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The Kyoto University Quarterly Model of the Japanese Economy

Chikashi Moriguchi*

Introduction

This is a quarterly econometric model of the Japanese Economy developed at the Institute of Economic Research, Kyoto University. It has been used for the short-term forecast as well as policy simulations. The outcomes have been announced for the past several years not only in Japan but also abroad particularly in cooperation with Project Link. The model here is the version in use as of February, 1979.

The new SNA statistics provide more detailed information on expenditures and income than the old national income statistics. But the published statistics of the new system are not yet complete in the sense that we cannot define all of the various balances and identities in a macroeconomic framework. There are no capital consumption allowances broken down by household, government and private corporate firm. Transfers among government, household, non-profit private institution, corporate firms and overseas sector are not complete matrixwise.

The model presented here, therefore, has a certain limitation due to this so that it cannot help being of a somewhat provisional nature.

I The Model

1) Expenditures in National Income Accounts

Private consumption expenditures

\[ C = 1026.7 + 0.19572 \frac{YD}{PC} \]

\[ + (0.76080 - 0.68284 \frac{\Delta PC}{PC_{-1}})C_{-1} \]

\[ R^2/SE/DW = 0.9980/434.2/1.5230 \]

(1966.1–1977.1)

Public consumption expenditures

\[ CG = CGY/PCG \]

Housing investment

\[ IH = 1521.3 + 0.3128 \frac{YD}{PIH} \]

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\[ +0.6694 \text{IH}_{-1} + 1.0938 \frac{DLBH}{PIH} + 203.4 \text{RLB} \]
\[ = 0.9704/259.8/2.2553 \]
(1966.1–1977.1)

**Private fixed investment**

5) \[ IF = -10296.2 + 0.12565 \sum_{t} \text{GDP}_{-t} \]
\[ -0.03701 \sum_{t} \text{KF}_{-t} \]
\[ + 0.1552 (\hat{O} \cdot \text{GDP})_{-t} \]
\[ -0.11062 (\hat{O} \cdot \text{KF})_{-t} \]
\[ = 0.6330592.9/1.7256 \]
(1966.1–1977.1)

**Public fixed investment**

6) \[ IG = IG' / \text{PIG} \]

**Private inventory investment**

7) \[ IIP = 1584.9 \]
\[ + 0.18191 - 0.12171 \frac{\text{IO}}{O_{-1}} \]
\[ + 0.0511 \text{PWM} \cdot \text{GDP} \]
\[ - 0.7033 \text{KIP}_{-1} \]
\[ = 0.6330592.9/1.7256 \]
(1966.1–1977.1)

**Exports of goods and services**

8) \[ EGS = EGS' / \text{PE} \]

**Factor income from abroad**

9) \[ ET = ET' / P \]
10) \[ E = EGS + ET \]

**Imports of goods and services**

11) \[ MGS = MGS' / \text{PM} \]

**Factor income to abroad**

12) \[ MT = MT' / P \]
13) \[ M = MGS + MT \]

**Gross domestic products in real terms**

14) \[ GDP = C + CG + IH + IF + IG + IIP + IIG + EGS - MGS \]

**Gross national products in real terms**

15) \[ GNP = GDP + ET - MT \]

**Private consumption expenditures, current values**

16) \[ CY = C \cdot \text{PC} \]

**Housing investment, current values**

17) \[ IH = IH \cdot \text{PIH} \]

**Private fixed investment, current values**

18) \[ IF = IF \cdot \text{PIF} \]

**Private corporate inventory investment, current values**

19) \[ IIP = 27.066 + 0.00682 (\text{PWM} + \text{PWM}_{-1}) IIP \]
\[ = 0.9384267.3/1.5981 \]
(1966.1–1977.1)

**Exports of goods and services, current values**

20) \[ EGS = -457.44 + 1.2826 \frac{X}{R} \]
\[ + 2.3530 \frac{\text{XFI} \cdot \text{XTO} + \text{XSO}}{\text{REX}} \]
\[ + 1501.7 Q_1 + 853.68 Q_2 \]
\[ + 455.00 Q_3 \]
\[ = 0.9980309.6/2.2171 \]
(1966.1–1977.1)

**Factor income from abroad, current values**

21) \[ ET = 85.63 + 1.6187 \frac{X}{R} \]
\[ - 76.19 Q_1 - 65.95 Q_3 \]
\[ = 0.993437.3/1.9908 \]
(1966.1–1977.1)

**Imports of goods and services, current values**

22) \[ E = EGS + ET \]

**Factor income to abroad**

23) \[ MGS = -292.35 + 1.4681 \frac{MB}{REX} \]
\[ + 1.2669 \frac{\text{MFI} + \text{MTO} + \text{MSO}}{REX} \]
\[ = 0.764 \]
(1966.1–1977.1)
Factor income to abroad, current values

24) \[ MT¥ = 135.6 \] (7.24)
\[ + 1.6616(MII + MSG)/REX \] (60.6)
\[ - 100.94 Q1 - 18.95 Q2 \] (4.69) (.863)
\[ - 85.58 Q3 \] (3.89)
\[ .9892/51.5/2.2036 \] (1966.1-1977.1)

Gross domestic products in current values

26) \[ GDP¥ = C¥ + CG¥ + IH¥ + IF¥ + IG¥ + IIP¥ + II¥ G - MGS¥ \]

Gross national products in current values

27) \[ GNP¥ = GDP¥ + ET¥ - MT¥ \]

(2) Definition of Stocks

Removal and scrappage, real terms

28) \[ RF = 105.34 + .0370 KF_{-1} \] (.33) (12.27)
\[ .7778/743.6/1.4788 \] (1966.1-1977.1)

Private gross fixed capital stocks, real terms

29) \[ KF = KF_{-1} + 0.25 (IF - RF) \]

Private inventory stocks, real terms

30) \[ KIP = KIP_{-1} + 0.25 IIP \]

Accumulated sum of private savings

31) \[ KSP = KSP_{-1} + 0.25 SP \]

(3) Commodity Trade

Commodity exports, custom clearance basis, seasonally adjusted

32) \[ \ln (XC/PEC) = 5.718 + 1.4811 \ln (TW) \] (7.04) (63.8)
\[ - 1.2133 \sum_{i} w_i \ln \left(\frac{PEC}{PEW}_{-i} \right) \] (8.31)
\[ - 0.268 \ln \left(\frac{PWM}{PEC/REX} \right) \] (5.04)
\[ w_0 \sim w_6 : .2586, .3017, .2328, .1293, .0517, .0259 \]
\[ .9903/.03973/1.528 \] (1966.3-1977.4)

Commodity imports, custom clearance basis, seasonally adjusted

Foodstuff

34) \[ \ln (MC I/PMC I/REX) = -3.27216 \] (2.70)
\[ + .433 \ln CF + .6812 \] (2.80) (6.45)
\[ \ln (MC I/PMC I/REX)_{-1} \]
\[ .9696/.05034/1.9813 \] (1966.1-1977.1)

Textile and other raw materials

35) \[ \ln (MC 24/PMC 24/REX) = .84932 + .22792 \] (6.20) (5.69)
\[ + .12482 \sum_{i} \ln O_{-i} + .2764 \] (3.99) (2.29)
\[ \ln (MC 24/PMC 24/REX)_{-1} \]
\[ .9549/.03557/1.8601 \] (1966.1-1977.1)
Metal ores and scraps
36) \( \ln (MC3/PMC3/REX) = -1.10252 + .2219 \cdot \frac{O_i}{O_{-i}} \cdot \frac{1}{3} + .21820 \cdot \frac{1}{2} \ln O_{-i} \cdot 0.9826 + 0.4490 + 1.1832 \text{ (1966.1–1977.1)} \)

