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Chapter 1

A QUARTERLY ECONOMETRIC MODEL OF JAPAN*

Fumimasa HAMADA

INTRODUCTION

The purpose of this paper is to present a quarterly econometric model of Japan. This model was constructed to make an attempt to analyze the structure of the postwar Japanese economy from the view-point of the interdependency between financial and non-financial transactions, and also to forecast the movements of the Japanese economy in the short-run. The effects of fiscal and monetary policies are under investigation too.

The supply of cash currency through changes in demand for and supply of treasury funds including those of general government and foreign exchange has recently been increasing, which appear not only to influence real economic activity, but also to form a potential factor to induce creeping or even hyper inflation through the accumulation of excess liquidity in the private sector. Though this inflationary factor has not yet been analyzed, a monetary expansion mechanism is assumed to work so as to transmit a monetary impact to real economic activity.

The new issue of the government bonds to finance the government deficits is dealt with as a factor to give rise to an impact on money market, based on the so-called "credit-expansion" mechanism. The rigidity of interest rates is a specific feature of our financial market, so that the monetary impact on the real economic activity is given by the volume of funds supplied mainly through financial intermediaries. Consequently, the indirect financing system, in particular with commercial banks as the main participants, has an important role in making adjustment of shortages and overages of funds by sector, or in other words, in transferring savings by sector.

To deal with the interdependency described above, (i) the government budget constraint is introduced in the model explicitly so as to be able to match an increase in the volume of government expenditures with that of sources of funds

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such as an increase in tax-revenues, a new issue of government bonds, and so forth, (ii) commercial bank behavior is specified in its relation to derivative deposits and to the "quota system" of government bonds newly issued, and (iii) the public depositors' behavior is specified in its relation to their sources of funds.

The present paper includes (i) the outline of the model, and (ii) the summary of final test of the model and its dynamic multipliers. The results of extrapolation and policy simulation will be seen in another paper separately.

I. THE OUTLINE OF THE MODEL

This model is a medium size non-linear and dynamic system, composed of 168 structural equations including 16 equations of a monetary sector and 43 equations of international trade sector, the observation period of which is from the first quarter of 1965 through the fourth quarter of 1975. Needless to say, the influence on this model of many works on macroeconometric models, already published abroard as well as in our country, has been inevitable. Among others, Teigen (1964) was useful in dealing with the credit-expansion process in the Japanese money market explicitly, and further more, equations for demand for labor and those for wage determination are following those proposed in E. Kuh and R. L. Schmalensee (1973).

A. *Final Demand Sector*

This sector determines the level of effective demand, the main components of which are personal consumption expenditures, gross fixed investment, investment in inventories by private non-agriculturel enterprises, and government expenditures. The last one is assumed to be an exogenous variable. Export variables are dealt with separately in International Trade Sector.

Equation for personal consumption expenditures determines the distribution of income into consumption and savings. This equation reflects a recent declining tendency of marginal propensity to consume, presumably caused by a longer average lag in consumer behavior and by the increasing importance of the effect of real financial assets. When total private consumption is determined, consumption by sub-item is taken as depending not only on this total (the budget constraint), but also on the relative prices.

The equation for gross investment in private dwellings is specified, taking account of the income-effect and costs of dwelling's services relative to prices of consumption goods. The effect of costs of dwelling's services is approximated as

$$a_1 PIHP + a_2 PIHP \cdot SRL0 = a_2 PIHP(SRL0 + a_1/a_2),$$
$$a_1 \gtreqless 0,\ a_2 < 0,$$

where $PIHP$ is the price of dwellings, and $SRL0$ is a short-term (regulated) rate on lendings of all banks, the latter of which seems to be a good proxy variable for

rates by which individuals borrow funds for dwelling investment. In the equation above, the ratio a_1/a_2 is supposed to be the difference between real rate of depreciation of dwellings, and the expected rate of change in prices of dwellings. The sign of coefficient a_1 depends on that of the difference.

Equation for gross fixed investment is also assumed to depend on the level of general economic activity, and real costs of capital services. Here, the expected rate of change in prices of fixed capital goods was found to play an important role in moving the economy as a whole, in which alternative simulation experiments are made.

Investment in inventories by private non-agricultural sector is assumed to be of the 'stock-adjustment' type, and also assumed to be dependent on changes in borrowings from city banks, deflated by prices of inventory goods, and changes in prices of imported goods.

B. *Production and Employment Sector*

This sector is composed of equations for the production level, potential real gross private product, labor-hours, demand for the number of workers, real private GNP, real stock of capital, and so forth.

Production level is simply dependent on real gross private product. A structural change is assumed to have taken place at the second quarter (July through September) of 1973, caused by the first "Oil-Crisis". Taking this into account, two dummy variables were introduced to switch two alternative coefficients on and off. A production function for potential real gross private product is introduced to determine the degree of utilization, in combination with real final demand. Labor-hours, and the number of workers are determined by the level of effective demand, the specification of which is following E. Kuh and R. L. Schmalensee (1973).

C. *Wages and Prices Sector*

Price equations are, in principle, of the 'Full-Cost' type. At first, we attempted to fit to data, the flexible mark-up schedule, but it was in vain. Now, as a matter of fact, the simplest specification was adopted. This has, unexpectedly, brought about a new problem on the specification of price equations, on which I will present interesting results at the earliest opportunity.

In price equations, principal determinants are found to be the prices of regulated industry goods, money wage rate, prices of raw materials, and those of fuels, the last two of which are imported from abroad.

Equation for wage rate determination is of E. Kuh and R. L. Schmalensee type[1]. That is, money wage rate is dependent on the normal level of the 'Value-Productivity' of labor, and its short-run divergence from the normal level, with a simple linear adjustment lag-distribution. In our country, there seems to be about 2% rate of unemployment and 6–7% increase in money wage rate these

[1] See, E. Kuh (1967) and also E. Kuh and R. L. Schmalensee (1973), Chapter 9.

days. The observations during the last two decades, however, have not precisely yielded the so-called 'Phillips Curve' relationship.

D. *Income Distribution*

Wage earnings of private employees are the product of money wage rate and labor-hours of private sector. The interest income of individuals from property is assumed to be dependent on the accumulation of personal savings, and interest rate, with a lag-distribution. Equation for dividends income is assumed to be explained by the 'Dividends-Hypothesis' of John Lintner. Corporate profits are determined as the difference between net national product and the sum of personal incomes. No adjustment has been made of the errors which were generated through the determination of corporate income, and this does not appear so serious in the final tests.

E. *Fiscal and Monetary Sector*

Three tax equations are introduced; that is, personal income tax, corporate income tax, and indirect taxes. Tax rate is not introduced into personal income tax equation, because of complexity in its progressive system, and, in contrast, tax rate on corporate income is explicitly introduced in the equation for corporate income tax.

The monetary sector of this model is specifically designed to deal with the indirect financing system and regulated interest rates, which are actually prevailing in the post-war Japanese financial market. We assume that, except for specific period 1971 through 1975, the expected marginal internal rate of return on bank-loans has been higher than the marginal cost of accepting deposits from private non-financial sector, so that there has presumably been excess demand for bank-loans potentially in the market.

Moreover, the regulated interest rates on commercial bills and those on lendings of all banks appear to be adjusted by monetary authority, move in the direction of equating the sum of demand for and the sum of supply of bank-loans, for these several years. As a matter of fact, a flexible credit expansion mechanism is assumed, to deal with the commercial bank behavior, and also with the interrelation between the credit expansion process and changes in cash currency in circulation. The latter is closely related to changes in receipts and payments of government's treasury, particularly its transactions with the public. This item is also related to the balance of foreign exchange accounts of the government, its selling of the short term government securities to the Bank of Japan, on the one hand, and to changes in supply of high-powered money to commercial banks by the Bank of Japan, on the other hand.

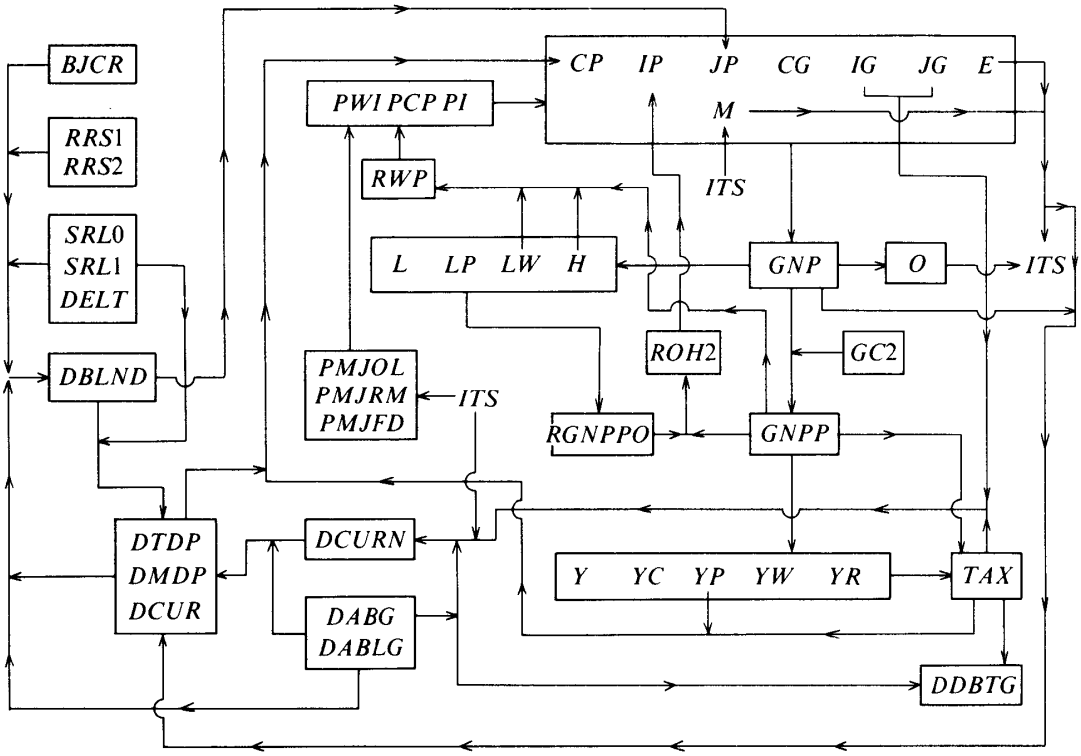
F. *International Trade Sector*

Our international trade sector is designed after the one that has already been established as a part of "A Quarterly Forecasting Econometric Model of Japan: KYQ75 (Kyoto Institute of Economic Research, Kyoto University) of the LINK

Model[2], though ours has turned out to be rather simplified in its commodity classification and specification of equations.

Finally, the simplified flow diagram of the model is shown below:

THE SIMPLIFIED FLOW DIAGRAM OF THE MODEL



Note: ITS means International Trade Sector.

II. FINAL TEST AND MULTIPLIERS ANALYSIS

II.1 *Final Test*

Final test has been done for the period of 1968–75 fiscal years. The reason why the first two years of the observation period were excluded is, that it seemed inappropriate to take observed values of predetermined endogeneous variables in 1965 (fiscal year) reflecting a drastic recession.

Table 1 shows a summary of findings by the test, where RMS is the root-mean-squares of errors, and the rightmost column shows percentage rates of RMS to sample mean. These figures show that the deviations of final test run from the observed values appear not so small as those for the periods excluding recent few years of drastic fluctuations caused by the international monetary crisis and the 'Oil-Crisis'. Though the direction of deviations of the final test run is not

[2] See, L. R. Klein, C. Moriguchi, and A. V. Peeterssen (1975).

TABLE 1. FINAL TEST 1968·I–1975·IV

	Variables	Sample Mean	RMS	Percentage rate
A.	Final Demand			
	GNP	95694.8	2541.6	2.7
	RGNP	79051.5	3279.3	4.1
	RCP	41155.8	2240.8	5.4
	RIFEP	14736.0	961.3	6.5
B.	Output & Employment			
	RGNPPO	79543.8	3768.2	4.7
	O	106.0	5.8	5.5
	LWP	32.601	0.263	0.8
C.	Prices & Wages			
	PCP	1.199	0.031	2.6
	PWI	1.163	0.036	3.1
	RWP	0.55088	0.02608	4.7
D.	Income Distribution			
	YP	76003.2	1751.3	2.3
	YWPP	40184.5	1893.7	4.7
	YR	10059.5	395.1	3.9
E.	Tax & Money Supply			
	TAX	16403.1	1195.4	7.3
	TDP	45320.0	7740.6	17.1
	M2	71985.22	14284.03	19.8
F.	International Trade			
	REJTOT	23722.3	1423.7	6.0
	RMJTOT	20756.8	1447.8	7.0
	EJBY	32006.9	2041.7	6.4
	MJBY	27200.3	1742.2	6.4

shown here, it appears that most of the variables are underestimated throughout the observation period. Particularly, the real consumption expenditures are significantly under-estimated, because of interaction between real consumption and real demand for time deposits at banks. The latter enters, as a determinant, the equation for real consumption, so that underestimation of the latter has probably brought about a decline of the former, which in turn, reduce the latter through a decline of personal disposable income. This general tendency, however, vanishes when the starting period of the final test, in making an extrapolation or a prediction for the period of the first quarter of 1977 through the fourth quarter of 1980, is moved to the second quarter of 1973.

