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A USER'S GUIDE TO THE THREE SECTOR QUARTERLY
MACRO DATA BASE
by

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Definitions of the Three Sectors

The Energy Sector is defined as Coal Mining and Oil and Gas Extraction. This sector includes all production of "raw energy," except hydroelectric and nuclear power. These are included in energy demand and considered produced by the energy sector, but with zero value added.

The Agricultural Sector is defined as Farming. We considered the possibility of aggregating this with other raw materials into a materials sector. Important such materials are ferrous and non-ferrous metals, and non-metal, non-fuel minerals. For these, annual value data are available for domestic production and imports. However, since a substantial portion of this is processed and semi-processed imports, these value figures contain a disproportionately large part of price changes other than changes in raw materials proper. In particular, since these commodities are very energy-intensive, deflation by the prices of crude materials would result in a spurious increase in quantity during the 1973-75 energy price increase. This, in addition to the lack of quarterly data, led to the conclusion that it would be better not to include these inputs. It should also be noted that historically the cost of these inputs never has exceeded 2% of variable cost, so that the error caused by this omission can hardly be large.

The Goods Sector is defined as the remaining part of the Nonfarm Business Sector plus the Household Sector. Its inputs are capital, labor, energy, and agricultural goods. The latter two are defined as the output of the corresponding sectors, including imports and excluding exports and deliveries to final demand.

Energy Data

Raw energy is defined as crude petroleum, natural gas, natural gas liquids, coal, and hydroelectric and nuclear power. Refined imports is added to this for computation of energy input to the goods sector. Quantity data for industrial consumption of most raw energy are available in abundance from the U.S. Bureau of Mines, published in _Minerals Yearbook_. Some supplementary data and updates were found in various mimeographed publications from the Bureau, in the _Survey of Current Business_, and in press releases from the Federal Power Commission. Some remaining updates were obtained by telephone.

For crude petroleum, imported refined petroleum products and natural gas liquids, data on industrial consumption (including imports) are available in pure quantity figures (i.e. barrels) monthly for the whole period 1947-75. These were converted to quarterly data and adjusted seasonally. For bituminous coal and lignite, similar consumption data are available annually for 1947-50 and monthly from then on. One half of "retail deliveries" was subtracted off under the assumption that it went to final demand. For 1951-75, the monthly figures were converted to quarterly and adjusted seasonally. For 1947-50 we assumed quarterly fluctuations of consumption to be proportional to that of production, seasonally adjusted. For Pennsylvania anthracite, which was of some importance in the early years, there are monthly series for production, exports, and imports, which we converted to a quarterly basis. The imports series showed small numbers all the time and was discontinued in September 1963. We then assumed imports to be zero from 1963 III and

computed industrial demand as production plus imports minus exports, seasonally adjusted. For natural gas, demand figures at the wellhead are available, but only annually. For 1967-75, we let it fluctuate quarterly like production plus imports minus exports, seasonally adjusted. For 1947-66, we used linear interpolation since reliable quarterly data for production, imports, and exports were not available. This was probably not too far off the mark since commercial utilization of natural gas rose steadily during that period, and annual figures were hardly affected by cyclical fluctuations in the economy.

Demand for hydroelectric power is measured as production of the same, which is available as monthly figures of kilowatt-hours in the Business Statistics supplements of the Survey of Current Business. Again, these were converted to a quarterly basis and corrected for seasonal variation. Nuclear power production was negligible before 1970 and assumed equal to zero. For 1970-75, annual figures are available in kilowatt-hours from press releases of the Federal Power Commission. Quarterly figures for 1974-75 were obtained from the Monthly Energy Review and for 1970-73 by linear interpolation of the FPC data.

This gives quite good quantity data. To obtain good price data was much more of a problem. The main difficulties were: (i) Transportation costs, especially for coal, are substantial and give large regional variations. (ii) For both coal and gas, long-term contracts dominate the market. In addition, price controls have kept gas prices at an artificially low level. It is therefore hard, both to determine what the relevant price concept is and, if one can define it, to find proper

data. (iii) Even for markets like crude oil, where there are good series for price quotations, these may differ from prices actually paid. (iv) A special problem arises for hydroelectric and nuclear power, since user price contains generation and distribution cost, which we intended to keep outside the energy sector.

In the face of these difficulties, the following compromise was made to obtain a price index for energy. First, we constructed two quantity aggregate series--one "oil aggregate" and one "coal aggregate"--in 1972 bill. dollars, based on average value data from the Bureau of Mines, Minerals Yearbook, 1972. Each quantity aggregate was then multiplied by an appropriate price index to obtain value series for the "oil and coal aggregates." Summing these gives an energy value aggregate. Using the two price indices with the quantity aggregates as weights we constructed an aggregate energy price index, which together with the energy value aggregate implies an aggregate quantity series for energy demand.