Mineral fuels
37) \( \ln (MC5/PMC5/REX) = -0.66350 + 0.41359 \cdot \sum O_{-i} \cdot \ln O_{-i} \cdot 2.30 + 0.0319 \cdot KIIL_{-i} + 0.1526 \cdot 2.87 + 0.9827 + 0.03849 + 2.1899 \text{ (1967.1–1977.1)} \)

Chemicals
38) \( \ln (MC6/PMC6/REX) = -3.87495 + 1.08624 \cdot \frac{O_i}{O_{-i}} + \frac{2}{3} \ln (PWC6/PMC6) + \frac{1}{3} \ln (PWC6/PMC6)_{-i} \cdot 1.6175 \cdot \frac{3}{5} \ln O \cdot 24.34 + \frac{2}{5} \ln O_{-i} + .03912 \ln (O/O_{-i}) \cdot 3.08 \cdot 0.9755 + 0.0236 + 1.4109 \text{ (1966.1–1977.1)} \)

Machinery and other manufactures
39) \( \ln (MC78/PMC78/REX) = 1.88579 + 0.87558 \cdot \frac{O_i}{O_{-i}} + \frac{2}{3} \ln (PWC78/PMC78) + \frac{1}{3} \ln (PWC78/PMC78)_{-i} \cdot 0.3568 + 0.03942 \cdot (MC78/PMC78/REX)_{-i} \cdot 0.9909 + 0.02604 + 1.6262 \text{ (1966.1–1977.1)} \)

Total commodity, custom clearance basis
40) \( MC = MC1 + MC24 + MC3 + MC5 + MC6 + MC78 \)

Commodity imports: balance of payments account
41) \( MB = 0.88028 - 0.0242 Q1_{-i} \cdot (181.50) + 0.0100 Q2 - 0.0389 Q3 \cdot (1.56) + 0.0375 D732 \cdot (MC78/PMC78) \cdot RMFI \cdot MFI \cdot 0.7534 + 0.0150 + 1.4156 \text{ (1966.1–1977.1)} \)

(4) Trade of Invisibles

Exports/Receipts, not seasonally adjusted

Freight and merchandise insurance
42) \( \ln XFI = -0.59868 \cdot \frac{O_i}{O_{-i}} + 0.2733 \ln (FRTL \cdot RXCJ \cdot XB) + 5.04 \cdot PE(PE/REX) \cdot 0.1944 \ln (FRTL \cdot RXCJ \cdot XB) + 3.23 \cdot PE(PE/REX)_{-i} + 0.9499 \ln XFI_{-i} \cdot 21.53 + 0.0989 Q2 + 0.0616 Q3 \cdot 5.29 + 3.20 \cdot 0.9963 + 0.04986 + 1.6292 \text{ (1966.1–1977.1)} \)
Investment income

43) \( \ln XII = -2.747 \)  
    \begin{align*}
    &+ 1.0919 \ln \left[ \frac{RFL3}{100} (KLA + KSBA + GFX) \right] \\
    &+ 1.838 Q1 + 1.733 Q3 \\
    &+ .1838 Q1 + 1.0919 \ln 100 \\
    &+ .1838 Q1 + .1733 Q3 \\
    &+ .1838 Q1 + .1733 Q3 \\
    &+ .9916 / 0.9321 / 1.724 \\
    \end{align*}

\( (1967.1-1977.1) \)

Freight and merchandise insurance

47) \( \ln MFI = -1.86235 + .3263 \)  
    \begin{align*}
    & (65.8) \\
    & - 0.669 Q1 - 0.420 Q2 \\
    & - 0.023 Q3 \\
    \end{align*}

\( (1966.1-1977.1) \)

Tourism

44) \( \ln (XTO/PC/REX) = -10.195 \)  
    \begin{align*}
    &+ 3.165 \ln (YDUS/PCUS) \\
    &+ 1.5525 \ln (PCUS/PC/REX) \\
    &+ 0.2481 \ln (XTO/PC/REX)_1 \\
    &+ 2.866 DEXP - 3.607 Q1 \\
    &+ 0.888 Q2 \\
    &+ 0.8579 / 1.1857 / 1.8511 \\
    \end{align*}

\( (1966.1-1977.1) \)

Other services

45) \( \ln (XSO/PC/REX) = -5.30191 \)  
    \begin{align*}
    &+ 4.6727 \ln (YDUS/PCUS) \\
    &+ 0.4373 \ln (PCUS/PC/REX) \\
    &- 1.324 Q2 \\
    &+ 0.9019 / 1.320 / 0.6291 \\
    \end{align*}

\( (1966.1-1977.1) \)

Total exports of services: balance of payments account

46) \( XS = XFI + XTO + XII + XSO + XSG \)

Imports

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\[ +1.0780 \ln GNP \quad (13.59) \]
\[ -1.2337 \ln (PCUS/PC/REX) \quad (11.06) \]
\[ +.0764 Q_1 - .0379 Q_2 \quad (2.70) \quad (1.31) \]
\[ +.0375 Q_3 \quad (1.30) \]
\[ \frac{.9837}{.0674} \cdot .7511 \]
\[ (1966.1-1977.1) \]

**Total imports of services: balance of payments account**

51) \( MS = MFI + MII + MTO + MSO + MSG \)

**Wage, Prices and Deflators**

\[ \text{Wage income, adjusted by hours worked} \]

52) \( W = - .76696 \quad (8.29) \]
\[ + 1.12332 \sum w_i CPL_i \quad (16.26) \]
\[ + .05340 \sum w_i (RU + .05) \quad (9.25) \]
\[ w_i: 0.4, 0.3, 0.2, 0.1 \]
\[ .8806/.0240/1.6357 \]
\[ (1966.4-1977.1) \]

**Wholesale price index (mfg and mining)**

53) \( PW = -.08134 + .2828 P\hat{MM} \quad (9.29) \quad (31.08) \]
\[ + .06173 \sum ULC \quad (8.04) \]
\[ + .5959 \hat{O} + .3972 P\hat{EW} \quad (12.60) \quad (10.12) \]
\[ .9844/.0132/1.0766 \]
\[ (1967.2-1977.1) \]

**Wholesale price index (mfg)**

54) \( P\hat{WM} = -.08892 + .2588 P\hat{MM} \quad (8.93) \quad (24.99) \]
\[ + .06024 \sum ULC \quad (6.90) \]

\[ + .6312 \hat{O} + .4135 P\hat{EW} \quad (11.75) \quad (9.27) \]
\[ .9766/.0150/1.0819 \]
\[ (1967.2-1977.1) \]

**Wholesale price index of metal products**

55) \( P\hat{WC}3 = -.07853 + .7032 P\hat{MC}3 \quad (4.34) \quad (4.26) \]
\[ + .5609 \hat{O} + 1.0528 P\hat{WM} \quad (3.45) \quad (3.58) \]
\[ .9078/.0650/.6886 \]
\[ (1966.1-1977.1) \]

**Wholesale price index of textiles and miscellaneous products**

56) \( P\hat{WC}24 \]
\[ = -.03303 + .6259 P\hat{MC}24 \quad (2.91) \quad (12.69) \]
\[ + .1475 \hat{O} + .4038 IH \quad (1.39) \quad (4.13) \]
\[ .8412/.04866/.9975 \]
\[ (1966.2-1977.1) \]