II.2 *Dynamic Multipliers Analysis*

Since this model includes an explicit identity between the government investment and a corresponding change in the government debt, for the calculation of investment multipliers, it is necessary to make an increase in government invest-

TABLE 2. PUBLIC INVESTMENT MULTIPLIERS: SUSTAINED CHANGE CASE

Period	*GNP*	*RGNP*	*RIFEP*	*PCP*	*M2*	*DDBTG*
1	1407.1	1163.7	60.8	0.0	254.1	213.3
2	1833.7	1390.3	129.5	0.0004	610.8	153.7
3	2343.1	1578.8	211.6	0.0012	1098.0	111.6
4	2977.1	1830.5	298.6	0.0020	1932.6	40.3
5	2832.4	1744.6	350.5	0.0028	2208.4	22.3
6	2860.9	1745.4	379.9	0.0034	2906.4	−26.2
7	2838.7	1714.5	391.1	0.0037	3054.3	30.0
8	2765.6	1637.4	388.2	0.0040	3080.1	22.3
9	2741.8	1611.4	375.0	0.0040	3608.0	36.6
10	2749.6	1604.7	357.4	0.0041	3757.8	1.5
11	2727.7	1569.1	334.8	0.0041	4330.3	56.3
12	2783.3	1566.3	296.8	0.0041	5184.0	35.1
13	2749.3	1509.3	247.3	0.0041	5119.9	43.1
14	2700.1	1448.6	188.5	0.0041	5722.6	5.6
15	2601.2	1353.6	122.8	0.0041	5550.9	60.4
16	2523.5	1285.8	59.2	0.0040	5205.5	46.7
17	2402.1	1200.8	−2.4	0.0039	5825.3	61.9
18	2337.8	1160.5	−51.9	0.0038	5761.8	32.1
19	2299.0	1123.3	−88.0	0.0037	6504.8	85.6
20	2331.3	1125.1	−109.5	0.0036	7676.8	69.4
21	2374.3	1131.9	−118.9	0.0035	7372.4	76.5
22	2462.0	1174.2	−118.7	0.0035	8155.4	38.1
23	2539.8	1195.8	−111.0	0.0034	7698.1	80.3
24	2659.1	1242.9	−96.7	0.0034	6909.1	56.2
25	2737.3	1256.6	−78.6	0.0034	7789.9	58.4
26	2830.4	1298.8	−57.2	0.0034	7490.3	17.8
27	2889.5	1308.6	−34.3	0.0034	8575.6	62.0
28	2988.6	1346.6	−9.8	0.0034	10297.1	40.1
29	3037.5	1355.9	14.1	0.0034	9615.4	44.9
30	3105.1	1390.0	37.5	0.0034	10674.3	7.0
31	3134.3	1392.6	59.0	0.0033	9725.8	52.8

ment, and the same amount, for instance, of increase in government bond to be newly issued simultaneously.

To make calculation of dynamic multipliers of government investment, it is assumed that an increase in govennment investment is 1,000 billion yen (equivalent to about 426 million dollar), the sum of government bonds newly issued is the same volume, of which 800 billion yen is bought by private financial institutions, and 200 billion yen is bought by the individuals' withdrawal of time deposits. Furthermore, to relieve a transitory liquidity-shortage of the member banks, the Bank of Japan makes buy-operations of 500 billion yen for them.

Tax-cut multipliers are also computed. It is assumed that personal income tax cut is 1,000 billion yen, the sum of government bond newly issued is 1,000 billion yen, of which 800 billion yen is bought by private financial institutions, 200

TABLE 3. TAX-CUT MULTIPLIERS: SUSTAINED CHANGE CASE

Period	*GNP*	*RGNP*	*RIFEP*	*PCP*	*M2*	*DDBTG*
1	231.8	178.6	10.1	0.0	195.5	226.3
2	589.1	430.3	33.8	0.0001	486.1	193.1
3	1030.8	694.3	76.1	0.0003	879.6	173.6
4	1611.0	1003.0	134.9	0.0007	1561.7	115.3
5	1869.9	1154.9	188.5	0.0012	1848.9	89.0
6	2059.3	1268.3	232.3	0.0017	2442.0	26.1
7	2154.7	1307.2	264.4	0.0022	2628.3	64.6
8	2178.6	1286.4	284.2	0.0026	2745.7	43.8
9	2142.1	1238.4	291.0	0.0028	3117.1	54.8
10	2126.6	1206.9	289.9	0.0030	3280.2	22.3
11	2083.3	1157.6	281.5	0.0031	3669.7	81.2
12	2101.2	1136.7	259.5	0.0031	4245.1	67.2
13	2084.3	1097.6	228.3	0.0031	4259.9	77.9
14	2073.6	1064.7	189.9	0.0031	4677.8	44.4
15	2025.8	1003.0	145.9	0.0031	4629.4	95.1
16	1994.4	961.1	102.0	0.0031	4507.6	80.5
17	1917.6	900.9	58.1	0.0030	4903.4	92.1
18	1877.7	869.4	21.3	0.0030	4930.1	63.6
19	1846.9	834.6	−7.6	0.0029	5396.5	112.8
20	1867.8	828.6	−27.1	0.0029	6133.3	98.9
21	1891.6	823.2	−38.9	0.0029	5997.3	107.0
22	1947.7	843.9	−44.4	0.0028	6502.3	74.9
23	1997.1	848.9	−44.8	0.0028	6282.4	115.3
24	2081.9	880.1	−40.5	0.0028	5902.3	96.1
25	2139.1	885.5	−33.4	0.0028	6439.1	100.2
26	2204.9	910.6	−23.7	0.0028	6328.4	66.5
27	2247.1	911.3	−12.6	0.0028	6985.3	106.8
28	2318.3	934.9	0.03	0.0028	8031.8	88.8
29	2352.3	936.5	12.6	0.0028	7678.4	94.4
30	2401.7	957.7	25.3	0.0027	8338.8	62.9
31	2423.2	955.4	37.1	0.0027	7837.3	103.9

billion yen is by the individuals' withdrawal of time-deposits, and the bank of Japan resorts to buy-operations of 500 billion yen for member banks.

Table 2 shows the estimated dynamic multipliers of sustained change of the government investment, starting at the second quarter of 1973. All figures are merely the differences between the bench-mark run and the controlled run, so that the leftmost column, for GNP, should be read, as multipliers, 1.4071, 1.8337, 2.3431, 2.9771, . . . , and so forth. The first period multiplier on annual basis is 2.14 which seems to be higher than the one starting at the latest period.

The sequence of this multiplier has some complex cyclical nature, and I don't have a series long enough to analyze it full. The sequence for implicit deflator for personal consumption, PCP shows a very moderate change. On the contrary, the sequence for money supply shows a dynamic configuration, reflecting changes

TABLE 4. PUBLIC INVESTMENT MULTIPLIERS: IMPACT CHANGE CASE

Period	*GNP*	*RGNP*	*RIFEP*	*PCP*	*M2*	*DDBTG*
1	1407.1	1163.7	60.8	0.0	254.1	213.3
2	1833.7	1390.3	129.5	0.0004	610.8	153.7
3	2343.1	1578.8	211.6	0.0012	1098.0	111.6
4	2977.1	1830.5	298.6	0.0020	1932.6	40.3
5	1391.1	799.1	282.5	0.0028	1955.9	−191.0
6	1041.1	561.8	243.1	0.0030	2302.7	−180.8
7	642.9	310.0	187.3	0.0025	1969.3	−85.0
8	132.4	−33.3	119.9	0.0021	1170.5	−26.6
9	103.4	−25.8	63.2	0.0016	1413.4	0.6
10	−1.8	−59.5	14.3	0.0011	864.9	13.6
11	−55.3	−76.0	−28.8	0.0008	1270.9	17.0
12	32.8	−11.8	−64.4	0.0006	2060.6	11.2
13	15.9	−19.1	−96.1	0.0004	1480.8	7.6
14	−10.6	−33.3	−123.9	0.0003	1906.0	6.3
15	−37.4	−50.4	−146.6	0.0003	1179.8	4.2
16	−108.1	−91.3	−164.2	0.0002	16.3	8.1
17	−162.3	−119.7	−176.5	0.0001	663.0	12.2
18	−205.8	−139.0	−182.5	0.0000	10.7	18.9
19	−227.8	−145.3	−182.2	−0.0000	877.3	18.8
20	−222.3	−134.8	−176.0	−0.0001	2315.8	21.1
21	−196.0	−112.8	−165.3	−0.0002	1419.5	20.2
22	−157.8	−85.7	−151.1	−0.0002	2212.3	20.4
23	−111.2	−54.3	−134.2	−0.0002	1055.4	13.9
24	−68.0	−26.1	−115.8	−0.0002	−822.0	10.9
25	−27.7	−1 1	−96.4	−0.0001	323.5	7.3
26	7.3	21.1	−76.6	−0.0001	−700.4	5.3
27	35.1	40.1	−57.1	−0.0001	795.3	1.8
28	58.9	56.2	−38.5	−0.0000	3231.4	0.2
29	77.6	70.2	−20.8	−0.0000	1743.5	−1.3
30	93.6	83.3	−4.4	0.0000	3076.8	−2.2
31	104.5	94.4	10.6	0.0000	1136.0	−3.4

in credit of the Bank of Japan. There seems to remain the counteractions by the Bank of Japan to be reconsidered more carefully. The rightmost column shows the sequence for the government debt changes, all of which may be completely cleared by government bonds to be issued, and even more than 20% of the bonds issued could be returned. Increases in *DDBTG* may restrict the government activity in the future.

Table 3 summarizes dynamic multipliers of personal income tax cut. As easily foreseen, tax-cut multipliers are smaller than multipliers of government investment. Moreover, increases in government debt are larger, so that as far as the macroscopic effects and the government accounts are concerned, the government investment seems to be preferable to the tax-cut.

TABLE 5. TAX-CUT MULTIPLIERS: IMPACT CHANGE CASE

Period	*GNP*	*RGNP*	*RIFEP*	*PCP*	*M2*	*DDBTG*
1	231.8	178.6	10.1	0.0	195.5	226.3
2	589.1	430.3	33.8	0.0001	486.1	193.1
3	1030.8	694.3	76.1	0.0003	879.6	173.6
4	1611.0	1003.0	134.9	0.0007	1561.7	115.3
5	1628.6	1000.3	177.2	0.0012	1654.4	−137.3
6	1477.6	895.8	196.7	0.0017	1959.8	−167.3
7	1216.4	712.2	194.3	0.0019	1756.5	−110.8
8	815.1	431.3	171.2	0.0020	1199.7	−78.0
9	539.7	249.9	137.8	0.0018	1279.0	−46.4
10	282.5	102.8	99.8	0.0015	850.6	−19.9
11	87.1	−3.6	58.8	0.0013	1040.5	2.0
12	15.7	−36.4	16.7	0.0009	1467.4	13.6
13	−27.6	−52.9	−23.1	0.0007	1109.3	18.7
14	−53.7	−59.8	−59.0	0.0005	1334.3	22.7
15	−57.2	−60.7	−89.2	0.0004	898.3	16.9
16	−75.3	−70.0	−112.4	0.0002	213.8	17.0
17	−101.8	−83.3	−130.1	0.0002	573.8	16.3
18	−131.9	−97.4	−141.7	0.0001	187.4	20.4
19	−155.7	−107.8	−147.5	0.0000	677.2	17.2
20	−170.1	−111.5	−148.0	−0.0000	1496.2	19.8
21	−169.6	−106.1	−144.2	−0.0001	974.1	20.2
22	−157.8	−94.8	−137.2	−0.0001	1423.4	22.8
23	−134.4	−76.9	−127.4	−0.0001	754.6	17.6
24	−107.8	−57.5	−115.5	−0.0001	−325.2	16.4
25	−76.7	−37.1	−102.0	−0.0001	333.5	13.9
26	−45.3	−17.2	−87.5	−0.0001	−252.5	12.9
27	−16.6	1.5	−72.3	−0.0001	610.0	8.5
28	8.9	17.8	−57.2	−0.0001	2015.3	6.7
29	31.6	32.6	−42.2	−0.0000	1161.6	4.8
30	52.2	46.4	−27.6	−0.0000	1933.6	3.7
31	68.4	58.6	−13.8	0.0000	819.6	1.8

Tables 4 and 5 are summaries of impact change multipliers, the evaluation of which will be omitted because of the length constraint of this paper.