The "oil aggregate" used in the above procedure consisted of crude oil, imported refined petroleum products, natural gas, and natural gas liquids. For refined petroleum imports no satisfactory price quotation was available. However, since the volume of oil is changed little by refining, and since we are interested in the "raw energy" content of these imports, these figures in barrels were added to those of crude oil consumption. The price quotations used in converting these three quantity components to 1972 dollars were: (1) $3.388 per barrel of

crude petroleum; (2) $2.28 per barrel of natural gas liquids; (3) $0.186 per thousand cubic feet of natural gas. Next, a value series was calculated from the constant dollar series under the assumption that the price movements of all these products followed the crude petroleum wholesale price index (WPI). However, since the WPI quotation only covers domestic oil, it was necessary to adjust the price index upwards to include imports for the period 1973-75. For 1974-75 this was done by multiplying the WPI figure by the ratio of average to domestic price as quoted in the Monthly Energy Review. Since this review does not have data previous to 1974, the 1973 adjustments were based on data on oil prices in the Persia Gulf and tanker freight rates in the same period.

The "coal aggregate" included bituminous coal and lignite, Pennsylvania anthracite, and hydroelectric and nuclear power. The 1972 prices used in calculating the constant dollar series for the first two components were: (1) $7.66 per short ton of bituminous coal and (2) $12.4 per short ton of anthracite coal. The remaining two components were valued at the average fuel cost per kwh for fossil fuel generated electricity in 1972 which was computed to the $4.163 per thousand kwh, based on information from the publication "Fossil Fuel Plant Factors." The rationale for this procedure is that this represents the replacement cost of these two energy sources. We include these sources in the "coal aggregate" because coal is quantitatively the most important fossil fuel for electricity generation.

In this way we obtain an oil and a coal value series which are then added together to give an energy value aggregate. An aggregate energy

price index was constructed as a Divisia index based on the two aggregates and the oil and coal WPI's. Finally, an aggregate quantity series for energy demand was computed residually by dividing aggregate energy value by the aggregate price index.

Data for Inputs from Agriculture

For inputs from the agricultural sector we started with nominal figures. For domestic agricultural inputs we used the monthly series of Farm Income (receipts from marketing and CCC loans, excluding government payments) published by the US Department of Agriculture, converted to a quarterly basis. To this we added the value of agricultural imports, subtracted exports from the agricultural sector, adjusted the outcome for seasonal variation, and subtracted the already seasonally adjusted series of changes in farm inventories in the National Income and Product Accounts (NIPA).

This procedure deserves the following comment. Using the Farm Income series is equivalent to assuming that all farm sales, except exports, are made to the goods sector and none to final demand, which represents a deviation from the convention of published input-output tables. We see this as an advantage because consumers actually buy their food from stores, not from farmers. The subtraction of exports means that exports of unprocessed farm products are assumed to be made directly from the farm sector. The subtraction of inventory changes is made as a correction of the fact that the Farm Income series contains receipts from CCC loans with stored crops as collateral.

The data for imports and exports were taken from the publications of the US Bureau of the Census on foreign trade. Specifically, import sources were: FT110 for January 47 to January 64, FT125 for February 64 to December 66, and FT135 for 67-75. The source for the export data was FT410. Because the classifications of these publications do not exactly match those of the present model and also have been changed over time, the extraction of these data had to rely on judgment to some extent. With respect to exports the objective was to sort out unprocessed agricultural goods. Consequently, the export series was constructed by aggregating the following SITC categories:

001	animals - live
011	meat - fresh, chilled, frozen
025	birds' eggs
041	wheat unmilled
042.1	rice in the husk or husked only
043	barley unmilled
044	corn or maize unmilled
045	cereals, N.E.C., unmilled
051	fruits - fresh; and nuts - fresh or dried
054.1	potatoes - fresh, except sweet potatoes
054.4	tomatoes - fresh
054.5	vegetables, N.E.C. - fresh
121	tobacco - unmanufactured
26	textile fibers (not manufactured into yarn, thread, or fabrics) & their waste

For imports, processed food etc. was included with the same justification of completeness as applied to refined petroleum imports. The definitions are, for 47-62: Group 00, Annuals and Annual Products, Edible; Group 1, Vegetable Food Products and Beverages; and for 63-75: Group 0, Food and Live Animals; Group 1, Beverages and Tobacco. The only available datum for 1947 was an annual average, which was assumed to have been distributed evenly over the four quarters.

The WPI for Farm Products was chosen as the input price of agricultural goods because it is a reasonably reliable series and because it covers imports.