**Wholesale price index of chemical products**

57) \( P\hat{WC}6 = -.01787 + .0845 P\hat{MC}5 \quad (3.89) \quad (7.15) \]
\[ + .9746 P\hat{WM} \quad (11.70) \]
\[ .9678/.0252/1.0097 \]
\[ (1966.1-1977.1) \]

**Unit value index of exports (dollar term)**

58) \( P\hat{EC} = .22155 \quad (5.41) \]
\[ + .7871 P\hat{WM} - 1 + .5614 R\hat{EX} - 1 \quad (11.40) \quad (8.47) \]
\[ -.9663 KIP \cdot 0.001 \quad (5.47) \]
\[ + .2890 P\hat{EW} \quad (3.78) \]
\[ .9577/.0220/1.1302 \]
\[ (1966.1-1977.1) \]

**Consumer price index**

59) \( CP\hat{I} = .021 + .4838 \sum w_i P\hat{W} \quad (2.4) \quad (12.5) \]
\[ +1.1815 \sum w_i CIP_{t-1} \]
\[ +1.1536 \sum w_t W_{t-1} \]
\[ w_0 = 0.6, w_1 = 0.4 \]
\[ 0.9429/0.0149/1.2001 \]
(1967.1–1977.1)

**Deflator of consumption expenditures**

60) \[ \hat{P}_C = 0.0324 + 0.12806 \sum w_t W_{t-1} \]
\[ (4.03) (2.32) \]
\[ +0.44530 \sum w_t PW_{t-1} \]
\[ (11.97) \]
\[ +0.0285 DD761 \]
\[ (2.19) \]
\[ w_i: 0.4, 0.3, 0.2, 0.1 \]
\[ i = 0, 3 \]
\[ i = 0.076, i = 0.127/1.169 \]
(1967.1–1977.1)

**Deflator of public consumption expenditures**

61) \[ \hat{P}_G = -0.005 + 0.6686 \sum w_t W_{t-1} \]
\[ (0.5) (5.78) \]
\[ +0.0435 \sum w_t PW_{t-1} \]
\[ (54) \]
\[ +2.0731 RWG \]
\[ (2.51) \]
\[ w_0 = 0.6, w_1 = 0.4 \]
\[ 0.8716/0.0261/2.403 \]
(1967.1–1977.1)

**Deflator of private fixed investment**

62) \[ \hat{P}_I = 0.0056 + 0.7984 PW_{t-1} \]
\[ (1.89) (28.56) \]
\[ +0.0301 DD7512 \]
\[ (2.55) \]
\[ 0.9522/0.0163/5.763 \]
(1966.2–1977.1)

**Deflator of housing investment**

63) \[ \hat{P}_H = 0.02467 + 0.7647 \hat{P}_I \]
\[ (10.6) (30.5) \]
\[ +0.2966 PW_{t-1} \]
\[ (2.55) \]
\[ 0.9779/0.0118/7.096 \]
(1966.2–1977.1)

**Deflator of public fixed investment**

64) \[ \hat{P}_G = 0.0217 + 0.8875 \hat{P}_I \]
\[ (11.1) (9.64) \]
\[ +0.1549 PW_{t-1} \]
\[ (2.06) \]
\[ 0.9835/0.0103/2.313 \]
(1966.2–1977.1)

**Deflator of exports**

65) \[ \hat{P}_E = 0.00839 \]
\[ (2.57) \]
\[ +0.4867 (PW_{t-1} + PW_{t-1}) \]
\[ (34.8) \]
\[ -0.1776 (REX + REX_{t-1}) \]
\[ (8.9) \]
\[ +0.0679 DREX \]
\[ (10.2) \]
\[ 0.9753/0.01572/1.563 \]
(1966.2–1977.1)

**Deflator of imports**

66) \[ \hat{P}_M = 0.2 (P_E + REX) \]
\[ (1.96) (37.5) \]
\[ +0.0088 + 0.5050 PM_{t-1} \]
\[ (1.96) \]
\[ 0.9702/0.0275/0.7040 \]
(1966.2–1977.1)

**GDP deflator**

67) \[ \hat{P} = GDP/P_{t-1}/GDP \]

(6) **Employment and Production**

**Demand for labor, employees man-hours**

68) \[ \ln (LWH) = 3.927 + 0.09632 \ln GDP \]
\[ (3.78) (2.83) \]
\[ +0.2003 \ln (O/O_{t-1}) \]
\[ (3.74) \]
\[ -0.0273 \ln (W/P)_{t-1} \]
\[ (1.32) \]
\[ +0.60104 \ln (LWH)_{t-1} \]
\[ (5.77) \]
\[ 0.9577/0.00878/0.2005 \]
(1966.1–1977.1)
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Hours worked
69) \[ \ln H = .9550 - .01591 \ln GDP \]
\[ + .1764 \ln (O/O_1) \]
\[ + .8296 \ln H_{-1} \]
\[ .9786/-.0060/2.626 \]
(1966.1–1977.1)

Number of employees
70) \[ LW = (LW \cdot H)/H \]

Number of non-agricultural self-employed
71) \[ LSNA = 1.945 + .09010 \ln GDP \]
\[ + .0619 \ln \left( \frac{YSNA}{LSNA} \right)^{-1} \]
\[ + .5700 \ln (LSNA)_{-1} \]
\[ .9214/-0.1455/1.595 \]
(1966.1–1977.1)

Number of people at work
72) \[ L = LW + LSNA + LSA \]

Labor supply
73) \[ NL = 1230.7 + 18.79 \left( \frac{YW+YS}{L \cdot P} \right) \]
\[ + 100.9 \hat{O} + .7276 NL_{-1} \]
\[ .9875/17.8/2.463 \]
(1966.1–1977.1)

Unemployment
74) \[ U = NL - L \]

Rate of unemployment
75) \[ RU = U/NL \]

Industrial production index, 1975 = 100.0
76) \[ O = 59.36 + .0009772 C \]
\[ (14.91) (57.75) \]
\[ + 1.2 (IH + IF + IG) \]
\[ + 1.63 (IIP + IIG) + 1.65 EGS \]
\[ + .29 CG)] - .2063 \frac{KIP_{-1}}{O_{-1}} \]
\[ .9888/2.3528/.5437 \]
(1966.1–1977.1)

(7) Income Distribution

Compensation for employees
77) \[ YW = W(LW \cdot H) \]

Income of self-employed, agriculture and fishery
78) \[ YSA/LSA = -1.27210 + .2559 \frac{YW}{LW} \]
\[ + .0770 PWA - .0286 PWM \]
\[ .9740/4.530/1.5736 \]
(1966.1–1977.1)

Income of self-employed, non-agriculture
79) \[ YSNA = 450.34 + .3291 GNP \]
\[ (1.27) (6.52) \]
\[ -.3458(YW + YRH) \]
\[ (4.87) \]
\[ + YC + YSA \]
\[ .9614/763.0/1.3337 \]
(1966.1–1977.1)

Income of self-employed, total
80) \[ YS = YSA + YSNA + YRENT \]

Property income of household, excluding dividend receipts
81) \[ YRH = 1598.7 + .0106 RLB \cdot KSP_{-1} \]
\[ (18.38) (67.48) \]
\[ .9906/363.7/8641 \]
(1966.1–1977.1)

Corporate dividend payments to household
82) \[ YDIH = 23.83 + .0078(YC + YC_{-1}) \]
\[ (56) (2.66) \]
\[ + .9351 YDIH_{-2} \]
\[ (31.95) \]
\[ .9734/75.52/1.4593 \]
(1966.1–1977.1)

Personal income
83) \[ YP = YW + YS + YRH + YDIH \]