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EMPIRICAL RESULTS

A. Final Demand Sector

Private consumption expenditure (1970 const. prices), 1964 · III–1975 · IV

$$
\begin{aligned}
(1)\quad RCP = {} & 1435.0578 \\
& \underset{(1.896)}{} \\
& + 0.0270051[(YD/PCP) + (YD/PCP)_{-1} + (YD/PCP)_{-2} + (YD/PCP)_{-3}] \\
& \quad (1.050) \\
& + 0.7226966(0.4 * DTDP_{-1} + 0.3 * DTDP_{-2} + 0.2 * DTDP_{-3} + 0.1 * DTDP_{-4})/PCP \\
& \quad (2.282) \\
& + 0.5427311\ RCP_{-1} + 0.2799388\ RCP_{-2} \\
& \quad (3.511) \qquad\qquad (1.605)
\end{aligned}
$$

$\bar{R}^2 = 0.99704 \qquad SE = 492.08 \qquad DW = 1.97972 \qquad \rho = 0.00512$

Expenditure of households for foods, beverages and tobacco (1970 const. prices), 1963 · IV–1975 · IV

$$
\begin{aligned}
(2)\quad \mathrm{LOG}(RCF) = {} & 3.175573260 + 0.004378456481\mathrm{T} + 0.4991262908\mathrm{LOG}(RCP) \\
& \qquad\qquad (5.409) \qquad\qquad (6.650) \qquad\qquad (6.650) \\
& - 0.8580500111\mathrm{LOG}(PCF/PCP) - 0.08788034252\mathrm{LOG}(RCF)_{-1} \\
& \quad (8.888) \qquad\qquad\qquad\qquad\qquad\qquad (1.215)
\end{aligned}
$$

anti-log = 23.9405

$\bar{R}^2 = 0.99870 \qquad SE = 0.0070672 \qquad DW = 0.92828 \qquad \hat{\rho} = 0.51084$

Expenditure of households for housing (Rent) (1970 const. prices), 1963 · III–1976 · IV

$$
\begin{aligned}
(5)\quad \mathrm{LOG}\,(RCR) = {} & 4.010796739 + 0.3609626373\mathrm{LOG}(RCP) \\
& \qquad\qquad (5.959) \qquad\qquad (5.211)
\end{aligned}
$$

Note: $DOT(x, i) = (x - x_{-i})/x_{-i}$; $DIF(x, i) = x - x_{-i}$

$$-0.1506069083\text{LOG}(RCR/PCP)+0.01358361832\text{T}$$
$$(4.905) \qquad (10.541)$$

anti-log = 55.1908

$\bar{R}^2 = 0.99936$ $SE = 0.0074792$ $DW = 0.76880$ $\hat{\rho} = 0.56103$

Expenditure of households for housing (Others) (1970 const. prices), 1963 · III–1975 · IV

$$(6)\quad \text{LOG}(RCO) = -28'42547686+3.658470104\text{LOG}(RCP)$$
$$(14.352) \qquad (18.196)$$
$$-0.5968259204\text{LOG}(PCO/PCP)-0.04520220010\text{T}$$
$$(2.690) \qquad (13.848)$$

anti-log = .4518–012

$\bar{R}^2 = 0.99461$ $SE = 0.032104$ $DW = 1.54445$ $\hat{\rho} = 0.22329$

Expenditure of households for the miscellaneous (1970 const. prices), 1963 · III–1975 · IV

$$(7)\quad \text{LOG}(RCOT) = 0.3814971556+0.8131295663\text{LOG}(RCP)$$
$$(0.652) \qquad (13.414)$$
$$-0.7039836419\text{LOG}(PCOT/PCP)+0.008122027920\text{T}$$
$$(6.629) \qquad (6.741)$$

anti-log = 1.4645

$\bar{R}^2 = 0.99905$ $SE = 0.010967$ $DW = 1.02039$ $\hat{\rho} = 0.48953$

Gross investment in private dwellings (1970 const. prices), 1963 · IV–1975 · IV

$$(8)\quad RIHP = -749.8667044+0.03815731291(YD/PCP=(YD_{-1})/PCP_{-1})$$
$$(1.063) \qquad (6.671)$$
$$+1836.360937PIHP/PCP-24294.53575PIHP*0.01*SRL0/PCP$$
$$(2.172) \qquad (6.185)$$
$$+0.3973170395RIHP_{-1}$$
$$(4.021)$$

$$\delta_{\text{H}}-\frac{\Delta PIHP}{PIHP}=-0.07559$$

$\bar{R}^2 = 0.98519$ $SE = 193.66$ $DW = 2.03366$ $\hat{\rho} = -0.02638$

Gross fixed investment by private sector (excl. dwellings, at 1970 const. prices), 1964 · III–1975 · IV

$$(9)\quad RIFEP-RRF=\underset{(2.773)}{940.8682661}+\underset{(4.311)}{0.01488097748}\sum_{i=0}^{3}(RGNPP+RM)_{-i}$$
$$+\underset{(1.181)}{0.01110071547}\sum_{i=0}^{3}\frac{PIFEP}{(P*ROH_2)}*(RGNPP+RM)_{-i}$$
$$-\underset{(4.201)}{0.002942535344}\sum_{i=0}^{3}\frac{PIFEP*SRL1}{P*ROH2}*(RGNPP+RM)_{-i}$$
$$+\underset{(16.976)}{0.8872747486}(RIFEP-RRF)_{-1}\qquad \delta-\frac{\Delta PIFEP}{PIFEP}=-0.03773$$

δ: Ratio of replacement to fixed capital stock

$\bar{R}^2=0.98665$ $SE=357.02$ $DW=2.11557$ $\hat{\rho}=-0.05822$

Investment in inventories by private non-agricultural enterprises (1970 const. prices), 1964 · III–1975 · IV

$$(10)\quad RJNAP=\underset{(0.455)}{105.8300304}+\underset{(4.367)}{0.1729224445}DIF((RGNPP+RM),4)$$
$$+\underset{(1.346)}{0.2175812702}RJNAP_{-1}+\underset{(0.741)}{0.07256727965}\sum_{i=0}^{3}\frac{4-i}{10}DBLND_{-1}/0.5*(PJPN+PJPN_{-1})$$
$$+\underset{(3.758)}{3681.056764}\mathrm{DOT}(PM,4)+\underset{(1.508)}{882.9879449}uu0+\underset{(1.054)}{635.0440778}uu1$$
$$+\underset{(0.728)}{403.2026901}uu2+\underset{(0.290)}{172.3474390}uu3-\underset{(0.696)}{419.3520093}uu4$$
$$+\underset{(1.176)}{729.7311819}uu5$$

$\bar{R}^2=0.7009$ $SE=529.79$ $DW=1.90696$ $\hat{\rho}=0.00381$

Expenditure of households for durable goods (current prices), 1963 · IV–1975 · IV

$$(11)\quad CD=\underset{(0.357)}{5.018817998}+\underset{(2.265)}{0.03577531436}PCO*RCO+\underset{(11.515)}{0.8410257276}CD_{-1}$$

$\bar{R}^2=0.99070$ $SE=39.087$ $DW=2.06790$ $\hat{\rho}=-0.05108$

Expenditure of households for non-durable goods (current prices), 1964 · III–1975 · IV

$$(12)\quad CND = \underset{(0.440)}{56.81764007} + \underset{(3.075)}{0.04739896778}(PCP*RCP)_{-1} + \underset{(1.079)}{0.04284391619}DIF((\mathrm{PCP}*RCP), 4) + \underset{(7.746)}{0.6606025353}CND_{-1}$$

$\bar{R}^2 = 0.98811 \qquad SE = 351.31 \qquad DW = 2.12465 \qquad \hat{\rho} = -0.14537$

Expenditure of households for services (current prices), 1964 · III–1975 · IV

$$(13)\quad CS = \underset{(0.766)}{-54.97477167} + \underset{(3.324)}{0.02902541238}(PCP*RCP)_{-1} + \underset{(0.698)}{0.01367364324}DIF((PCP*RCP), 4) + \underset{(7.775)}{0.6680576446}CS_{-1}$$

$\bar{R}^2 = 0.99138 \qquad SE = 172.95 \qquad DW = 2.18351 \qquad \hat{\rho} = -0.17371$

Investment in inventories by incorporated sector (current prices), 1964 · III–1975 · IV

$$(14)\quad JC = \underset{(2.019)}{-217.9444559} + \underset{(16.215)}{1.150124142}(0.5*(PJPN + PJPN_{-1})*RJNAP) - \underset{(2.259)}{0.1310609462}JC_{-1} + \underset{(0.192)}{150.7373231}DOT(PWI, 4)$$

$\bar{R}^2 = 0.94653 \qquad SE = 311.92 \qquad DW = 1.85590 \qquad \hat{\rho} = -0.01107$

A′. Final Demand Sector Identities

Household consumption expenditure (at 1970 const. prices)

$$(15)\quad RCHT = RCF + RCC + RCL + RCR + RCO + RCOT$$

Expenditure of private non-profit institutions (1970 const. prices)

$$(16)\quad RCNH = RCP - RCHT - RCB$$

Gross domestic capital formation (1970 const. prices)

$$(17)\quad RIT = RI + RJ$$

Gross domestic fixed capital formation (1970 const. prices)

(18) $RI = RIP + RIHG + RIFG$

Gross fixed capital formation by private sector (1970 const. prices)

(19) $RIP = RIHP + RIFEP$

Gross fixed capital formation by government sector (at 1970 const. prices)

(20) $RIG = RIHG + RIFG$

Gross fixed capital formation: Dwellings by government sector (at 1970 const. prices)

(21) $RIHG = IHG/PIHG$

Gross fixed capital formation: Others by government sector (at 1970 const. prices)

(22) $RIFG = IFG/PIFG$

Change in inventories (1970 const. prices)

(23) $RJ = RJP + RJG$

Change in inventories of private enterprises (1970 const. prices)

(24) $RJP = RJNAP + RJAP$

Private consumption expenditure (current prices)

(25) $CP = PCP * RCP$

Household consumption e penditure (current prices)

(26) $CHT = CF + CC + CL + CR + CO + COT$

Expenditure of households for foods, beverages and tobacco (current prices)

(27) $CF = PCF * RCF$

Expenditure of households for clothing (at current prices)

(28) $CC = PCC * RCC$

Expenditure of households for fuel and light (at current prices)

(29) $CL = PCL * RCL$

Expenditure of households for housing (Rent) (at current prices)

(30) $CR = PCR * RCR$

Expenditure of households for housing (Others) (at current prices)

(31) $CO = PCO * RCO$

Expenditure of households for the miscellaneous (at current prices)

(32) $COT = PCOT * RCOT$

Expenditure of private non-profit institutions (at current prices)

(33) $CNH = CP - CHT - CB$

Expenditure of residents abroad and etc. (at current prices)

(34) $CB = PCB * RCB$

Gross domestic capital formation (at current prices)

(35) $IT = I + J$

Gross domestic fixed capital formation (at current prices)

(36) $I=IP+IG$

Gross fixed capital formation by private sector (at current prices)

(37) $IP=IHP+IFEP$

Gross investment in private dwellings (at current prices)

(38) $IHP=PIHP*RIHP$

Gross fixed investment by private sector (at current prices)

(39) $IFEP=PIFEP*RIFEP$

Change in inventories (at current prices)

(40) $J=JP+JG$

Change in inventories of private sector (at current prices)

(41) $JP=JNAP+JNP$

Investment in inventories by private non-agricultural enterprises (at current prices)

(42) $JNAP=0.5*(PJPN+PJPN_{-1})*RJNAP+AVNAP$

B. Production and Employment Sector

Production index for mining and manufacturing industries, 1964 · III–1975 · IV

(1) $O=\underset{}{-1.357046358}+\underset{(0.842)}{0.0003581801445}W1*RGNPP$
$+\underset{(3.253)}{0.0002992841473}W2*RGNPP+\underset{(12.669)}{0.7866171795}O_{-1}$

$\bar{R}^2=0.99136 \quad SE=2.4840 \quad DW=1.16721 \quad \hat{\rho}=0.40914$

Potential GNP private sector (1970 const. prices), 1964 · IV–1975 · IV

$$(2)\quad \underset{}{\mathrm{LOG}(RGNPPO)} = \underset{}{-41.61496467} + \underset{(9.828)}{2.822489070}\,\mathrm{LOG}(LP*HM) + \underset{(12.871)}{1.910845139}\,\mathrm{LOG}(RKF_{-1}) - \underset{(7.862)}{0.03602662985}\,T$$

anti-log = .8450–018

$\bar{R}^2 = 0.99472$ $SE = 0.023029$ $DW = 0.62903$ $\hat{\rho} = 0.65819$

Average hours worked (for one quarter per capita), 1966 · II–1974 · IV

$$(3)\quad \mathrm{LOG}(H/H_{-1}) = \underset{(4.199)(3.80)}{4.5} - \underset{(4.631)}{0.0055}\,T + \underset{}{0.1524}\,\mathrm{LOG}(RGNPP) - \underset{(3.155)}{0.7703}\,\mathrm{LOG}(H)_{-1} + \underset{(0.021)}{0.0023}\,\mathrm{LOG}(H*LWP)_{-1}$$

$\bar{R}^2 = 0.441$ $SE = 0.0046443$ $DW = 1.569$ $\hat{\rho} = 0.20154$

The number of workers in private sector, 1963 · IV–1975 · IV

$$(4)\quad \mathrm{LOG}(LP) = \underset{}{0.3556380012} - \underset{(0.365)}{0.000099483866 58}\,T + \underset{(0.885)}{0.01595338778}\,\mathrm{LOG}(RGNPP) + \underset{(10.077)}{0.8647927404}\,\mathrm{LOG}(LP)_{-1}$$

anti-log = 1.4271

$\bar{R}^2 = 0.98473$ $SE = 0.0046443$ $DW = 1.99325$ $\hat{\rho} = -0.00610$

Man-hours of employee in private sector, 1964 · IV–1975 · IV

$$(5)\quad \mathrm{LOG}(H*LWP) = \underset{(4.269)}{4.538548475} - \underset{(2.648)}{0.002614398870}\,T + \underset{(3.473)}{0.2082361564}\,\mathrm{LOG}(RGNPP) + \underset{(2.916)}{0.3975056065}\,\mathrm{LOG}(H*LWP)_{-1}$$

anti-log = 93.5549

$\bar{R}^2 = 0.92527$ $SE = 0.014700$ $DW = 1.83116$ $\hat{\rho} = -0.10555$

Replacement of fixed capital stock (1970 const. prices), 1963·IV–1975·IV

(6) $RRF = \underset{(2.298)}{18.32055770} + \underset{(468.284)}{0.04434624199} RKF_{-1}$

$\bar{R}^2 = 0.99978 \quad SE = 21.344 \quad DW = 0.48479 \quad \hat{\rho} = 0.75673$

B′. Production and Employment Sector Identities

Gross national product (at current)

(7) $GNP = GNPP + CG2$

Gross private product

(8) $GNPP = CP + (CG - CG2) + IT + XAB$

Gross national product (at 1970 const. prices)

(9) $RGNP = RGNPP + RCG2$

Gross private product (at 1970 const. prices)

(10) $RGNPP = RCP + (RCG - RCG2) + RIT + FSRP$

Degree of utilization of private sector

(11) $ROH2 = RGNPP / RGNPPO$

Gross stock in fixed capital of private sector (at 1970 const. prices)

