676	2.814	2.329	0.822	2.242	1.965
1990 2	0.53	-0.461	4.474	2.164	3.259	-0.932	2.06	1.844	6.883	2.044
1990 3	3.121	4.431	4.625	-2.658	-19.5	0.298	1.849	1.292	1.327	1.98
1990 4	6.816	9.058	5.338	2.142	1.16	1.237	1.931	0.91	-4.626	1.901
1991 1	3.166	4.874	5.102	4.981	38.98	1.433	2.107	1.18	1.203	1.943
1991 2	3.01	2.345	5.076	0.151	-0.153	0.422	2.109	1.685	1.698	2.351
1991 3	2.811	2.889	4.945	-4.409	-22.157	-0.439	2.038	1.929	1.909	2.549
1991 4	2.65	12.951	4.934	0.584	-1.402	-0.068	2.025	1.588	1.706	2.612

	EMDOM	EMDVM	EMFM	EMICH	EMIM	EMNDM	EMRESM	EPNMFM	ERTRM	ESM
1990 1	-2.801	-14.34	-6.28	-1.225	0.691	-2.364	-9.909	1.641	1.101	2.218
1990 2	0.786	17.288	4.965	2.343	-0.055	-1.087	-7.277	1.917	1.724	2.89
1990 3	1.79	9.972	4.088	1.607	-1.21	1.287	-6.545	2.221	1.873	3.215
1990 4	1.942	4.424	2.732	1.319	-1.301	2.091	1.248	2.475	2.013	3.55
1991 1	1.091	2.013	1.582	1.976	-1.802	1.966	0.78	2.557	2.017	3.735
1991 2	-0.844	-0.4	-0.216	1.652	-2.293	1.239	2.072	2.317	1.754	3.61
1991 3	-1.836	-2.632	-1.539	1.426	-2.506	0.46	3.545	2.118	1.562	3.511
1991 4	-3.124	-4.607	-2.917	1.117	-2.919	-0.318	4.196	2.036	1.388	3.517

	ETCM	ETRM	EWSM	EWTRM	GA	GASVAL	HRSM	LFM	NTCIGMNS	NTHORSEM
1990 1	-0.759	1.189	-0.206	1.489	30.167	-3.448	-3.649	0.805	-28.944	-100.
1990 2	0.234	1.679	3.446	1.514	4.431	-10.161	0.064	1.512	70.482	-100.
1990 3	1.067	1.85	2.51	1.767	-12.38	8.589	3.902	1.338	17.344	-100.
1990 4	1.377	1.952	1.326	1.732	5.963	18.139	3.937	1.414	-27.396	-100.
1991 1	1.489	1.895	2.101	1.454	15.178	-3.026	2.269	1.625	-32.957	-100.
1991 2	1.283	1.597	1.608	1.03	1.905	-6.355	1.156	1.777	70.133	-100.
1991 3	0.914	1.392	1.207	0.776	-14.034	9.744	0.233	1.758	17.452	-100.
1991 4	0.484	1.195	0.798	0.497	4.308	17.753	-0.314	1.675	-27.762	-100.

	NTSBMNS	NTYMNS	OILVAL	PCPID	RUMICH	STCIGMNS	TBWMNS	TCIGMNS	TCTF	THORSEM
1990 1	-24.461	7.581	85.656	3.391	27.854	-29.517	-14.684	-28.643	14.952	-100.
1990 2	188.257	248.458	-1.167	4.6	-9.082	70.482	-15.891	70.482	123.065	-100.
1990 3	-46.146	-73.407	16.047	4.972	-3.098	17.344	213.211	17.344	-17.518	2.03E+07
1990 4	22.18	11.136	-4.991	4.727	1.125	-27.396	-53.222	-27.396	-13.312	-100.
1991 1	-15.074	41.15	-11.416	4.965	-4.036	-32.957	-14.634	-32.957	-14.413	-100.
1991 2	206.983	223.632	21.178	4.908	1.494	70.133	-14.688	70.133	101.494	-100.
1991 3	-48.527	-72.75	16.594	4.903	3.973	17.452	207.068	17.452	-15.023	2.06E+07
1991 4	13.904	6.638	-3.733	4.966	6.666	-27.762	-53.382	-27.762	-16.164	-100.

	TINHMNS	TINTMNS	TLIQMNS	TOILMNS	TRESM	TRSAMNS	TRSAMNST	TRSAMN8T	TRSAMN82	TRSAM82
1990 1	-14.343	-100.	-73.06	-12.208	-1.422	15.402	NA	15.353	15.244	20.645
1990 2	-50.429	1.60E+10	58.358	-5.438	8.44	123.065	122.499	118.205	118.76	-2.219
1990 3	99.986	-100.	9.969	12.132	9.344	-17.518	-17.471	-19.529	-19.574	5.153
1990 4	31.514	-100.	127.797	5.294	10.002	-13.312	-13.274	-15.886	-15.923	32.245
1991 1	-14.441	-100.	-72.035	-7.249	2.81	-14.413	-14.371	-16.932	-16.973	-11.241
1991 2	-50.858	1.92E+10	57.999	6.843	7.708	101.494	101.076	95.328	95.734	-9.996
1991 3	112.677	-100.	9.556	12.972	7.168	-15.023	-14.985	-17.439	-17.476	7.29
1991 4	37.409	-100.	129.015	5.824	8.791	-16.164	-16.122	-18.53	-18.572	26.663