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Personal disposable income
84) \( YD = YP + TR + TROH - TP - SI - TRHO \)

Personal savings
85) \( SP = YD - (C \cdot Y - CNH \cdot Y) \)

Corporate profit
86) \( YC = -650.60 + .2274 \cdot YC \)  
\( \sum \cdot GNP \cdot Y - \sum \cdot YW \)  
\(-.0142 \cdot RLB \cdot \sum \cdot L \)  
\( .8289/963.65/8769 \)  
\( (1966.1-1977.1) \)

Corporate profit after dividend payment
87) \( YCA = -444.33 + .8933 \cdot YC \)  
\( 3.95 \)  
\( 65.84 \)  
\(-880.46 \cdot D \)  
\( 13.07 \)  
\( .9908/204.84/1.5248 \)  
\( (1966.1-1977.1) \)

Corporate savings
88) \( SC = YCA - TC \)

National income
89) \( Y = YP + YCA + YRNH + YRG + YCG - INTG - INTP \)

Statistical discrepancy
90) \( DISC = GNP \cdot Y - D - TI + SUB - Y \)

(8) Taxes and Fiscal Balance

Personal income tax
91) \( TP = 280.83 + .0742(YW) \)  
\( (1.58) \)  
\( (4.20) \)  
\( + YDIH + YRH + YSA \)  
\(+.1912 \cdot YSNA \)  
\( 2.39 \)  
\(-.0004 \cdot LW \cdot EQA \)  
\( 1.62 \)  
\(+1107.13 \cdot DLAND \)  
\( 2.36 \)  

Corporate tax
92) \( TC = -1418.12 \)  
\( (6.83) \)  
\( +.1928 \cdot RC \cdot YCA \)  
\( 4.32 \)  
\( +5.6422 \cdot RC \cdot YDIH \)  
\( 20.99 \)  
\(+1824.70 \cdot DT \)  
\( 6.82 \)  

Indirect tax
93) \( TI = 82.77 + (.03551 \cdot YCA) \)  
\( 55.01 \)  
\( (.82) \)  
\(-.0027 \cdot D \)  
\( 6.31 \)  
\( 3.1) \)

Current surplus
94) \( SG = TP + TC + TI + SI + YRG \)  
\(-INTG - CG \cdot Y - TR \)  
\(-SUB - TRGP \)

Net increase in public borrowing
95) \( BG = SG - IG \cdot Y - II \cdot Y \)

(9) Balance of Payments Account

Trade balance
96) \( BT = XB - MB \)

Invisible trade balance
97) \( BS = XS - MS \)

Current account
98) \( BC = BT + BS + BU \)

Basic balance
99) \( BB = BC + A(KL - KLA) \)

Over-all account
100) \( BA = BB + \Delta KSNN + BEO \)

Gold and foreign exchange reserves
101) \( GFX = GFX_{-1} + BA + BONR \)
# II List of Variable: by Alphabetical Order

<table>
<thead>
<tr>
<th>Variable</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA</td>
<td>S130</td>
<td>$10^9$ Balance of payments, over-all account.</td>
</tr>
<tr>
<td>BB</td>
<td>S149</td>
<td>$10^9$ Balance of payments, basic balance.</td>
</tr>
<tr>
<td>BC</td>
<td>S129</td>
<td>$10^9$ Balance of payments, current account.</td>
</tr>
<tr>
<td>BEO</td>
<td>E38</td>
<td>$10^9$ Errors and omission in balance of payments.</td>
</tr>
<tr>
<td>BG</td>
<td>E40</td>
<td>$10^9$ Government demand for funds, saar.</td>
</tr>
<tr>
<td>BONR</td>
<td>E92</td>
<td>$10^9$ Balance of official, non-reserve transactions.</td>
</tr>
<tr>
<td>BS</td>
<td>E77</td>
<td>$10^9$ Balance of invisible trade.</td>
</tr>
<tr>
<td>BT</td>
<td>E94</td>
<td>$10^9$ Balance of unilateral transfer.</td>
</tr>
<tr>
<td>BU</td>
<td>E10</td>
<td>$10^9$</td>
</tr>
<tr>
<td>C</td>
<td>S1</td>
<td>$10^9$ Private consumption, real term, saar.</td>
</tr>
<tr>
<td>CY</td>
<td>S46</td>
<td>$10^9$ Private consumption, current value, saar.</td>
</tr>
<tr>
<td>CF</td>
<td>S11</td>
<td>$10^9$ Personal consumption on food, real, saar.</td>
</tr>
<tr>
<td>CG</td>
<td>S2</td>
<td>$10^9$ Government consumption, real, saar.</td>
</tr>
<tr>
<td>CGv</td>
<td>E7</td>
<td>$10^9$ Government consumption, current, saar.</td>
</tr>
<tr>
<td>CNHv</td>
<td>E5</td>
<td>$10^9$ Current consumption expenditures by private non-profit institution, saar.</td>
</tr>
<tr>
<td>CPI</td>
<td>S29</td>
<td>$10^9$ Consumer price index, 1975 = 100.</td>
</tr>
<tr>
<td>CPIp</td>
<td>E64</td>
<td>$10^9$ Index of regulated consumer prices, 1975 = 100.</td>
</tr>
<tr>
<td>D</td>
<td>E2</td>
<td>$10^9$ Total depreciation allowance in NIA, current, saar.</td>
</tr>
<tr>
<td>D741</td>
<td>E78</td>
<td>$10^9$ Dummy, = 1.0 for 1974.1 and after, 0.0 otherwise.</td>
</tr>
<tr>
<td>DD761</td>
<td>E92</td>
<td>$10^9$ Dummy, = 1.0 for 1976.1 only, and 0.0 otherwise.</td>
</tr>
<tr>
<td>DISC</td>
<td>E97</td>
<td>$10^9$ Dummy variable, = 1.0 in 1974.1 and 1974.2, = 0.0 otherwise.</td>
</tr>
<tr>
<td>DREX</td>
<td>E10</td>
<td>$10^9$ Increase in housing loans from private banks, sa.</td>
</tr>
<tr>
<td>DTC</td>
<td>E93</td>
<td>$10^9$ Dummy variable, = 1.0 after 1975.3.</td>
</tr>
<tr>
<td>E</td>
<td>S7</td>
<td>$10^9$ Dummy variable, = 1.0 in 1974.3 and 1975.1, = 0.0 otherwise.</td>
</tr>
</tbody>
</table>
Exports and income from abroad in NIA, real, saar.
\( EY \) S50 \( 10^9 \) ¥
Exports and income from abroad in NIA, current, saar.
\( EGS \) S107 \( 10^9 \) ¥
Exports of goods and services in NIA, real, saar.
\( EGSY \) S137 \( 10^9 \) ¥
Exports of goods and services in NIA, current, saar.
\( EQA \) E19 \( 10^9 \) ¥
Level of income tax exemption for a household of four persons.
\( ET \) S142 \( 10^9 \) ¥
Factor income from abroad in NIA, real, saar.
\( ETY \) S140 \( 10^9 \) ¥
Factor income from abroad in NIA, current, saar.
\( FRTL \) E75
Liner freight rate (the Bremen index), 1965 = 100.
\( GDP \) S67 \( 10^9 \) ¥
Gross Domestic Product, real, saar.
\( GDPY \) S68 \( 10^9 \) ¥
Gross Domestic Product, current, saar.
\( GFX \) S131 \( 10^9 \) ¥
Gold and foreign exchange reserves.
\( GNP \) S9 \( 10^9 \) ¥
Real GNP, saar.
\( GNPy \) S52 \( 10^9 \) ¥
Current GNP, saar.
\( H \) S16
House worked, 1975 = 100.