(12) $RKF = 0.25 * (RIFEP - RRF) + RKF_{-1}$

Stock in inventories of private non-agricultural enterprises (at 1970 const. prices)

(13) $RSJNAP = 0.25 * RJNAP + RSJNAP_{-1}$

The number of workers

(14) $L=LP+LG$

The number of employees

(15) $LW=LWP+LG$

Man-hours in normal operation

(16) $\mathrm{LOG}(HLWPE)=7.52-0.00469T+0.34562\mathrm{LOG}(RGNPP)$

Stock in private dwellings (at current prices)

(17) $KIHP=0.25*(IHP-DEP1)+KIHP_{-1}$

Stock in fixed capital of private sector (at acquisite prices)

(18) $KFP=0.25*(IFEP-DEP2)+KFP_{-1}$

C. Wages and Prices Sector

Implicit price deflator for private consumption expenditure (1970=1.0), 1964·IV –1975·IV

(1) $\mathrm{DOT}(PCP,\ 1)=0.008396376781$
(2.267)
$+0.05964895123(\mathrm{DOT}(RWP,\ 1)+\mathrm{DOT}(RWP,\ 1)_{-1})_{-1}$
(1.187)
$+0.2552959081\mathrm{DOT}(PWI,\ 1)_{-1}$
(2.618)
$+0.1227211162\mathrm{DOT}(PPCP,\ 1)_{-2}+0.09148162554\mathrm{DOT}(PMJRM,\ 1)_{-1}$
(1.485) (1.449)
$\bar{R}^2=0.62311 \quad SE=0.0085843 \quad DW=2.66067 \quad \hat{\rho}=-0.33956$

Implicit price deflator for fuel and light (1970=1.0), 1964·III–1975·IV

(2) $\mathrm{DOT}(PCL,\ 1)=-0.02097566012+0.7398151513\mathrm{DOT}(PPCP,\ 1)$
(−2.493) (4.567)
$+0.0004970623308T$
(2.434)
$\bar{R}^2=0.44501 \quad SE=0.017385 \quad DW=1.43319 \quad \hat{\rho}=0.27499$

Implicit price deflator for housing (Rent) (1970=1.0), 1964·III–1975·IV

$$
\begin{aligned}
(3)\quad \mathrm{DOT}(RCH,1) &= 0.008850170960 + 0.5889845491\,\mathrm{DOT}(PCP,1) \\
&\qquad\qquad (3.217) \qquad\quad (10.250) \\
&\quad -0.1585386478\,\mathrm{DOT}(RCR,1) \\
&\qquad (1.282) \\
&\quad \bar{R}^2=0.69727 \qquad SE=0.0053374 \qquad DW=1.54547 \qquad \hat{\rho}=0.20287
\end{aligned}
$$

Implicit price deflator for housing (Others) (1970=1.0), 1964·III–1975·IV

$$
\begin{aligned}
(4)\quad \mathrm{DOT}(PCO,1) &= -0.003273978225 + 1.083063718\,\mathrm{DOT}(PCP,1) \\
&\qquad\qquad (0.760) \qquad\quad (7.033) \\
&\quad -0.1961434772\,\mathrm{DOT}(RCO,1) \\
&\qquad (-3.415) \\
&\quad \bar{R}^2=0.72804 \qquad SE=0.012071 \qquad DW=1.35545 \qquad \hat{\rho}=0.31507
\end{aligned}
$$

Implicit price deflator for the miscellaneous (1970=1.0), 1964·III–1975·IV

$$
\begin{aligned}
(5)\quad \mathrm{DOT}(PCOT,1) &= 0.001719685428 + 0.7180396326\,\mathrm{DOT}(PCP,1) \\
&\qquad\qquad (0.708) \qquad\quad (7.644) \\
&\quad +0.1841504916\,\mathrm{DOT}(PCOT,1)_{-1} \\
&\qquad (1.933) \\
&\quad \bar{R}^2=0.63057 \qquad SE=0.0083098 \qquad DW=2.09674 \qquad \hat{\rho}=-0.07882
\end{aligned}
$$

Implicit price deflator for the consumption expenditure of private non-profit institutions (1970=1.0),1964·III–1975·IV

$$
\begin{aligned}
(6)\quad \mathrm{DOT}(PCNH,1) &= -0.005616610662 + 1.197869613\,\mathrm{DOT}(PCP,1) \\
&\qquad\qquad (1.858) \qquad\quad (14.826) \\
&\quad +0.1823361559\,\mathrm{DOT}(RCP,1) \\
&\qquad (2.088) \\
&\quad \bar{R}^2=0.89509 \qquad SE=0.0051151 \qquad DW=2.34195 \qquad \hat{\rho}=-0.45576
\end{aligned}
$$

Implicit price deflator for the inventory stocks by private non-agricultural, sector (1970=1.0), 1964·III–1975·IV

$$
\begin{aligned}
(7)\quad \mathrm{DOT}(PJPN,1) &= 0.0004883210186 \\
&\qquad\qquad (0.296) \\
&\quad +0.5731963441[\mathrm{DOT}(PWI,1)+\mathrm{DOT}(PWI,1)_{-1}] \\
&\qquad (13.618)
\end{aligned}
$$

$$-0.1823015355\mathrm{DOT}(PWI, 1)_{-2}$$
$$(2.299)$$
$$\bar{R}^2=0.86256 \quad SE=0.0097108 \quad DW=1.74016 \quad \hat{\rho}=0.05157$$

Whole sale price index for all industries (1970=1.0), 1964·IV–1975·IV

(8) $$\mathrm{DOT}(PWI, 1)=0.0005810940332$$
$$(0.134)$$
$$+0.07754210244[\mathrm{DOT}(RWP, 1)+\mathrm{DOT}(RWP, 1)_{-1}]$$
$$(1.404)$$
$$+0.07092904168\mathrm{DOT}(PMJOL, 1)+0.3182221751\mathrm{DOT}(PMJRM, 1)$$
$$(5.525) \qquad (5.676)$$
$$\bar{R}^2=0.82737 \quad SE=0.010781 \quad DW=1.57726 \quad \hat{\rho}=0.13879$$

Implicit price deflator for private fixed investment, 1964·III–1975·IV

(9) $$\mathrm{DOT}(PIFEP, 1)=-0.0003102524214$$
$$(-0.206)$$
$$-+0.3882371513(\mathrm{DOT}(PWI, 1)+\mathrm{DOT}(PWI, 1)_{-1})$$
$$(15.975)$$
$$+0.05640241995\mathrm{DOT}(O, 1)_{-1}$$
$$(1.433)$$
$$\bar{R}^2=0.85130 \quad SE=0.0077851 \quad DW=1.83398 \quad \hat{\rho}=0.05115$$

Implicit deflator for housing investment by private sector, 1965·I–1975·IV

(10) $$PIHP=0.06086338591-0.1322337779PWI_{-1}$$
$$(3.638) \qquad (2.801)$$
$$+0.6498472058\mathrm{DIF}(PWI_{-1})+1.086418946PIHP_{-1}$$
$$(6.459) \qquad (30.302)$$
$$\bar{R}^2=0.99734 \quad SE=0.016951 \quad DW=1.29078 \quad \hat{\rho}=0.33980$$

Implicit price deflator for general government consumption expenditure (1970=1.0), 1964·III–1975·IV

(11) $$PCG=-0.5356601020+1.533755481PCP$$
$$(34.245) \qquad (109.622)$$
$$\bar{R}^2=0.99627 \quad SD=0.027557 \quad DW=1.43286 \quad \hat{\rho}=0.26235$$

Implicit price deflator for investment in non-housing items by government sector (at 1970 const. prices), 1964 · III–1975 · IV

(12) $PIFG = -0.3250030222 + 1.307529143 PIFEP$
(13.756) (60.012)
$\bar{R}^2 = 0.98766$ $SE = 0.027860$ $DW = 0.40288$ $\hat{\rho} = 0.77558$

Implicit price deflator for investment in dwellings by government sector (at 1970 const. prices), 1964 · III–1975 · IV

(13) $PIHG = 0.09448330711 + 0.8995826247 PIHP$
(10.896) (119.151)
$\bar{R}^2 = 0.99684$ $SE = 0.016794$ $DW = 0.35691$ $\hat{\rho} = 0.82618$

Wage rate for employee in private sector (billion yen per hour per million persons) 1964 · IV–1975 · IV

(14) $RWP = -0.02341338299$
(3.758)
$+0.3572606793 GNPP*(1.0/CH*LWP) - 1.0/HLWPE)$
(3.432)
$+0.1313633312 GNPP/HLWPE + 0.7734695764 RWP_{-1}$
(4.387) (13.686)
$+0.1946938932 \mathrm{DIF}(PCP, 1)$
(1.694)
$\bar{R}^2 = 0.99820$ $SE = 0.010349$ $DW = 2.35248$ $\hat{\rho} = -0.18218$

C′. Wages and Prices Sector Identities

Implicit deflator for household consumption expenditure (1970 = 1.0)

(15) $PCHT = CHT/RCHT$

Implicit deflator for gross domestic capital formation (1970 = 1.0)

(16) $PIT = IT/RIT$

Implicit deflator for gross domestic fixed capital formation (1970 = 1.0)

(17) $PI = I/RI$

Implicit deflator for private gross fixed capital formation (1970=1.0)

(18) $PIP=IP/RIP$

Implicit deflator for government gross fixed capital formation (1970=1.0)

(19) $PIG=IG/RIG$

Implicit defator for GNP (1970=1.0)

(20) $P=GNP/RGNP$

Implicit deflator for investment in inventories of private sector (1970=1.0)

(21) $PJNAP=0.5*(PJPN+PJPN_{-1})$

D. Income Distribution Sector

Incomes of employee other than wages and salaries, 1963·IV–1975·IV

$$\begin{array}{l}(1)\quad YWO=-73.08346469+0.08518210808(YW-GC2)\\ \qquad\qquad\qquad\quad (1.635)\qquad\quad (5.747)\\ \qquad +0.012469941250GC2+0.4482691603YWO_{-1}\\ \qquad\quad (0.400)\qquad\qquad\quad (4.408)\\ \qquad \bar{R}^2=0.99784\qquad SE=134.18\qquad DW=1.41563\qquad \hat{\rho}=0.22012\end{array}$$

Profits from unincorporated non-agricultural enterprises, 1964·III–1975·IV

$$\begin{array}{l}(2)\quad YFNA=-51.16008218+0.08842202888(GNP-GC2)_{-1}\\ \qquad\qquad\qquad\quad (0.077)\qquad (20.228)\\ \qquad +0.1554173171\mathrm{DIF}((GNP-GC2),4)+87.76333603SRL0\\ \qquad\quad (6.039)\qquad\qquad\qquad\qquad\qquad\quad (0.852)\\ \qquad \bar{R}^2=0.98072\qquad SE=528.20\qquad DW=1.03682\qquad \hat{\rho}=0.47617\end{array}$$

Income from property: Rent, 1964·III–1975·IV

$$\begin{array}{l}(3)\quad YRNT=-8.48834987+0.001306125451GNPP\\ \qquad\qquad\qquad\quad (0.705)\qquad (1.051)\\ \qquad +1.010512355YRNT_{-1}\\ \qquad\quad (33.953)\end{array}$$

$\bar{R}^2=0.99965 \quad SE=28.866 \quad DW=1.77355 \quad \hat{\rho}=0.03629$

Income from property: Interest, 1963 · IV–1975 · IV

$$
\begin{aligned}
(4)\quad YINT = & -1106.790821 + 0.01317319333(SSP+SSP_{-1}) \\
& \qquad\qquad (6.002) \qquad\quad (5.556) \\
& +135.6141514SRL0 + 0.6757598036YINT_{-1} \\
& \quad (5.709) \qquad\quad (10.101) \\
& \bar{R}^2=0.99911 \quad SE=89.870 \quad DW=2.06244 \quad \hat{\rho}=-0.04497
\end{aligned}
$$

Income from property: Dividends, 1964 · III–1975 · IV

$$
\begin{aligned}
(5)\quad YDIV = & \ 18.45939265 + 0.01529320782(YC+YC_{-1}-TAXC-TAXC_{-1}) \\
& \qquad\quad (0.767) \qquad\quad (3.489) \\
& +0.8678740858YDIV_{-1} \\
& \quad (23.434) \\
& -0.005610022486(YC_{-1}+YC_{-2}-TAXC_{-1}-TAXC_{-2}) \\
& \qquad\quad (1.515) \\
& +614.9949518\mathrm{DOT}(PWI, 4) \\
& \quad (4.359) \\
& \bar{R}^2=0.97235 \quad SE=49.064 \quad DW=3.07204 \quad \hat{\rho}=-0.54053
\end{aligned}
$$

Provisions for the consumption of private dwellings, 1963 · IV–1975 · IV

$$
\begin{aligned}
(6)\quad DEP1 = & \ 196.5014432 + 0.05586401208KIHP_{-1} \\
& \qquad\quad (10.151) \qquad\quad (65.576) \\
& \bar{R}^2=0.98896 \quad SE=81.457 \quad DW=0.70749 \quad \hat{\rho}=0.64658
\end{aligned}
$$

Provisions for the consumption of private fixed capital, 1963 · IV–1975 · IV

$$
\begin{aligned}
(7)\quad DEP2 = & \ 7082.520146 + 0.08317474284(PIFEP*RKF_{-1}) \\
& \qquad\quad (7.349) \qquad\quad (31.544) \\
& -887.3996599SRL0 \\
& \quad (5.975) \\
& \bar{R}^2=0.96653 \quad SE=726.06 \quad DW=0.21600 \quad \hat{\rho}=0.97376
\end{aligned}
$$