	TRSM	TRSMNS	TRSMNST	TRSMT	TRSM824	TRSM824T	TRSOMNS	TRSOMNST	TSBDLNS	TSBQAMNS
1990 1	3.555	-47.976	NA	NA	0.158	NA	-58.063	-57.943	49.687	-3.174
1990 2	15.109	86.42	86.032	14.87	10.046	9.818	76.15	75.811	127.878	145.164
1990 3	3.007	-5.518	-5.502	3.026	-1.871	-1.854	-1.348	-1.344	-95.411	-58.267
1990 4	8.503	45.396	45.233	8.382	3.605	3.49	68.601	68.34	460.65	37.437
1991 1	5.299	-47.1	-46.995	5.507	0.318	0.516	-53.87	-53.76	71.659	6.311
1991 2	11.39	80.396	80.065	11.185	6.179	5.984	74.258	73.953	127.844	149.71
1991 3	3.424	-5.137	-5.122	3.439	-1.411	-1.396	-1.812	-1.807	-92.53	-58.312
1991 4	5.178	40.939	40.804	5.076	0.202	0.105	63.258	63.036	243.249	29.886

	TSIM	TUPMNS	TUSEMNS	TYAMNS	TYAMNT	TYDLNS	TYFISCNS	TYMNS	TYQMNS	TYQMNT
1990 1	21.77	-100.	-7.572	3372.8	NA	12.867	-100.	8.024	1.01E+04	NA
1990 2	3.241	-100.	71.938	3.63E+05	3.54E+05	271.235	-100.	250.377	253.699	253.699
1990 3	4.023	3.32E+09	0.746	-99.998	-99.998	-73.631	-100.	-73.211	-81.347	-81.347
1990 4	4.906	-5.684	-16.382	-67.748	-67.745	11.66	-100.	10.286	-96.54	-96.54
1991 1	21.242	-100.	-5.609	4286.47	5646.52	7.346	-100.	37.918	5181.21	5181.21
1991 2	2.731	-100.	67.866	3.51E+05	3.56E+05	300.737	-100.	229.495	270.106	270.106
1991 3	2.359	4.35E+09	0.429	-99.998	-99.999	-70.218	-100.	-72.333	-81.267	-81.267
1991 4	4.357	-5.444	-15.92	-68.795	-69.42	4.465	-100.	5.656	-96.659	-96.659

	TYWM	TYWMNS	TYWMNST	TYWMT	UMICH	WM	WSGM	WSM	WSMFM	WSPNMF
1990 1	-15.228	-25.991	NA	NA	28.423	1.826	5.424	0.059	-10.263	6.008
1990 2	6.683	10.029	8.283	6.683	-7.707	2.684	7.45	5.934	4.482	6.477
1990 3	8.064	-2.804	-2.024	8.064	-1.799	2.637	4.49	7.161	8.701	6.949
1990 4	13.01	39.539	39.54	13.01	2.555	7.175	1.875	8.392	12.038	7.946
1991 1	7.626	-6.036	-5.282	7.626	-2.478	1.761	4.408	6.861	6.533	7.79
1991 2	5.827	9.146	7.413	5.827	3.298	3.018	4.76	5.257	2.124	7.511
1991 3	5.329	-5.264	-4.503	5.329	5.8	2.085	4.774	4.816	1.305	7.168
1991 4	8.339	33.772	33.773	8.339	8.454	2.188	4.401	7.534	9.656	7.071

	WUS	YA	YAFDCR	YAFDCU	YAT	YDM	YDM824	YENTM	YGA	YOLM
1990 1	2.728	6.035	17.184	48.743	NA	4.081	0.667	5.005	41.248	1.946
1990 2	3.225	5.193	-25.809	-24.974	3.028	5.954	1.293	4.323	-17.415	7.059
1990 3	2.578	5.012	-17.885	-32.072	3.448	6.929	1.864	4.657	-22.039	7.146
1990 4	2.625	5.396	48.433	47.934	4.66	8.039	3.163	6.264	42.586	5.744
1991 1	2.897	6.077	18.919	57.15	6.077	7.535	2.448	6.67	26.336	6.061
1991 2	3.295	7.105	-21.565	-21.452	7.105	5.702	0.757	5.748	-14.046	5.488
1991 3	2.823	7.16	-19.32	-34.384	7.16	5.338	0.414	5.601	-23.281	2.792
1991 4	2.842	6.88	47.14	44.656	6.88	7.307	2.231	5.855	29.846	7.637

	YPADJM	YPERM	YPERM824	YPM	YPM824	YPRM	YQ	YSSTRM	YTM824	YTRM
1990 1	2.143	5.91	1.369	2.986	-0.392	8.761	7.846	20.321	-68.373	14.064
1990 2	6.407	5.703	1.085	6.221	1.548	8.443	7.445	6.789	48.208	4.182
1990 3	7.417	6.196	1.619	7.199	2.122	9.297	8.181	6.789	52.312	4.912
1990 4	8.109	6.558	1.994	8.356	3.465	8.67	8.099	6.789	358.668	8.642
1991 1	6.994	6.778	1.796	7.046	1.982	7.917	7.624	18.27	94.608	11.81
1991 2	5.862	6.559	1.741	5.907	0.953	8.104	7.548	6.789	-63.801	5.107
1991 3	5.398	6.384	1.453	5.523	0.591	8.31	7.673	6.789	-77.176	5.193
1991 4	7.103	6.67	1.676	7.483	2.399	5.847	5.849	6.789	139.585	8.636

	YUCTRM
1990 1	32.192
1990 2	-5.986
1990 3	0.133
1990 4	4.37
1991 1	-0.946
1991 2	4.819
1991 3	7.045
1991 4	9.366