\( IF \) S4 \( 10^9 \) ¥
Business fixed investment, real, saar.
\( IFy \) S48 \( 10^9 \) ¥
Business fixed investment, current, saar.
\( IG \) S5 \( 10^9 \) ¥
Government fixed investment, real, saar.
\( IGy \) E6 \( 10^9 \) ¥
Government fixed investment, current, saar.
\( IH \) S3 \( 10^9 \) ¥
Private housing investment, real, saar.
\( IHY \) S47 \( 10^9 \) ¥
Private housing investment, current, saar.
\( IIG \) E9 \( 10^9 \) ¥
Government inventory investment, real, saar.
\( IIGy \) E8 \( 10^9 \) ¥
Government inventory investment, current, saar.
\( IIP \) S6 \( 10^9 \) ¥
Private corporate inventory investment, real, saar.
\( IIPY \) S49 \( 10^9 \) ¥
Private corporate inventory investment, current, saar.
\( INTP \) E47 \( 10^9 \) ¥
Interest payment on consumer's loan, current, saar.
\( INTG \) E48 \( 10^9 \) ¥
Government interest payments on bond, current, saar.
\( KF \) S96 \( 10^9 \) ¥
Gross fixed capital stock (net of RF), real, sa.
\( KIP \) S97 \( 10^9 \) ¥
Private corporate inventory stock, real,
Imports and income paid to abroad, NIA, current, saar.

$MB$ S120 10^6$

Merchandise imports, balance of payments basis.

$MC$ S119 10^6$

Commodity imports, custom clearance basis, sa.

$MC1$ S113 10^6$

Imports of food and beverage, custom clearance basis, sa.

$MC24$ S114 10^6$

Imports of crude materials, custom clearance basis, sa.

$MC3$ S115 10^6$

Imports of metal ores and scrap, custom clearance basis, sa.

$MC5$ S116 10^6$

Imports of mineral fuels, custom clearance basis, sa.

$MC6$ S117 10^6$

Imports of chemical products, custom clearance basis, sa.

$MC78$ S118 10^6$

Imports of machineries and other mfg products, custom clearance basis, sa.

$MFI$ S122 10^6$

Payments of freight and merchandise insurance.

$MGS$ S121 10^9$

Imports of goods and services, NIA, real, saar.

$MGS\$ S138 10^9$

Imports of goods and services, NIA, current, saar.

$MII$ S124 10^6$

Payments of investment income to abroad.

$MS$ S126 10^6$
Total service imports, balance of payments basis.

\( MSG \) \( Е31 \) \( 10^8 \)S
Payments for overseas government services.

\( MSO \) \( S125 \) \( 10^8 \)S
Payments for other services including non-merchandise insurance.

\( MT \) \( S143 \) \( 10^8 \)¥
Factor income paid to abroad, NIA, real, saar.

\( MTV \) \( S141 \) \( 10^8 \)¥
Factor income paid to abroad, NIA, current, saar.

\( MTO \) \( S123 \) \( 10^8 \)S
Payments for tourism.

\( NL \) \( S20 \) \( 10^4 \)
Total labor force.

\( O \) \( S10 \)
Industrial production index, \( 1975 = 100 \).

\( P \) \( S53 \)
GDP deflator, \( 1970 = 1.00, \) sa.

\( PC \) \( S35 \)
Consumption deflator, \( 1970 = 1.00, \) sa.

\( PCF \) \( S55 \)
Food consumption deflator, \( 1970 = 1.00, \) sa.

\( PCG \) \( S37 \)
Government consumption deflator, \( 1970 = 1.00, \) sa.

\( PCUS \) \( E68 \)
Consumption deflator in U.S., NIA, \( 1967 = 100.0, \) sa.

\( PE \) \( S45 \)
Deflator of goods and service exports, \( 1970 = 1.0, \) sa.

\( PEC \) \( S135 \)
Unit value index of commodity export in dollar term, \( 1975 = 1.00 \).

\( PEW \) \( E63 \)
Price index of world manufacturing export, \( 1970 = 1.0 \).

\( PIF \) \( S71 \)
Fixed investment deflator, \( 1970 = 1.00, \) sa.

\( PIG \) \( S43 \)
Government capital formation deflator, \( 1970 = 1.00, \) sa.

\( PIH \) \( S41 \)
Housing investment deflator, \( 1965 = 1.00, \) sa.

\( PM \) \( S136 \)
Deflator of goods and service imports, \( 1970 = 1.00, \) sa.

\( PMC1 \) \( E54 \)
Unit value index of foodstuff imports, \( 1975 = 100.0 \).

\( PMC2 \) \( E55 \)
Unit value index of \( MC2 \) imports, \( 1975 = 100.0 \).

\( PMC3 \) \( E56 \)
Unit value index of \( MC3 \) imports, \( 1975 = 100.0 \).

\( PMC4 \) \( E57 \)
Unit value index of \( MC4 \) imports, \( 1975 = 100.0 \).

\( PMC5 \) \( E58 \)
Unit value index of \( MC5 \) imports, \( 1975 = 100.0 \).

\( PMC6 \) \( E59 \)
Unit value index of \( MC6 \) imports, \( 1975 = 100.0 \).

\( PMC7 \) \( E60 \)
Unit value index of \( MC7 \) imports,
1975 = 100.

$PMC8 \ E61$
Unit value index of $MC8$ imports, 1975 = 100.

$PMC24 \ S132$
Deflator for $MC2 + MC4$, derived from $PMC2$ and $PMC4$ price index, 1975 = 100.

$PMC78 \ S133$
Deflator for $MC7 + MC8$, derived from $PMC7$ and $PMC8$ price index, 1975 = 100.

$PMM \ S62$
Price index of imported materials (SITC0–4), 1975 = 100.

$PW \ S31$
Wholesale price index (mining and mfg), 1975 = 100.

$PWA \ S65$
Wholesale price index for foodstuffs and inedible agricultural product, 1975 = 100.

$PWC3 \ S57$
Wholesale price index for metal products, 1975 = 100.

$PWC24 \ S59$
Wholesale price index for textiles and miscellaneous products, 1975 = 100.

$PWC6 \ S61$
Wholesale price index for chemical products, 1975 = 100.

$PWM \ S33$
Wholesale price index for manufacturing products, 1975 = 100.

$Q1 \ E80$
Seasonal dummy for the first quarter.

$Q2 \ E81$
Seasonal dummy for the second quarter.

$Q3 \ E82$
Seasonal dummy for the third quarter.

$RC1 \ E17$
Corporate income tax rate.

$RC2 \ E18$
Corporate income tax rate as applied to dividend payment credit.

$RED \ E71$
Euro-dollar rate.

$REX \ E69$
Index of yen value against U.S. dollar, 1.0 before 1971.3.

$RF \ S95 \ 10^6 \ yen$
Removal and scrappage of capital stock, real, saar.

$RFL3 \ E70$

$RLB \ E28$
Average loan rate by bank, percentage.

$RMCF \ E74$
Ratio of import cargo shipped by foreign vessels, per cent.

$RMF \ E76$
Ratio of payments for merchandise freight and insurance to total payments of freight and insurance.

$RU \ S22$
Rate of unemployment = $U/NL$.

$RWG \ E16$
Ratio of wage bills in government consumption (estimate from annual statistics).

$RXCJ \ E73$
Ratio of export cargo shipped by Japanese vessels, per cent.
SC  
Corporate saving, current, saar.

SG  
Government current surplus, saar.