Provisions for the consumption of incorporate dwellings, 1963 · IV–1975 · IV

$$
\begin{aligned}
(8)\quad DEPC1 = & -0.03436341977 + 0.06109840624DEP1 \\
& \qquad\quad (0.004) \qquad\quad (2.892) \\
& +0.6577941073DEPC1_{-1} \\
& \quad (5.727) \\
& \bar{R}^2=0.94894 \quad SE=32.399 \quad DW=1.54297 \quad \hat{\rho}=0.21865
\end{aligned}
$$

Provisions for the consumption of incorporate fixed capital, 1963 · IV–1975 · IV

$$(9)\quad DEPC2 = \underset{(2.967)}{1491.568005} + \underset{(3.120)}{0.2390861809}DEP2 + \underset{(8.851)}{0.7402376486}DEPC2_{-1} - \underset{(2.824)}{224.3682371}SRL0$$

$\bar{R}^2 = 0.98567 \qquad SE = 409.01 \qquad DW = 2.02814 \qquad \hat{\rho} = -0.03713$

Stock valuation adjustment, 1965 · II–1975 · IV

$$(10)\quad AVNAP = \underset{(1.519)}{-61.31521886} + \underset{(2.752)}{4.131750175}\mathrm{DIF}(PJNAP, 1)*RJNAP - \underset{(2.505)}{0.4681912249}\mathrm{DIF}(PFNAP, 1)*RSJNAP_{-1}$$

$\bar{R}^2 = 0.12659 \qquad SE = 239.83 \qquad DW = 2.10585 \qquad \hat{\rho} = -0.15983$

D′. Income Distribution Sector Identities

Compensation of employees (incl. social insurance contributions by employers)

$$(11)\quad YW = YWPP + GC2$$

Wages and salaries (incl. social insurance contributions by employers)

$$(12)\quad YWR = YW - YWO$$

Income from unincorporated enterprises

$$(13)\quad YF = YFNA + YFA$$

Income from property

$$(14)\quad YR = YRNT + YINT + YDIV$$

Saving of private corporations

$$(15)\quad SAVC = YC - TAXC - TRCH - YDIV - YDIV3$$

Income from private corporations

(16) $YC = Y-(YP+YG-TRCH-TRGH-TRFH-GINT)+YDIV+YDIV2$

National income

(17) $Y=GNP-(DEPG+DEP1+DEP2)-ITAX+SUB-SGAP$

Personal income

(18) $YP=YW+YF+YR+TRCH-CINT+TRGH+TRFH$

Personal savings

(19) $SP=YP-(CP+TAXH+SI+TRHG+TRHF)$

Disposable income of persons

(20) $YD=YP-(TAXH+SI+TRHG+TRHF)$

Cumulative personal savings

(21) $SSP=0.25*SP+SSP_{-1}$

Compensation of employees in private sector

(22) $YWPP=RWP*H*LWP$

E. Fiscal and Monetary Sector

Corporate income tax, 1965 · I–1975 · IV

$$
\begin{aligned}
(1)\quad TAXC = {} & -689.0178630 + 0.02825048649(R1*(YC-YDIV)_{-1} \\
& \qquad (0.587) \qquad (0.601) \\
& + R1_{-1}*(YC-YDIV)_{-2} + R1_{-2}*(YC-YDIV)_{-3} \\
& + R2*YDIV_{-1} + R2_{-1}*YDIV_{-2} + R2_{-2}*YDIV_{-3}) \\
& + 126.7193560SRL0 + 0.8634172574TAXC_{-1} \\
& \quad (0.753) \qquad (8.402) \\
& + 11537.15592\mathrm{DOT}(PWI,\ 1) \\
& \quad (3.808) \\
& \bar{R}^2 = 0.94959 \qquad SE = 499.36 \qquad DW = 2.67121 \qquad \hat{\rho} = -0.36287
\end{aligned}
$$

Personal income taxes and charges, 1965 · I–1975 · IV

$$(2)\quad TAXH = \underset{(0.975)}{395.4003709} + \underset{(22.568)}{0.07089852796} \sum_{i=0}^{3} \frac{5-i}{10} (YP - YDIV)_{-1}$$

$$- \underset{(3.154)}{261.3197856} DEL\,T + \underset{(9.005)}{62089.86183}\mathrm{DOT}(PCP, 1)$$

$\bar{R}^2 = 0.96141 \qquad SE = 501.91 \qquad DW = 1.88802 \qquad \hat{\rho} = 0.00580$

Incirect taxes, 1964 · III–1975 · IV

$$(3)\quad ITAX = \underset{(2.646)}{153.8674438} + \underset{(2.941)}{0.02339336591} GNPP_{-1}$$

$$+ \underset{(5.541)}{0.04558685263}\mathrm{DIF}(GNPP, 4) + \underset{(5.441)}{0.6207055652} ITAX_{-1}$$

$\bar{R}^2 = 0.99675 \qquad SE = 147.25 \qquad DW = 2.34501 \qquad \hat{\rho} = -0.18054$

Changes in demand for cash currency by private sector (excl. finacial intermediaries), 1964 · III–1975 · IV

$$(4)\quad DCUR = \underset{(1.264)}{-77.80626709}$$

$$+ \underset{(6.664)}{0.1200897685}(DCURN + DBLND + DBSEC + DABG + DABLG)$$

$$+ \underset{(6.508)}{0.05518549152}\mathrm{DIF}(GNPP, 4)$$

$$- \underset{(9.484)}{2.953580468}(Q2) * DCUR_{-1} - \underset{(3.974)}{1.462384187}(Q3) * DCUR_{-1}$$

$$- \underset{(9.901)}{1.716308173}(Q4) * DCUR_{-1} + \underset{(5.146)}{0.6502323412} DCUR_{-1}$$

$$+ \underset{(0.663)}{124.0542684} zz0 + \underset{(0.591)}{110.8858970} zz1$$

$$- \underset{(0.539)}{102.4367979} zz2 - \underset{(1.768)}{351.7856541} zz3$$

$$- \underset{(0.443)}{87.81382828} zz4 - \underset{(0.328)}{62.15112304} zz5$$

$$- \underset{(0.699)}{141.5791868} zz6$$

$\bar{R}^2 = 0.95107 \qquad SE = 180.78 \qquad DW = 1.69784 \qquad \hat{\rho} = 0.12029$

Changes in demand for demand and short-term deposite by private sector (excl. financial intermediaries), 1964 · III–1975 · IV

$$
\begin{aligned}
(5)\quad DMDP = {} & 502.7680434 \\
& \quad (0.976) \\
& + 0.3383460576(DCURN + DBLND + DBSEC + DABG + DABLG) \\
& \quad (12.876) \\
& - 88.03451205 SRL0 - 0.8920058388 Q2 * DMDP_{-1} + 0.03385318259 Q3 * DMDP_{-1} \\
& \quad (1.265) \qquad (2.248) \qquad (0.078) \\
& - 0.3099453927 Q4 * DMDP_{-1} + 0.2295035495 DMDP_{-1} \\
& \quad (0.816) \qquad (0.598) \\
& \bar{R}^2 = 0.80915 \qquad SE = 411.08 \qquad DW = 1.46089 \qquad \hat{\rho} = 0.25012
\end{aligned}
$$

Changes in demand for time deposite by private sector (excl. financial intermediaries), 1965 · I–1975 · IV

$$
\begin{aligned}
(6)\quad DTDP = {} & = 36.71346927 \\
& \quad (0.386) \\
& + 0.2246415173(DCURN + DBLND + DBSEC + DABG + BABLG) \\
& \quad (4.350) \\
& - 0.6849987819(Q2) * DTDP_{-1} - 1.219040862(Q3) * DTDP_{-1} \\
& \quad (4.488) \qquad (10.503) \\
& - 1.216958792(Q4) * DTDP_{-1} + 1.348472270 DTDP_{-1} \\
& \quad (7.916) \qquad (6.568) \\
& - 141.8302146 zz0 + 362.7510162 zz1 \\
& \quad (0.534) \qquad (1.371) \\
& - 459.6616155 zz2 - 213.1429548 zz3 \\
& \quad (1.680) \qquad (0.676) \\
& - 122.2514996 zz4 + 515.7214915 zz5 \\
& \quad (0.440) \qquad (1.880) \\
& - 1121.345570 zz6 + 1321.337209 \mathrm{DOT}(PCP, 4)_{-2} \\
& \quad (3.383) \qquad (1.475) \\
& \bar{R}^2 = 0.91213 \qquad SE = 255.54 \qquad DW = 2.64351 \qquad \hat{\rho} = -0.47312
\end{aligned}
$$

Change in reserve requirement of deposite money banks, 1964 · III–1975 · IV

$$
\begin{aligned}
(7)\quad DDBJ = {} & 357.3751361 \\
& \quad (1.292) \\
& + 0.9677174227(RRS1 * DMDP + RRS2 * (DTDP + DFB2)) \\
& \quad (1.516) \\
& + (RRS1 * DMDP + RRS2 * (DTDP + DFB2))_{-1} \\
& + 0.1192472357 BJCR - 45.36112800 SRL0 \\
& \quad (2.720) \qquad (1.144) \\
& + 0.6679880614(Q2) * DDBJ_{-1} - 1.846235844(Q3) * DDBJ_{-1} \\
& \quad (1.132) \qquad (3.188) \\
& + 0.7652010933(Q4) * DDBJ_{-1} - 0.5553288508 DDBJ_{-1} \\
& \quad (2.046) \qquad (2.499)
\end{aligned}
$$

$\bar{R}^2=0.25544 \quad SE=177.90 \quad DW=1.96317 \quad \hat{\rho}=0.01593$

Changes in bank-loans to private sector, 1964 · III–1975 · IV

$$
\begin{aligned}
(8)\quad & DBLND-BJCR=-435.8352424 \\
& \qquad\qquad (-1.719) \\
& +0.7166354768((1.0-RRS1)*DMDP+(1.0-RRS2)*(DTDP+DFB2)-DABG-DABLG) \\
& \quad (7.109) \\
& +334.6030595(SRL0-DELT)+0.5291522425(Q2)*(DBLND-BJCR)_{-1} \\
& \quad (1.795) \qquad\qquad (4.037) \\
& +0.3878688426(Q2)*(DBLND-BJCR)_{-1} \\
& \quad (3.372) \\
& +0.3121774701(Q4)*(DBLND-BJCR)_{-1} \\
& \quad (1.945) \\
& -0.03160152719(DBLND-BJCR)_{-1} \\
& \quad (0.184) \\
& \bar{R}^2=0.88936 \quad SE=478.31 \quad DW=1.57609 \quad \hat{\rho}=0.20147
\end{aligned}
$$

Changes in private security holdings by banks, 1964 · III–1975 · IV

$$
\begin{aligned}
(9)\quad & DBSEC=36.61403556 \\
& \qquad\qquad (2.000) \\
& +0.01366642376((1.0-RRS1)*DMDP+(1.0-RRS2)*(DTDP+DFB2)-DABG-DABLG) \\
& \quad (1.658) \\
& -4.946442481(RCAM-DELT)+0.04297328642(Q2)*DBSEC_{-1} \\
& \quad (0.803) \qquad\qquad (0.222) \\
& -0.1860567138(Q3)*DBSEC_{-1}-0.5438607351(Q4)*DBSEC_{-1} \\
& \quad (1.095) \qquad\qquad (-2.274) \\
& +0.7405960801DBSEC_{-1} \\
& \quad (2.616) \\
& \bar{R}^2=0.67491 \quad SE=39.860 \quad DW=1.23087 \quad \hat{\rho}=0.35186
\end{aligned}
$$

Changes in loans and security holdings by financial intermediaries, 1964 · III–1975 · IV

$$
\begin{aligned}
(10)\quad & DABP=20.84969054+1.015376597(DBLND+DBSEC) \\
& \qquad\qquad (0.459) \quad (62.043) \\
& \bar{R}^2=0.98844 \quad SE=168.97 \quad DW=1.12510 \quad \hat{\rho}=0.43652
\end{aligned}
$$

Changes in financial bond issued by banks, 1964 · III–1975 · IV

(11) $DFB2 = -12.55877419 + 0.01992718211(DMDP + DTDP + DMDP_{-1} + DTDP_{-1})$
(0.278) (0.966)
$+0.03202229943 DBLND_{-2} + 0.4640441525(Q2)*(DBF2)_{-1}$
(1.295) (1.590)
$+1.133588999(Q3)*(DFB2)_{-1} + 0.1221250113(Q4)*(DFB2)_{-1}$
(3.082) (0.903)
$\bar{R}^2 = 0.55699 \quad SE = 143.32 \quad DW = 2.11000 \quad \hat{\rho} = -0.05583$

Changes in supply of cash currency through the government sector deficit, 1964 · IV–1975 · IV

(12) $DCURN = -302.2685467 - 0.09282910608 SG + 0.178166329 IG$
(0.967) (1.033) (2.736)
$+0.2781199934 JG + 0.2687056415 E - M + 1.119940661 DABG$
(0.478) (2.038) (1.916)
$-1.298482276 Q2*DCURN_{-1} - 0.9559242643 Q3*DCURN_{-1} - 1.110670116 Q4*DCURN_{-1}$
(2.113) (1.771) (2.129)
$+0.1905416409 DCURN_{-1} - 0.0002710874683 BCLY*EXR$
(0.426) (1.448)
$\bar{R}^2 = 0.64790 \quad SE = 621.69 \quad DW = 1.74968 \quad \hat{\rho} = 0.11465$

Changes in postal savings, 1964 · III–1975 · IV

(13) $DTDPG = -22.51700121$
(1.358)
$+0.01819147525(DCURN + DBLND + DBSEC + DABG + DABLG)$
(2.315)
$+0.006281768914 \mathrm{DIF}(YD, 4) - 0.2124220526 Q2*DTDPG_{-1}$
(2.390) (4.112)
$+0.2000933747 Q3*DTDPG_{-1} - 0.5167966546 Q4*DTDPG_{-1}$
(3.544) (8.595)
$+1.063372704 DTDPG_{-1}$
(12.387)
$\bar{R}^2 = 0.98136 \quad SE = 53.731 \quad DW = 1.72516 \quad \hat{\rho} = 0.09338$

E′. Fiscal and monetary sector Identities

Total tax payments (excl. subsidies)

(14) $TAX = TAXH + TAXC + ITAX$

Government savings

(15) $SG = TAX + SI + TRHG + TRFG + YG - GINT - (CG + TRGH + TRGF)$

Net change in public debts to private sector

(16) $DDBTG = (DLOGH + DLOGC) + IG/4 + JG/4 - (SG/4 + DEPG/4 + (DTDPG + DLISG))$

Net change in public bonds holdings by private non-financial sector

(17) $DPBG = DDBTG - (DABG + DABLG)$

Change in cash-holding by commercial banks

(18) $DCAS = DMDP + DTDP + DFB2 + BJCR + DBOT - (DABP + DABG + DABLG)$

Outstanding of demand deposite at commerical banks

(19) $SDP = DMDP + SDP_{-1}$

Outstanding of time deposite at commercial banks

(20) $TDP = DTDP + TDP_{-1}$

Cash currency in circulation

(21) $CUR = DCUR + CUR_{-1}$

Money supply (incl. time deposite at commercial banks)

(22) $M2 = 0.4*(CUR + SDP + TDP) + 0.3*(CUR + SDP + TDP)_{-1} + 0.2*(CUR + SDP + TDP)_{-2} + 0.1*(CUR + SDP + TDP)_{-3}$

F. International Trade Sector

Commodity exports to U.S.A. (FOB basis, at 1970 const prices), 1966·III–1976·IV

(1) $\text{LOG}(REJNA) = -1.9707 + 0.3163\text{LOG}(MTNA/PEJTP\$)$
(1.57) (2.21)
$+0.1869\text{LOG}(RPEJNAP\$)$
(1.63)
$+0.7619\text{LOG}(REJNA_{-1})$
(8.00)
$-0.0303Q_2 - 0.0777Q_3 - 0.2132Q_4$
(0.76) (1.99) (5.24)

anti-log = 0.1394

$RPEJNAP\$ = (PEJNA*EXR/(PEJT*3.6))_{-1} + (\cdot)_{-2} + (\cdot)_{-3} + (\cdot)_{-4}$
$PEJTP\$ = (PEJT*3.6/EXR)_{-1} + (\cdot)_{-2} + (\cdot)_{-3} + (\cdot)_{-4}$

Commodity exports to Western Europe (FOB basis, at 1970 const. prices), 1964 · III–1976 · IV

(2) $\text{LOG}(REJWE) = -8.3355 + 0.6018\text{LOG}(MTWE/PEJTP\$)$
(2.08) (3.01)
$+0.7810\text{LOG}(RPEJWEP\$)$
(1.44)
$+0.6522\text{LOG}(REJWE_{-1})$
(5.73)
$+0.0959Q_2 + 0.0767Q_3 - 0.0417Q_4$
(2.29) (1.98) (1.00)

anti-log = 0.00024

$RPEJWEP\$ = (PEJWE*EXR/(PEJT*3.6))_{-1} + (\cdot)_{-2} + (\cdot)_{-3} + (\cdot)_{-4}$
$PEJTP\$ = (PEJT*3.6/EXR)_{-1} + (\cdot)_{-2} + (\cdot)_{-3} + (\cdot)_{-4}$
$\bar{R}^2 = 0.967$ $SE = 0.0923$ $DW = 2.03$

Exports to Asian Countries (FOB basis, at 1970 const. prices), 1964 · III–1975 · IV

(3) $REJSEA = -196.8038798 + 0.04423406206MTSEA/(PEJT*(3.60/EXR))$
(0.918) (1.957)
$+99.08347328T - 46.10386072Q2$
(10.319) (0.316)
$+509.0026145Q3 - 420.1396654Q4$
(3.575) (2.926)
$\bar{R}^2 = 0.95605$ $SE = 340.87$ $DW = 0.97832$ $\hat{\rho} = 0.50173$

Other commodity imports (CIF basis, at 1970 const. prices), 1964·III–1975·IV

$$
\begin{aligned}
(4)\quad \mathrm{LOG}(RMJOT) &= 0.6930 + 0.4313\mathrm{LOG}(RGNPP) \\
&\qquad\quad (2.40) \quad (3.12) \\
&\quad -0.2313\mathrm{LOG}(PMJOT*EXR/PWI) + 0.6424\mathrm{LOG}(RMJOT_{-1}) \\
&\qquad (2.62) \qquad\qquad\qquad\qquad (7.14)
\end{aligned}
$$

anti-log = 1.9997

$\bar{R}^2 = 0.976 \qquad SE = 0.078 \qquad DW = 1.503$

Food-Stuff imports (CIF bases, at 1970 const. prices), 1964·III–1975·IV

$$
\begin{aligned}
(5)\quad RMJFD &= -676.9267442 + 0.1697335420RCF \\
&\qquad\quad (2.223) \quad (3.637) \\
&\quad +0.5075163311RMJFD_{-1} - 242.7365011Q2 \\
&\qquad (3.991) \qquad\qquad (2.560) \\
&\quad +70.80197220Q3 - 262.9398038Q4 \\
&\qquad (0.779) \quad (2.755)
\end{aligned}
$$

$\bar{R}^2 = 0.92423 \qquad SE = 217.81 \qquad DW = 2.31772 \qquad \hat{\rho} = -0.16051$

Fuel imports (CIF basis, at 1970 const. prices), 1964·III–1975·IV

$$
\begin{aligned}
(6)\quad \mathrm{LOG}(RMJOIL) &= 1.268185819 + 0.5891271756\mathrm{LOG}(O) \\
&\qquad\quad (5.362) \quad (4.751) \\
&\quad +0.5192554386\mathrm{LOG}(RJOIL_{-1}) - 0.02882796743Q2 \\
&\qquad (5.480) \qquad\qquad\qquad (1.509) \\
&\quad +0.05394004584Q3 - 0.01572327729Q4 \\
&\qquad (2.834) \qquad\quad (0.825)
\end{aligned}
$$

anti-log = 3.5544

$\bar{R}^2 = 0.98831 \qquad SE = 0.044788 \qquad DW = 2.33913 \qquad \hat{\rho} = -0.22199$

Crude materials imports (CIF basis, at 1970 const. prices), 1964·III–1975·IV

$$
\begin{aligned}
(7)\quad RMJRM &= 721.6891743 + 48.53661583Q \\
&\qquad\quad (4.004) \quad (5.827) \\
&\quad -0.03819737738RSJNAP + 0.2994105625RMJRM_{-1} \\
&\qquad (2.743) \qquad\qquad (2.349) \\
&\quad -398.9193331Q2 - 300.3556388Q3 - 391.6085820Q4 \\
&\qquad (3.305) \quad (2.739) \quad (3.560)
\end{aligned}
$$

$\bar{R}^2 = 0.97076 \qquad SE = 262.17 \qquad DW = 1.79013 \qquad \hat{\rho} = 0.09238$

Exports of services: freights and insurances (at current prices), 1964 · III–1975 · IV

$$
\begin{aligned}
(9)\quad ESFISY = {} & -89.85167483 + 0.1183451578\,EJBY \\
& \qquad (0.286) \qquad (7.749) \\
& -0.1729592856\,ESFISY_{-1} - 533.6997217\,Q2 \\
& \qquad (1.211) \qquad\qquad (1.459) \\
& -180.2760816\,Q3 + 236.0027681\,Q4 \\
& \qquad (0.494) \qquad (0.649) \\
& \bar{R}^2 = 0.80811 \qquad SE = 856.86 \qquad DW = 2.14087 \qquad \hat{\rho} = -0.09001
\end{aligned}
$$

Imports of services: freights and insurances (at current prices), 1964 · III–1975 · IV

$$
\begin{aligned}
(10)\quad MSFISY = {} & 236.7722714 + 0.08218514997\,MJBY \\
& \qquad (5.504) \qquad (14.604) \\
& +0.5000956842\,MSFISY_{-1} + 3.602308292\,Q2 \\
& \qquad (13.527) \qquad\qquad (0.069) \\
& +30.97258967\,Q3 - 123.3897264\,Q4 \\
& \qquad (0.616) \qquad (2.396) \\
& \bar{R}^2 = 0.99793 \qquad SE = 119.35 \qquad DW = 1.46332 \qquad \hat{\rho} = 0.23316
\end{aligned}
$$

Investment incomes from abroad, 1964 · III–1975 · IV

$$
\begin{aligned}
(11)\quad \mathrm{LOG}(ESIVY) = {} & -1.719452912 \\
& \qquad (2.548) \\
& +0.4604852724\,\mathrm{LOG}(KLDA + KLTA + KLLA + KLSOA) \\
& \qquad (2.575) \\
& +0.6212341722\,\mathrm{LOG}(ESIVY_{-1}) + 0.2390776305\,Q2 \\
& \qquad (4.347) \qquad\qquad (4.318) \\
& -0.04558715627\,Q3 + 0.2752662372\,Q4 \\
& \qquad (0.924) \qquad\qquad (4.636)
\end{aligned}
$$

anti-log = 0.1792

$$
\bar{R}^2 = 0.98847 \qquad SE = 0.11753 \qquad DW = 1.95611 \qquad \hat{\rho} = -0.07781
$$

Investment incomes to abroad, 1964 · III–1975 · IV

$$
\begin{aligned}
(12)\quad \mathrm{LOG}(MSIVY) = {} & -3.416342945 + 0.7174978402\,\mathrm{LOG}(EJBY + MJBY) \\
& \qquad (5.392) \qquad (5.455) \\
& +0.3956689166\,\mathrm{LOG}(MSIVY_{-1}) + 0.1702532861\,Q2 \\
& \qquad (3.571) \qquad\qquad (3.879) \\
& -0.03116438066\,Q3 + 0.2385794919\,Q4 \\
& \qquad (0.752) \qquad\qquad (5.729)
\end{aligned}
$$

anti-log = 0.03283

$\bar{R}^2 = 0.98625$ $SE = 0.097595$ $DW = 1.97617$ $\hat{\rho} = -0.00734$

Other payments to abroad, 1964 · III–1975 · IV

(13) $\mathrm{LOG}(MSOTY) = -1.955494981 + 0.3264222733\mathrm{LOG}(RGNP*P)$
(2.692) (2.657)
$+0.7754919772\mathrm{LOG}(MSOTY_{-1}) + 0.1197887944Q2$
(9.095) (5.369)
$+0.02598812181Q3 + 0.1396300256Q4$
(1.257) (6.491)

anti-log = 0.1415

$\bar{R}^2 = 0.99559$ $SE = 0.049341$ $DW = 2.14475$ $\hat{\rho} = -0.12423$

Total commodity exports (Custom clearance and FOB basis, at current prices), 1964 · III–1975 · IV

(14) $EJBY = 60.89428405 + 0.9810583347EJTOTY$
(1.935) (1344.311)
$-24.99296021Q2 - 50.50901113Q3 - 77.62574856Q4$
(0.781) (1.404) (2.162)
$\bar{R}^2 = 0.99998$ $SD = 86.033$ $DW = 2.16671$ $\hat{\rho} = -0.18919$

Total commodity imports (Custom clearance and FOB basis, at current prices), 1964 · III–1975 · IV

(15) $MJBY = -1131.484465 + 0.8736773435MJTOTY$
(8.777) (312.733)
$-52.15246314Q2 + 68.20637357Q3 + 26.14962083Q4$
(0.343) (0.458) (0.176)
$\bar{R}^2 = 0.99954$ $SE = 356.40$ $DW = 1.26956$ $\hat{\rho} = 0.35687$

Commodity-service exports and incomes from abroad (national accounts, at current prices), 1964 · III–1975 · IV

(16) $E = 67.83325223$
(0.453)

$$+1.582551168(0.4*(EJBY+ESTOTY)*(EXR/1000))$$
$$(10.022)$$
$$+0.9348640751(0.3*(EJBY+ESTOTY)*(EXR/1000))_{-1}$$
$$(3.139)$$
$$+0.6746056059(0.2*(EJBY+ESTOTY)*(EXR/1000))_{-2}$$
$$(1.466)$$
$$-0.3529285941(0.1*(EJBY+ESTOTY)*(EXR/1000))_{-3}$$
$$(0.522)$$
$$\bar{R}^2=0.99212 \quad SE=526.66 \quad DW=1.68166 \quad \hat{\rho}=0.10580$$

Commodity-service imports and incomes to abroad (National accounts, at current prices), 1964 · III–1975 · IV

(17) $$M=27.69386398$$
$$(0.881)$$
$$+2.352015913(0.4*(MJBY+MSTOTY)*(EXR/1000))$$
$$(36.577)$$
$$+0.4266806401(0.3*(MJBY+\text{MSTOTY})*(EXR/1000))_{-1}$$
$$(2.645)$$
$$-0.6028423262(0.2*(MJBY+MSTOTY)*(EXR/1000))_{-2}$$
$$(2.425)$$
$$+0.5071876751(0.1*(MJBY+MSTOTY)*(EXR/1000))_{-3}$$
$$(1.841)$$
$$\bar{R}^2=0.99964 \quad SE=118.14 \quad DW=2.36022 \quad \hat{\rho}=-0.18089$$

Implicit deflator for commodity-service exports and incomes from abroad (1970=1.0), 1964 · III–1975 · IV