SI  
Personal contributions to social insurance, NIA, saar.

SP  
Personal saving, saar.

SUB  
Government subsidy to firms, NIA, saar.

TC  
Corporate tax (private corporations), NIA, saar.

TI  
Indirect tax, NIA, saar.

TP  
Personal income tax, NIA, saar.

TR  
Social security benefit to persons, NIA, saar.

TRGP  
Net Transfer from government to private sector, other than social security benefit, NIA, saar.

TRHO  
Transfer payments by household other than SI and TP, NIA, saar.

TROH  
Transfer receipts by household other than TR, NIA, saar.

Tw  
Quantum index of world manufacturing export, 1975=100.

U  
Number of unemployment.

ULC  
Unit labor cost, $ULC=\frac{YW}{LW}.$

W  
Wage income employee, saar, adjusted by index of hours worked, $W=\frac{YW}{LW/H}.$

XB  
Merchandise exports, balance of payments basis.

XC  
Commodity exports, custom clearance basis, sa.

XFI  
Receipits of freight and merchandise insurance.

XII  
Receipts of investment income from abroad.

XS  
Total service exports, balance of payments basis.

XSG  
Government receipts of services from abroad.

XSO  
Receipts of other services including non-merchandise insurance.

XTO  
Receipts from tourism.

Y  
National income, NIA, saar.

YC  
Corporate income, NIA, saar.

YCA  
Corporate income after dividend payment, NIA, saar.

Since 1977, particularly at the time of LINK Kyoto Meeting, major economic policy issues in Japan have been (1) accelerating domestic activity and (2) narrowing of trade surplus, namely, a pursuit of double targets which are in trade-off relations. The economy has been virtually free from inflation since the latter half of 1977. The substantial upvaluation of the currency seems to have stabilized domestic prices and completely destroyed the public’s inflationary expectation. From the viewpoint of a textbook macroeconomic theory, the economy has no dilemma or trilemma in her pursuing both domestic and external equilibria. But in practice the Government’s heavy reliance on deficit financing has come to a “limit,” and a fairly conservative view on the fiscal deficit is being shared in common by not only Government bureaucrats, especially those of Ministry of Finance and the governmental party, but also by most of the opposition parties.

In the fiscal 1978 which is about to conclude, the Government adopted one of the most expansionary budget in the modern history of Japan, with 33 per cent of its revenue dependent upon bond issuance. Besides, some additional spending was added last Fall, when Mr. Fukuda
realized that it would be utterly difficult
to keep his words given at the Bonn
Summit. Towards the end of fiscal
1978, the growth rate is rising. How­
ever, the rate of growth for the whole
fiscal 1978 is likely to end up close to
6 per cent. This is way below the
original target posted by the Fukuda
Cabinet, but I should say (and have been
contending) that the original target was
unrealistic from the start. Judging from
a recent change in the trend of trade
balance; that is, a fast shrinking of trade
surplus in real terms (National Income
Account), more than 7 per cent growth of
the domestic aggregate demand could
not bring about 6 per cent growth of
GNP. However, with the present rate of
modest expansion, domestic situation in
employment/unemployment is not likely
to worsen further. Then why did Mr.
Fukuda insist with 7 per cent? Perhaps
there was a certain confusion in identify­
ing policy targets and policy instruments.

The long-waited change in the balance
of payments has taken place. As shown
by Table 1 upward trend in imports and
downward one in exports (both in quanti­
ty) are clear. Durable consumption
goods to be shipped to the U.S. have been
declining in number of units. Imports
of various manufactured goods are grow­
ing at the annual rate of 30 per cent in
values. A tight control by the Govern­
ment on foodstuff import is being under­
mined by increasing 'semi-processed' food
products that are not under the control.
Clearly, with certain time lags, the
balance of payments in current account
has begun to contract. As long as the
Government successfully manage the pres­
sure for protecting domestic industries
from competitive imports, this tendency
will add a momentum.

Bright aspect in the private sector is
P & E investment. A recent survey of
corporate investment plans indicates that
majority firms are revising upward their
planned capital outlays. Power industry
has been a leader in picking-up P & E
investment, followed by service industries.
It is observed that investment surveys
tend to underestimate recent trend mainly
because these surveys heavily rely on
large corporations while their relative
share in the total capital spending has
been dwindling. Fiscal 1978 will have
seen an increase in private real fixed

Table 1  Recent Trend of Trade and Balance of Payments in Japan

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume change (%)</td>
<td>1.1</td>
<td>1.5</td>
<td>-5.7</td>
<td>-0.2</td>
<td>0.3</td>
<td>-5.0</td>
</tr>
<tr>
<td>Goods imports, fob</td>
<td>15.85</td>
<td>16.27</td>
<td>16.48</td>
<td>17.56</td>
<td>20.63</td>
<td></td>
</tr>
<tr>
<td>Volume change (%)</td>
<td>1.2</td>
<td>2.5</td>
<td>1.8</td>
<td>1.7</td>
<td>5.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Trade balance</td>
<td>5.17</td>
<td>6.89</td>
<td>6.75</td>
<td>6.81</td>
<td>4.35</td>
<td>0.94</td>
</tr>
<tr>
<td>Current account</td>
<td>3.74</td>
<td>5.07</td>
<td>4.80</td>
<td>4.60</td>
<td>2.19</td>
<td>0.34</td>
</tr>
<tr>
<td>Basic balance</td>
<td>2.57</td>
<td>3.41</td>
<td>1.18</td>
<td>0.58</td>
<td>-2.81</td>
<td>0.14</td>
</tr>
<tr>
<td>Over-all account</td>
<td>3.18</td>
<td>6.04</td>
<td>0.91</td>
<td>1.10</td>
<td>-2.07</td>
<td>0.77</td>
</tr>
<tr>
<td>Exchange rate (¥/$)</td>
<td>251</td>
<td>240</td>
<td>220</td>
<td>191</td>
<td>190</td>
<td>197</td>
</tr>
</tbody>
</table>
investment by 7–8 per cent over fiscal 1979. As for 1979, views are divided, but an optimistic view seems to be obtaining more supports among economists and forecasting institutions. Some of the factors that reinforce optimism of P & E investment outlook are: 1) stagnant period has lasted long enough and technical obsolescence has proceeded; 2) in view of high energy cost and related price system change some industries have “dead stocks” to be written-off while they are still counted as “productive capacity” which causes an under estimation in capacity utilization.

Housing investment is not so promising. Housing starts (for private dwelling units) have been hovering around one and half million for the past three years, despite the Governments’ effort for stimulating it. The well-known high price of land tends to shift peoples’ preference to urban multiplex from single houses with small land site. Thanks to the Government’s stimulus, housing loans have become cheaper, and average age of young family that starts to buy dwelling units has come down. However, a lack of public control on land use and a potentially strong price expectation on land, supply of medium priced multiplex is limited. We foresee that the number of housing starts will remain at the present level and that only growth factor in this market is growth in size and interior outlay per unit.

Let us proceed to discussing 1979 budget that starts from this April. Mr. Ohira’s budget plan, now in the Diet, was drawn up under the strong fear of further rising fiscal deficit. The planned spending seems to be only slightly expansionary (11.0 per cent increase over the 1978 budget while the anticipated rate of current GNP growth is 9.9 per cent). Among the spending items a heavy stress is put on public investment. Public fixed investment in N.I.A. is assumed to grow at about 15 per cent, while public consumption at 9. With this modest spending plan, fiscal 1979 will see further increase in the dependency ratio on bond issuance, from 33 to 37 per cent.