(18) $$PE=0.09074513466+2.725214955(0.4*PEJT/100.)$$
$$(5.663) \qquad (11.110)$$
$$-1.174573197(0.3*PEJT/100.)_{-1}+0.06656278242(0.2*PEJT/100.)_{-2}$$
$$(1.853) \qquad (0.069)$$
$$+1.641432501(0.1*PEJT/100.)_{-3}$$
$$(1.542)$$
$$\bar{R}^2=0.99048 \quad SE=0.019562 \quad DW=1.25191 \quad \hat{\rho}=0.31906$$

Implicit deflator for commodity-service imports and incomes to abroad (1970=1.0), 1964 · III–1975 · IV

(19) $$PM=0.1692588862$$
$$(7.462)$$

$$+2.498033787(0.4*(MJTOTY/RMJTOT)*(EXR/360))$$
$$(10.351)$$
$$-0.7108050472(0.3*(MJTOTY/RMJTOT)*(EXR/360))_{-1}$$
$$(1.209)$$
$$+0.4470230794(0.2*(MJTOTY/RMJTOT)*(EXR/360))_{-2}$$
$$(0.499)$$
$$-0.4610400196(0.1*(MJTOTY/RMJTOT)*(EXR/360))_{-3}$$
$$(0.441)$$
$$\bar{R}^2=0.98385 \quad SE=0.045820 \quad DW=0.96003 \quad \hat{\rho}=0.52007$$

Export price index for all commodities of Japan (1970=1.0), 1965·I–1975·IV

(20) $$PEJT=16.0702+0.2040DIF(PWI*EXR, 1)$$
$$(0.695) \quad (6.524)$$
$$-0.0796(PWI*EXR)_{-1}+1.1207PEJT_{-1}$$
$$(4.122) \quad (24.91)$$
$$\bar{R}^2=0.985 \quad SE=0.0269 \quad DW=2.089$$

F′. International Trade sector Identities

Commodity exports to U.S.A. (FOB basis, at current prices)

(21) $$EJNAY=REJNA*(PEJT*(3.60/EXR))$$

Commodity exports to Asian countries (FOB basis, at current prices)

(22) $$EJSEAY=REJSEA*(PEJT*(3.60/EXR))$$

Commodity exports to the Rest of the World (FOB basis, at current prices)

(23) $$EJOTY=REJOT*(PEJT*(3.60/EXR))$$

Total commodity exports (Custom clearnace and FOB basis, at 1970 const. prices)

(24) $$REJTOT=REJNA+REJWE+REJSEA+REJOT+REJCOM$$

Total commodity exports (Custom clearance and FOB basis, at 1970 const. prices)

(25) $$EJTOTY=REJTOT*(PEJT*(3.60/EXR))$$

Food-stuff imports (CIF basis, at current prices)

(26) $MJFDY = RMJFD * (PMJFD * (3.60/EXR))$

Fuel imports (CIF basis, at current prices)

(27) $MJOILY = RMJOIL * (PMJOL * (3.60/EXR))$

Crude materials imports (CIF basis, at current prices)

(28) $MJRMY = RMJRM * (PMJRM * (3.60/EXR))$

Other commodity imports (CIF basis, at current prices)

(29) $MJOTY = RMJOT * (PMJOT * (3.60/EXR))$

Total commodity imports (Custom clearance and FOB basis, at 1970 const. prices)

(30) $RMJTOT = RMJFD + RMJOIL + RMJRM + RMJOT$

Total commodity imports (Custom clearance and FOB basis, at 1970 const. prices)

(31) $MJTOTY = MJFDY + MJOILY + MJRMY + MJOTY$

Total services to abroad: credits

(32) $ESTOTY = ESFISY + ESIVY + ESGY + ESOTY$

Total services from abroad: debits

(33) $MSTOTY = MSFISY + MSIVY + MSGY + MSOTY$

PEJT transformation ratio

(34) $PZ = EJTOTY/(REJTOT * PEJT * (3.60/EXR))$

Trade balance

(35) $BTY = EJBY - MJBY$

Current balance

(36) $BCY = BTY + (ESTOTY - MSTOTY) + (ESTY - MSTY)$

Long-term capital balance

(37) $BCLY = CLAY - CLLY$

Basic balance

(38) $BBY = BCY + BCLY$

Overall balance

(39) $BOY = BBY + BCSY + BEOY$

Commodity-service exports and incomes from abroad (national account)

(40) $RE = E/PE$

Commodity-service imports and incomes to abroad (national account, at 1970 conat. prices)

(41) $RM = M/PM$

Surplus of the nationa on current account (national account, at 1970 const. prices)

(42) $FSRP = RE - RM$

Surplus of the nation on current account (national account, at current prices)

(43) $XAB = E - M$

C″. An Alternative Set of Price Equations

Implicit price deflator for private consumption expenditure (1970=1.0), 1965·II–1975·IV

$$
\begin{aligned}
(1)'\quad & \mathrm{DOT}(PCP,4) = 0.0007099699235 \\
& \qquad\qquad (0.074) \\
& +0.1318001156(\mathrm{DOT}(RWP,4)+\mathrm{DOT}(RWP,4)_{-1}) \\
& \quad (4.110) \\
& +0.3530946117\mathrm{DOT}(PWI,4)+0.2372140099\mathrm{DOT}(PPCP,4)_{-3} \\
& \quad (9.267) \qquad\qquad\qquad (4.823) \\
& \bar{R}^2=0.90429 \qquad SE=0.015793 \qquad DW=0.68686 \qquad \hat{\rho}=0.64867
\end{aligned}
$$

Implicit price deflator for fuel and light (1970=1.0), 1964·III–1975·IV

$$
\begin{aligned}
(2)'\quad & \mathrm{DOT}(PCL,4) = -0.1009814819 \\
& \qquad\qquad (-5.027) \\
& +1.328556712\mathrm{DOT}(PPCP,4)+0.001520841630T \\
& \quad (9.337) \qquad\qquad\qquad (2.906) \\
& \bar{R}^2=0.77490 \qquad SE=0.041455 \qquad DW=0.75140 \qquad \hat{\rho}=0.62997
\end{aligned}
$$

Implicit price deflator for housing (Rent) (1970=1.0), 1965·I–1975·IV

$$
\begin{aligned}
(3)'\quad & \mathrm{DOT}(PCH,4) = 0.04407930846 \\
& \qquad\qquad (3.930) \\
& +0.3207443927(\mathrm{DOT}(PCP,4)_{-1}+\mathrm{DOT}(PCP,4),2) \\
& \quad (7.633) \\
& -0.0005650946835T \\
& \quad (1.741) \\
& \bar{R}^2=0.63166 \qquad SE=0.020872 \qquad DW=0.49525 \qquad \hat{\rho}=0.75251
\end{aligned}
$$

Implicit price deflator for housing (Others) (1970=1.0), 1964·III–1975·IV

$$
\begin{aligned}
(4)'\quad & \mathrm{DOT}(PCO,4) = -0.06896383203 \\
& \qquad\qquad (3.843) \\
& +1.547486932\mathrm{DOT}(PCP,4)+0.002400008418\mathrm{DOT}(RCO,4) \\
& \quad (11.030) \qquad\qquad\qquad (0.036) \\
& \bar{R}^2=0.86540 \qquad SE=0.030086 \qquad DW=0.67618 \qquad \hat{\rho}=0.66614
\end{aligned}
$$

Implicit price deflator for the miscellaneous (1970=1.0), 1965·I–1975·IV

$$(5)' \quad \mathrm{DOT}(PCOT, 4) = 0.01111527517$$
$$(1.416)$$
$$+0.4500413355(\mathrm{DOT}(PCP, 4)_{-1} + \mathrm{DOT}(PCP, 4), 2)$$
$$(15.307)$$
$$-0.0001061844088T$$
$$(0.467)$$
$$\bar{R}^2 = 0.89945 \qquad SE = 0.014604 \qquad DW = 1.74794 \qquad \hat{\rho} = 0.12117$$

Implicit price deflator fot the consumption expenditure of private non-profit institutions (1970 = 1.0), 1964 · III–1975 · IV

$$(6)' \mathrm{DOT}(PCNH, 4) = -0.01299814745$$
$$(2.088)$$
$$+1.80737290\mathrm{DOT}(PCP, 4) + 0.05754427476\mathrm{DOT}(RCP, 4)$$
$$(41.341) \qquad (1.044)$$
$$\bar{R}^2 = 0.99052 \qquad SE = 0.0056112 \qquad DW = 1.49317 \qquad \hat{\rho} = 0.24634$$

Implicit price deflator for the inventory stocks by private non-agricultural sector (1970 = 1.0), 1965 · I–1975 · IV

$$(7)' \quad \mathrm{DOT}(PJPN, 4) = -0.001031179733$$
$$(0.422)$$
$$+0.7084541144(\mathrm{DOT}(PWI, 4) + \mathrm{DOT}(PWI, 4)_{-1})$$
$$(33.982)$$
$$-0.4176883014(\mathrm{DOT}(PWI, 4)_{-2})$$
$$(10.243)$$
$$\bar{R}^2 = 0.98214 \qquad SE = 0.013768 \qquad DW = 1.69595 \qquad \hat{\rho} = 0.11346$$

Implicit price deflator for private fixed investment, 1965 · I–1975 · IV

$$(9)' \quad \mathrm{DOT}(PIFEP, 4) = -0.007432254251$$
$$(2.138)$$
$$+0.3936668644(\mathrm{DOT}(PWI, 4) + \mathrm{DOT}(PWI, 4)_{-1})$$
$$(31.523)$$
$$+0.1106187000\mathrm{DOT}(O, 4)_{-1}$$
$$(4.635)$$
$$\bar{R}2 = 0.95853 \qquad SE = 0.015420 \qquad DW = 0.72993 \qquad \hat{\rho} = 0.63541$$

Implicit price deflator for general government consumption expenditure (1970 = 1.0), 1964 · III–1975 · IV

$$(11)' \quad \mathrm{DOT}(PCG, 4) = \underset{(3.078)}{0.02671201111} + \underset{(11.404)}{1.060166364}\mathrm{DOT}(PCP, 4) + \underset{(1.948)}{0.03529259094}\mathrm{DOT}((GCZ/LG), 4)$$

$\bar{R}^2 = 0.76676 \quad SE = 0.030228 \quad DW = 1.76588 \quad \hat{\rho} = 0.07130$

Implicit prices deflator for investment in dwellings by government sector (at 1970 const. prices), 1964·III–1975·IV

$$(13)' \quad \mathrm{DOT}(PIHG, 4) = -\underset{(1.177)}{0.01207058864} + \underset{(23.243)}{1.018316113}\mathrm{DOT}(PIHP, 4) + \underset{(0.263)}{0.00006609269663}T$$

$\bar{R}^2 = 0.93208 \quad SE = 0.021189 \quad DW = 0.53277 \quad \hat{\rho} = 0.73205$

List of Variables

AVNAP	Stock valuation adjustment
BBY	Basic balance
BCLY	Long-term capital balance
BCSY	Balance of payment: Short-term capital (U.S.$ million)
BCY	Current balance
BEOY	Balance of payment: Errors & Omissions (U.S.$ million)
BJCR	Change in Bank of Japan credit (incl. lendings, sales and purchases of securities, and bills purchased)
BOY	Overall blance
BTY	Trade balance
CB	Expenditure of residents abroad and etc. (at current prices)
CC	Expenditure of households for clothing (at current prices)
CD	Expenditure of households for durable goods
CF	Expenditure of households for foods, beverages and tobacco (current prices)
CG	General government consumption expenditure
CHT	Household consumption expenditure (current prices)
CINT	Interest on consumer's debt
CL	Expenditure of households for fuel and light (at current prices)
CLAY	Balance of payment: Long-term capital assets (U.S.$ million)
CLLY	Balance of payment: Long-term liabilities (U.S.$ million)
CND	Expenditure of households for non-durable goods
CNH	Expenditure of private non-profit institutions (at current prices)

CO	Expenditure of households for housing (Others) (at current prices)
COT	Expenditure of households for the miscellaneous (at current prices)
CP	Private consumption expenditure (current prices)
CR	Expenditure of households for housing (Rent) (at current prices)
CS	Expenditure of households for services
CUR	Cash currency in circulation
DABG	Change in deposite money banks' claims on the central government
DABLG	Change in deposite money banks' claims on local government
DABP	Changes in loans and security holdings by financial intermediaries
DBLND	Changes in bank-loans to private sector
DBOT	Change in other debts (net of other assets) in all banks
DBSEC	Changes in private security holdings by banks
DCAS	Change in cash-holding by commercial banks
DCUR	Changes in demand for cash currency by private sector (excl. financial intermediaries)
DCURN	Changes in supply of cash currency through the government sector deficit
DDBJ	Change in reserve requirement of deposite money banks
DDBTG	Net change in public debts to private sector
DELT	The Bank of Japan)s discount rate of commercial bills and interest rates on loans secured by govenment securities, specially designated securities and bills corresponding to commercial bills.
DEP 1	Provisions for the consumption of private dwellings
DEP 2	Provision for the consumption of private fixed capital
DEPC 1	Provisions for the consumption of incorporate dwellings
DEPC 2	Provisions for the consumption of invorporate fixed capital
DEPG	Provisions for the government's consumption of fixed capital
DFB 2	Changes in financial bond issued by banks
DLISG	Change in post-office life insurance
DLOGC	Change in government loans to private corporations
DLOGH	Change in government loans to households and private non-profit institutions
DMDP	Changes in demand for demand and short-term deposite by private sector (excl. financial intermediaries)
DPBG	Net change in public bonds holdings by private non-financial sector
DTDP	Changes in demand for time deposite by privare sector (excl. financial intermediaries)
DTDPG	Changes in postal savings
E	Commodity-service exports and incomes from abroad (national accounts, at current prices)
EFJOT	Commodity exports to the Rest of the World (FOB basis, at 1970 const. prices)

EJBY	Total commodity exports (Custom clearance and FOB basis, at current prices)
EJNAY	Commodity exports to U.S.A. (FOB basis, at current prices)
EJOTY	Commodity exports to the Rest of the World (FOB basis, at current prices)
EJSEAY	Commodity exports to Asian countries (FOB basis, at current prices)
EJTOTY	Total commodity exports (Custom clearance and FOB basis, at current prices)
EJWEY	Commodity exports to Western Europe (FOB basis, at current prices)
ESFISY	Exports of services: freights and insurances (at current prices)
ESGY	Balance of payment: government's services (credits), (U.S.$ million)
ESIVY	Investment incomes from abroad
ESOTY	Balance of payment: Others' (credits), (U.S.$ million)
ESTOTY	Total services to abroad: credits
ESTY	Balance of payment: Transfers (credits), (U.S.$ million)
EXR	Foreign exchange rate (Yen per Dollar)
FSRP	Surplus of the nation on current account (national account, at 1970 const. prices)
GC 2	Wages and salaries of employees in government sector
GDP	Outstanding of time deposite at commercial banks
GINT	Interest on the public debt
GNP	Gross national product (at current)
GNPP	Gross private product
H	Average hours worked (for one quarter per capita)
H LWP*	Man-hours of employee in private sector
HLWPE	Man-hours in normal operation
HM	Estimated upper limit for hours worked per capita
I	Gross domestic fixed cpital formation (at current prices)
IFC	Gross fixed investment by incorporated sector (excl. dwellings)
IFEP	Gross fixed investment by private sector (at current prices)
IFG	Government investment in fixed capital (excl. housing investment)
IG	Gross fixed capital formation by government sector
IHC	Gross investment in dwellings by incorporated sector
IHG	Government housing investment
IHH	Gross investment in dwellings by unineorporated sector
IHP	Gross investment in private dwellings (at current prices)
IP	Gross fixed capital formation by private sector (at current prices)
IT	Gross domestic capital formation (at current prices)
ITAX	Indirect taxes

J	Change in inventories (at current prices)
JC	Investment in inventories by incorporated sector
JG	Changes in inventories of government enterprises
JNAP	Investment in inventories by private non-agricultural enterprises (at current prices)
JNP	Change in inventories in the sector of agriculture, foresty, and fishing (at current prices)
JP	Change in inventories of private sector (at current prices)
KFP	Stock in fixed capital of private sector (at acquisite prices)
KIHP	Stock in private dwellings (at current prices)
KLDA	Balance of payment: Long-term capital; direct investments (U.S.$ million)
KLLA	Balance of payment: Long-term capital; loans (U.S.$ million)
KLSOA	Balance of payment: Long-term capital; securities and others (U.S.$ million)
KLTA	Balance of payment: Long-term capital; trade credits (U.S.$ million)
L	The number of workers
LG	The number of employees in govenment sector
LP	The number of workers in private sector
LW	The number of employees
LWP	The number of employees in private sector
M	Commodity-service imports and incomes to abroad (national accounts, at current prices)
M2	Money supply (incl. time deposite at commercial banks)
MJBY	Total commodity imports (Custom clearance and FOB basis, at current prices)
MJFDY	Food-stuff imports (CIF basis, at current prices)
MJOILY	Fuel imports (CIF basis, at current prices)
MJOTY	Other commodity imports (CIF basis, at current prices)
MJRMY	Crude materials imports (CIF basis, at current prices)
MJTOTY	Total commodity imports (Custom clearance and FOB basis, at 1970 const. prices)
MSFISY	Imports of services: freights and insurances (at current prices)
MSGY	Balance of payment: government's services (debits), (U.S.$ million)
MSIVY	Investment incomes to abroad
MSOTY	Other payments to abroad
MSTOTY	Total services from abroad- debits
MSTY	Balance of payment: Transfers (debits), (U.S.$ million)
MTEJC	Commodity imports of the rest of the world (custom clearance basis, U.S.$ million)
MTNA	Commodity imports of U.S.A. (custom clearance basis, U.S.$ million)

MTSEA Commodity imports of the Asian countries (custom clearance basis, U.S.$ million)

MTWE Commodity imports of the Western Europe (custom clearance basis, U.S.$ million)

NL The number of workers

O Production index for mining and manufacturing industries

P Implicit deflator for GNP (1970=1.0)

PCB Implicit deflator for expenditure of residents abroad and etc.

PCC Implicit deflator for private consumption expenditure on clothing

PCD Price index of durable consumer goods (1970=1.0)

PCF Implicit price deflator for foods, bererages and tabcco (1970=1.0)

PCG Implicit price deflator for general government consumption expenditure (1970=1.0)

PCH Implicit price deflator for housing (Rent) (1970=1.0)

PCHT Implicit deflator for household consumption expenditure (1970=1.0)

PCL Implicit price deflator for fuel and light (1970=1.0)

PCNH Implicit price deflator for the consumption expenditure of private non-profit institutions (1970=1.0)

PCO Implicit price deflator for housing (Others) (1970=1.0)

PCOT Implicit price deflator for the miscellaneous (1970=1.0)

PCP Implicit price deflator for private consumption expenditure (1970=1.0)

PCR Implicit deflator for private housing rent

PE Implicit deflator for commodity-service exports and incomes from abroad (1970=1.0)

PEJT Export price index for all commodities of Japan (1970=1.0

PEJNA Export price index for all commodities of U.S.A. (1970=1.0)

PEWA Export price index for all commoditities of Western Europe (1970=1.0)

PI Implicit deflator for gross domestic fixed capital formation (1970=1.0)

PIFEP Implicit price defator for private fixed investment

PIFG Implicit price deflator for investment in non-housing items by government sector (at 1970 const. prices)

PIG Implicit deflator for government gross fixed capital formation (1970=1.0)

PIHG Implicit price deflator for investment in dwellings by government sector (at 1970 const. prices)

PIHP Implicit deflator for housing investment by private sector

PIP Implicit defator for private gross fixed capital formation (1970=1.0)

PIT Implicit deflator for gross domestic capital formation (1970=1.0)

PJAP	Implicit deflator for inventories (stocks) of agricultural sector
PJNAP	Implicit deflator for investment in inventories of private sector
PJPN	Implicit price denator for the inventory stocks by private non-agricultural sector (1970 = 1.0)
PM	Implicit deflator for commodity-service imports and incomes to abroad (1970 = 1.0)
PMJFD	Price index for food-stuff imports
PMJOL	Price index for fuel imports (1970 = 1.0)
PMJOT	Price index for other commodity imports (1970 = 1.0)
PMJRM	Price index for crude materials imports (1970 = 1.0)
PPCP	Price index for goods and services supplied by regulated industries
PWI	Whole sale price index for all industries (1970 = 1.0)
PZ	PEJT transformation ratio
Q_2, Q_3, Q_4	Seasonal dummy variables
*R*1	Corporation tax rate
*R*2	Separate tax rate on dividends
RCAM	Call rate (unconditional, lenders' rate)
RCB	Expenditure of residents abroad and etc. (at 1970 const. prices)
RCC	Expenditure of households for clothing (1970 const. prices)
RCF	Expenditure of households for foods, beverages and tobacco (1970 const. prices)
RCG	Government consumption expenditure (at 1970 const. prices)
RCHT	Household consumption expenditure (at 1970 const. prices)
RCL	Expenditure of households for fuel and light (1970 const. prices)
RCNH	Expenditure of private non-profit institutions (1970 const. prices)
RCO	Expenditure of households for housing (Others) (1970 const. prices)
RCOT	Expenditure of households for the miscellaneous (1970 const. prices)
RCP	Private consumption expenditure (1970 const. prices)
RCR	Expenditure of households for housing (Rent) (1970 const. prices)
RE	Commodity-service exports and incomes from abroad (national account)
REJCOM	Commodity exports to socialist countries (custom clearance and CIF basis, at 1970 const. prices)
REJNA	Commodity exports to U.S.A. (FOB basis, at 1970 const. prices)
PEJOT	Commodity exports to the Rest of the World (FOB basis, at 1970 const. prices)
REJSEA	Exports to Asian Countries (FOB basis, at 1970 const. prices)
REJTOT	Total commodity exports (Custom clearance and FOB basis, at 1970 const. prices)
REJWE	Commodity exports to Western Europe (FOB basis, at 1970 const. prices)
*RGC*2	Wages and salaries of employees in government sector (at 1970 const. prices)

RGNP	Gross national product (at 1970 const. prices)
RGNPP	Gross private product (at 1970 const. prices)
RIFG	Gross fixed capital formation: Others by government sector (at 1970 const. prices)
RGNPPO	Potential GNP by private sector (1970 const. prices)
RI	Gross domestic fixed capital formation (1970 const. prices)
RIFEP	Gross fixed investment by private sectors (excl. dwellings) (1970 const. prices)
RIG	Gross fixed cpaital formation by government sector (at 1970 const. prices)
RIHG	Gross fixed capital formation: Dwellings by government sector (at 1970 const. prices)
RIHP	Gross investment in private dwellings (1970 const. prices)
RIP	Gross fixed capital formation by private sector (1970 const. prices)
RIT	Gross domestic capital formation (1970 const. prices)
RJ	Change in inventories (1970 const. prices)
RJAP	Change in inventories of agricultural sector (at 1970 const. prices)
RJG	Change in inventories of government sector (at 1970 const. prices)
RJNAP	Investment in inventories by private non-agricultural enterprises (1970 const. prices)
RJP	Change in inventories of private enterprises (1970 const. prices)
RKF	Gross stock in fixed capital of private sector (at 1970 const. prices)
RM	Commodity-service imports and incomes to abroad (national account: at 1970 const. prices)
RMJFD	Food-Stuff imports (CIF basis, at 1970 const. prices)
RMJOIL	Fuel imports (CIF basis, at 1970 const. prices)
RMJOT	Other commodity imports (CIF basis, at 1970 const. prices)
RMJRM	Crude materials imports (CIF basis, at 1970 const. prices)
RMJTOT	Total commodity imports (Custom clearance and FOB basis, at 1970 const. prices)
ROH2	Degree of utilization of private sector
RRF	Replacement of fixed capital stock (1970 const. prices)
RRS1	Reserve rate on balance of demand deposite (the regal highest rate)
RRS2	Reserve rate on balance of time deposite (the regal highest rate)
RSJNAP	Stock in inventories of private non-agricultural enterprises (at 1970 const. prices)
RTI	Indirect tax rate (average)
RWG	Wage rate of government employees
RWP	Wage rate for employee in private sector (billion yen per hour per million persons)
SAVC	Saving of private corporations
SDP	Outstanding of demand deposite at commercial banks
SG	Government savings
SGAP	Statistical discrepancy in national income and expenditure accounts

SI	Social insurance contributions by persons
SP	Personal savings
SRLO	Short-term (regulated) rate on lendings of all banks (annual percent rate)
SRLI	Long-term (non-regulated) rate on lendings of all banks (annual percent rate)
SSP	Cumulative personal savings
SUB	Current subsidies
T	Quartery time variable (1960 I = 1.0)
TAX	Total tax payments (excl. subsidies)
TAXC	Corporate income tax
TAXH	Personal income taxes and charges
TRCH	Transfers (from private corporations to households and private non-profit institutions)
TRFG	Transfers (from abroad to government)
TRFH	Transfers (from abroad to households and private non-profit institutions)
TRFG	Transfers (from government to abroad)
TRGH	Transfers (from government to households and private non-profit institutions)
TRHF	Transfers (from households and private non-profit institutions to abroad)
TRHG	Transfers (from households and private non-profit institutions to government)
*uu*0 ~ *uu*5	Dummy variables assigned to changes through "Nixon shocks" and "Oil shocks." *uu*0 = 1 in 1970. II and = 0 otherwise *uu*1 = 1 in 1979. III and = 0 otherwise *uu*2 = 1 in 197Z. II and = 0 otherwise *uu*2 = 1 in 1971. II and = 0 otherwise *uu*4 = 1 in 1972. II and = 0 otherwise *uu*4 = 1 in 1973. II and = 0 otherwise *uu*5 = 1 in 1973. IV and = 0 otherwise
*W*1	Dummy variable concerning to a structural change near in 1973 (W1 = 1 until 1973. II, and after 1973. III, W1 = 0)
*W*2	Dummy variable concerning to a structural change near in 1973 (W2 = 0 until 1973. II, and after 1973. III, W2 = 1)
XAB	Surplus of the nation on current account (national account, at current prices)
Y	National income

YC	Income from private corporations
YD	Disposable income of persons
YDIV	Income from property: Dividends
*YDIV*2	An adjustment variable defining corporate income
*YDIV*3	An adjustment variable defining corporate savings
YF	Income from unincorporated enterprises
YFA	Income from unincorporated enterprises in agriculture, forestry and fishing sectors
YFNA	Profits from unincorporated non-agricultural enterprises
YG	General government income from property and entrepreneurship
YGP	Profit from govenment enterprises
YGR	Rent, interest and vididends from general government property
YINT	Income from property: Interest
YP	Personal income
YP	Income from property
YRNT	Income from property: Rent
YW	Compensation of employees (incl. social insurance contributions by employers)
YWO	Incomes of employee other than wages and salaries (other pays and allowances)
YWR	Wages and salries (incl. social insurance contributions by employers)
YWPP	Compensation of employees in private sector
$zz0 \sim zz6$	Dummy variables assigned to changes through "Nixon-shocks" and "Oil-shocks."