Overall outlook of the economy this year is not as good as last year. Major differences are seen in (1) weaker public expenditure and (2) contraction of trade surplus. General public’s pessimistic view on the future economy has not improved. It might be reinforced by the unfavorable situation in labor market where unemployment rate among male workforce with family, age of 45 and up, is rising. Hence it is unlikely that we will see a further decline in personal saving ratio as long as there is no improvement in labor market.

The details of our forecast for the years 1979 and 1980 are presented in the following tables from 2 to 11. They are made in February, 1979.
### Table 2 Real Expenditures, Production and Unemployment

<table>
<thead>
<tr>
<th></th>
<th>1978CY</th>
<th>1979CY</th>
<th>1980CY</th>
</tr>
</thead>
<tbody>
<tr>
<td>C P. Consps</td>
<td>56.527</td>
<td>59.276</td>
<td>61.877</td>
</tr>
<tr>
<td>%</td>
<td>5.24</td>
<td>4.86</td>
<td>4.39</td>
</tr>
<tr>
<td>IH Hous. I</td>
<td>7.355</td>
<td>7.644</td>
<td>8.212</td>
</tr>
<tr>
<td>%</td>
<td>9.33</td>
<td>3.94</td>
<td>7.42</td>
</tr>
<tr>
<td>IF Fixed I</td>
<td>16.067</td>
<td>17.324</td>
<td>18.525</td>
</tr>
<tr>
<td>%</td>
<td>4.88</td>
<td>7.83</td>
<td>6.93</td>
</tr>
<tr>
<td>IIIP Inv. Chg.</td>
<td>1.500</td>
<td>1.898</td>
<td>2.021</td>
</tr>
<tr>
<td>%</td>
<td>-16.05</td>
<td>26.58</td>
<td>6.44</td>
</tr>
<tr>
<td>IG Gov. I</td>
<td>11.774</td>
<td>13.338</td>
<td>14.583</td>
</tr>
<tr>
<td>%</td>
<td>7.47</td>
<td>13.25</td>
<td>9.37</td>
</tr>
<tr>
<td>CG Gov. Cstpn</td>
<td>9.221</td>
<td>9.536</td>
<td>9.758</td>
</tr>
<tr>
<td>%</td>
<td>6.41</td>
<td>3.41</td>
<td>2.33</td>
</tr>
<tr>
<td>IIIG Gov. Inv. Chg.</td>
<td>0.238</td>
<td>0.262</td>
<td>0.212</td>
</tr>
<tr>
<td>%</td>
<td>35.38</td>
<td>10.06</td>
<td>-19.05</td>
</tr>
<tr>
<td>E Export</td>
<td>18.601</td>
<td>18.185</td>
<td>19.069</td>
</tr>
<tr>
<td>%</td>
<td>2.20</td>
<td>4.86</td>
<td>4.86</td>
</tr>
<tr>
<td>M Import</td>
<td>12.518</td>
<td>13.413</td>
<td>14.586</td>
</tr>
<tr>
<td>%</td>
<td>6.17</td>
<td>7.15</td>
<td>8.37</td>
</tr>
<tr>
<td>GNP</td>
<td>108.764</td>
<td>114.045</td>
<td>119.720</td>
</tr>
<tr>
<td>%</td>
<td>6.07</td>
<td>4.86</td>
<td>4.98</td>
</tr>
<tr>
<td>O Prod. Ind.</td>
<td>138.981</td>
<td>146.669</td>
<td>156.885</td>
</tr>
<tr>
<td>% 1970 = 100</td>
<td>6.62</td>
<td>5.53</td>
<td>6.96</td>
</tr>
<tr>
<td>U Unemp. (10^4)</td>
<td>122.352</td>
<td>126.720</td>
<td>114.282</td>
</tr>
</tbody>
</table>

### Table 3 Current Values of Expenditures

<table>
<thead>
<tr>
<th></th>
<th>1978CY</th>
<th>1979CY</th>
<th>1980CY</th>
</tr>
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<tr>
<td>CV</td>
<td>114.365</td>
<td>125.275</td>
<td>137.991</td>
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<tr>
<td>%</td>
<td>10.20</td>
<td>9.54</td>
<td>10.15</td>
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<tr>
<td>IHV</td>
<td>14.171</td>
<td>15.420</td>
<td>17.267</td>
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<tr>
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<td>10.92</td>
<td>8.81</td>
<td>11.98</td>
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<tr>
<td>IFV</td>
<td>25.129</td>
<td>28.194</td>
<td>31.614</td>
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<tr>
<td>%</td>
<td>6.69</td>
<td>12.20</td>
<td>12.13</td>
</tr>
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<td>IIFV</td>
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<td>2.863</td>
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<tr>
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<td>-29.38</td>
<td>33.05</td>
<td>10.77</td>
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<tr>
<td>IGV</td>
<td>20.407</td>
<td>24.058</td>
<td>27.567</td>
</tr>
<tr>
<td>%</td>
<td>20.11</td>
<td>17.89</td>
<td>14.59</td>
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<td>CGV</td>
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<td>23.933</td>
<td>26.037</td>
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<tr>
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<td>8.81</td>
<td>8.60</td>
<td>8.79</td>
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<td>IIGV</td>
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<td>0.825</td>
<td>0.300</td>
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<td>-7.69</td>
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<td>22.956</td>
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<td>-5.52</td>
<td>-5.04</td>
<td>6.06</td>
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<td>MIV</td>
<td>20.245</td>
<td>21.226</td>
<td>23.081</td>
</tr>
<tr>
<td>%</td>
<td>-10.34</td>
<td>4.85</td>
<td>8.74</td>
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<tr>
<td>GNPV</td>
<td>202.513</td>
<td>221.797</td>
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<tr>
<td>%</td>
<td>10.19</td>
<td>9.52</td>
<td>10.56</td>
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### Table 4 Trade and Balance of Payments

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<th>1978CY</th>
<th>1979CY</th>
<th>1980CY</th>
</tr>
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<tbody>
<tr>
<td>XC Exp. fob</td>
<td>96.700</td>
<td>100.454</td>
<td>112.825</td>
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<tr>
<td>%</td>
<td>20.80</td>
<td>3.88</td>
<td>12.31</td>
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<tr>
<td>MC Imp. cif</td>
<td>77.426</td>
<td>90.009</td>
<td>104.303</td>
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<tr>
<td>%</td>
<td>9.40</td>
<td>16.25</td>
<td>15.88</td>
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<tr>
<td>MC1 Foodstuf</td>
<td>10.780</td>
<td>12.357</td>
<td>13.523</td>
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<tr>
<td>%</td>
<td>6.48</td>
<td>14.63</td>
<td>9.44</td>
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<tr>
<td>MC24 Oth. Mat.</td>
<td>9.403</td>
<td>9.662</td>
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<td>%</td>
<td>-2.04</td>
<td>2.75</td>
<td>7.49</td>
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<td>MC3 Met. Ore.</td>
<td>4.850</td>
<td>5.226</td>
<td>5.612</td>
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<td>7.38</td>
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<td>MC5 Min. Fuel</td>
<td>32.089</td>
<td>37.639</td>
<td>43.079</td>
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<td>3.36</td>
<td>17.30</td>
<td>14.45</td>
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<tr>
<td>MC6 Chemical</td>
<td>3.331</td>
<td>3.725</td>
<td>4.344</td>
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<tr>
<td>%</td>
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<td>11.82</td>
<td>16.60</td>
</tr>
<tr>
<td>MC78 Mach &amp; Oth Mfc.</td>
<td>16.971</td>
<td>21.399</td>
<td>27.360</td>
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<tr>
<td>%</td>
<td>40.39</td>
<td>26.09</td>
<td>27.85</td>
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<tr>
<td>XB Exp.</td>
<td>95.430</td>
<td>99.282</td>
<td>111.563</td>
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<tr>
<td>%</td>
<td>20.34</td>
<td>4.04</td>
<td>12.37</td>
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<td>MB Imp. fob</td>
<td>67.838</td>
<td>78.648</td>
<td>90.684</td>
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<tr>
<td>%</td>
<td>9.75</td>
<td>15.94</td>
<td>15.30</td>
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<tr>
<td>BT Trade Bal.</td>
<td>27.592</td>
<td>20.634</td>
<td>20.879</td>
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<tr>
<td>%</td>
<td>19.183</td>
<td>22.133</td>
<td>25.279</td>
</tr>
<tr>
<td>XSNA Exp. Serv.</td>
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<td>15.38</td>
<td>14.21</td>
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<tr>
<td>%</td>
<td>24.18</td>
<td>17.93</td>
<td>16.11</td>
</tr>
<tr>
<td>MSNA Imp. Serv.</td>
<td>27.833</td>
<td>32.823</td>
<td>38.109</td>
</tr>
<tr>
<td>%</td>
<td>24.18</td>
<td>17.93</td>
<td>16.11</td>
</tr>
<tr>
<td>BS Bal. Invisible</td>
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<tr>
<td>%</td>
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<td>7.649</td>
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### Table 5 Price Index and Deflators

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<th>1980CY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PW Wholesale</td>
<td>164.320</td>
<td>166.053</td>
<td>170.146</td>
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<tr>
<td>%</td>
<td>-2.53</td>
<td>1.05</td>
<td>2.46</td>
</tr>
<tr>
<td>PC Cons. Def.</td>
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<td>2.113</td>
<td>2.230</td>
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<tr>
<td>%</td>
<td>4.16</td>
<td>4.46</td>
<td>5.52</td>
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<td>PIIF Def. IF</td>
<td>1.564</td>
<td>1.627</td>
<td>1.706</td>
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<td>%</td>
<td>1.73</td>
<td>4.02</td>
<td>4.87</td>
</tr>
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<td>PIIF Def. IH</td>
<td>1.927</td>
<td>2.016</td>
<td>2.102</td>
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<tr>
<td>%</td>
<td>1.46</td>
<td>4.61</td>
<td>4.26</td>
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<tr>
<td>PE Def. Exp.</td>
<td>1.298</td>
<td>1.262</td>
<td>1.277</td>
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<tr>
<td>%</td>
<td>7.65</td>
<td>-2.76</td>
<td>1.15</td>
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<tr>
<td>PIM Def. Imp.</td>
<td>1.620</td>
<td>1.582</td>
<td>1.588</td>
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<tr>
<td>%</td>
<td>-15.41</td>
<td>-2.31</td>
<td>0.34</td>
</tr>
<tr>
<td>PIG Def. IG</td>
<td>1.733</td>
<td>1.804</td>
<td>1.899</td>
</tr>
<tr>
<td>%</td>
<td>2.23</td>
<td>4.07</td>
<td>4.76</td>
</tr>
<tr>
<td>PCG Def. CG</td>
<td>2.390</td>
<td>2.510</td>
<td>2.668</td>
</tr>
<tr>
<td>%</td>
<td>2.04</td>
<td>5.01</td>
<td>6.33</td>
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### Table 6 Wage and Income Distribution

<table>
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<tr>
<th>Year</th>
<th>W Wage Earning</th>
<th>W Wage Income</th>
<th>IS Self Emp.</th>
<th>FR Rentier's</th>
<th>YC Corporate</th>
<th>YP Personal</th>
<th>YD Disposable</th>
<th>YDI Dividend</th>
<th>YG Gov. Corp.</th>
<th>Y Nat. Income</th>
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</thead>
<tbody>
<tr>
<td>1978CY</td>
<td>0.299</td>
<td>106.454</td>
<td>23.837</td>
<td>22.402</td>
<td>173.139</td>
<td>150.907</td>
<td>1.603</td>
<td>1.729</td>
<td>167.573</td>
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<tr>
<td>1979CY</td>
<td>0.315</td>
<td>113.180</td>
<td>26.150</td>
<td>24.875</td>
<td>191.177</td>
<td>8.98</td>
<td>1.907</td>
<td>1.875</td>
<td>183.519</td>
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### Table 7 Fiscal Balance

|------|--------------|--------------|---------------|-------------|---|----|----|------|----------------|------------|-------------|---|-----|------------|

### Table 8 Saving and Investment Balance

<table>
<thead>
<tr>
<th>Year</th>
<th>SC Corp. Sav.</th>
<th>SP Pers. Sav.</th>
<th>SG Gov. Sav.</th>
<th>DF CCA Fixed</th>
<th>DG CCA Gov.</th>
<th>IG</th>
<th>HIG</th>
<th>IF</th>
<th>IIPI</th>
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<tr>
<td>1979CY</td>
<td>9.313</td>
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### Table 9 Labor Supply, Market

<table>
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<tr>
<th>Year</th>
<th>NL Work Force</th>
<th>LW Employee</th>
<th>LSA Self Employed</th>
<th>LSNA Self Employed</th>
<th>L Total at Work</th>
<th>U</th>
<th>RU</th>
<th>H Hours Worked</th>
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</thead>
<tbody>
<tr>
<td>1978CY</td>
<td>5508.809</td>
<td>3812.014</td>
<td>584.791</td>
<td>989.657</td>
<td>5386.457</td>
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<tr>
<td>1979CY</td>
<td>5552.484</td>
<td>3845.988</td>
<td>579.000</td>
<td>1000.781</td>
<td>5425.766</td>
<td>126.720</td>
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<td></td>
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<td>5588.074</td>
<td>3893.064</td>
<td>571.000</td>
<td>1009.733</td>
<td>5473.793</td>
<td>114.282</td>
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*Note: All values are in billions of yen.*
### Table 10 Exogenous Variables

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<tbody>
<tr>
<td>$IGY$</td>
<td>20.407</td>
<td>24.058</td>
<td>27.567</td>
</tr>
<tr>
<td>%</td>
<td>20.11</td>
<td>17.89</td>
<td>14.59</td>
</tr>
<tr>
<td>$CGY$</td>
<td>22.038</td>
<td>23.933</td>
<td>26.037</td>
</tr>
<tr>
<td>%</td>
<td>8.81</td>
<td>8.60</td>
<td>8.79</td>
</tr>
<tr>
<td>$TR$</td>
<td>18.843</td>
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<p>| | | | |</p>
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<th></th>
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</thead>
<tbody>
<tr>
<td>$LB$</td>
<td>Bank Loan</td>
<td>1278.881</td>
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<td>outstdgs</td>
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<td>B. Loan Rate</td>
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<td>Hous. Loan</td>
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<td>MFG. Exp.</td>
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<td>Priced Ind.</td>
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<td>8.95</td>
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<td>$RECHUS$</td>
<td>Exch.</td>
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<tr>
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<td>Rate</td>
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<td>$PMC1$</td>
<td>Imp. Pric</td>
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### Table 11 Great Ratios

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<th>1980CY</th>
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<td>$CY/YD$</td>
<td>0.758</td>
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<td>$YW/Y$</td>
<td>0.635</td>
<td>0.617</td>
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<td>$YC/Y$</td>
<td>0.114</td>
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<td>$IF/GNP$</td>
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<td>0.155</td>
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<td>1.382</td>
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<td>0.022</td>
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<tr>
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