Labor Data

Quarterly data, 1947-75, on "Hours of All Persons" and "Hourly Compensation" for all persons in the private nonfarm sector were obtained on request directly from the US Bureau of Labor Statistics. Denote these variables as MH_{PNF} and CPM_{PNF}, respectively.

Labor data for the energy sector was constructed as follows. An annual series of compensation per man-hour in the energy sector (CPM_E) was computed as the ratio of "Compensation of Employees" and "Hours Worked by Employees" (MHE_E) of the coal mining and oil and gas extraction subsectors of the mining industry. These series are from the NIPA data on "Compensation of Employees by Industry" and "Hours Worked by Full-Time and Part-Time Employees by Industry." This implies the assumption that hourly compensation is the same for entrepreneurs as for employees in this sector. Quarterly figures for compensation per

man-hour in the energy sector were constructed from the annual series by linear interpolation.

Data for "Hours Worked by All Persons Engaged in Production" are available only for mining as a whole (MH_M). The series for hours worked by all persons engaged in production in the energy sector was constructed on the assumption that the ratio of man-hours for all persons engaged in production to man-hours of employees was the same in the energy sector as in mining as a whole. That is, an annual series of man-hours of all persons engaged in production in the energy sector (MH_E) was computed as: $MH_E = MHE_E \times (MH_M/MHE_M)$.

Monthly data on "Hours Worked by Employees" in the mining sector, obtained directly from BLS, were used to compute the ratio of quarterly average to annual average man-hours in mining. On the assumption that the quarterly fluctuations in man-hours in the energy sector are proportional to the quarterly fluctuations in man-hours in the mining sector as a whole, a quarterly series for MH_E was computed by multiplying the annual series for MH_E by the quarterly fluctuation ratios from the MHE_M series.

For the goods sector (referred to with subscript G), man-hours could then be constructed as

$$MH_G = MH_{PNF} - MH_E$$

Compensation per man-hour in the same sector is defined as

$$CPM_G = (MH_{PNF}/MH_G) * CPM_{PNF} - (MH_E/MH_G) * CPM_E ,$$

and total labor cost in nominal terms is

$$CPM_G * MH_G .$$

Two more wage concepts were constructed, one which is adjusted for inter-industry shifts in employment, and one that is adjusted both for this and for overtime in manufacturing. This could not be done directly with the CPM series, since industry data and data excluding overtime are not available. It could, however, be done for the less comprehensive series of Average Hourly Earnings of Production or Nonsupervisory Workers on Private Nonagricultural Payrolls (AHE). This is available by industry for the total private economy in the BLS publication "Employment and Earnings 1909-72," and in the monthly issues of Employment and Earnings. The industry division used was Mining, Contract Construction, Durable Manufacturing, Nondurable Manufacturing; Finance, Insurance, and Real Estate; Wholesale and Retail Trade; Transportation and Public Utilities; and Services. For the durable and nondurable goods manufacturing industries there are also series for AHE excluding overtime, based on the assumption that overtime pays 50% more than regular hours. These industry data permitted computation of average hourly earnings adjusted for interindustry shifts in employment (AHEAS), using as weights the number of production or nonsupervisory workers times average weekly hours for the same category of workers in each industry in 1972. The industry weights are: Mining, 0.011; Contract Construction, 0.063; Durable Manufacturing, 0.178; Nondurable Manufacturing, 0.127; Wholesale and

Retail Trade, 0.268; Finance, Insurance and Real Estate, 0.062; Transportation and Public Utilities, 0.085; and Services, 0.206.

Because of limitations in the data, this computation was actually quite complicated. AHE for total private industries (AHE_{TP}), is available quarterly and seasonally adjusted only for 1964-75. (Actually, monthly figures are published for all AHE series that are available more frequently than anually. We converted this to quarterly averages.) For 1947-63 there is an annual series, which we assumed fluctuated quarterly proportionately to CMP_{PNF}.

For single industries, seasonally adjusted quarterly series are available for the whole period 1947-75 only for Mining and Contract Construction. For the two parts of Manufacturing, quarterly series are available, but seasonal adjustment was necessary. For Wholesale and Retail Trade (treated as one industry), and for Finance, Insurance and Real Estate, quarterly series, seasonally adjusted, are available for 1964-75. For 1947-63 there are annual figures, which we assumed fluctuated quarterly like AHE for Manufacturing of Non-durables, seasonally adjusted (AHE_N).

For Transportation and Public Utilities, and for Services, quarterly series, seasonally adjusted, are again available for 1964-75, but no information prior to 1963. For these two industries, then ,we constructed artificial series, defined as

$$AHE_{TU} = (AHE_{TU}(64)/AHE_N(64)) * AHE_N$$

for Transportation and Public Utilities, and similarly for Services.

Average hourly earnings adjusted for overtime in manufacturing and for interindustry shifts in employment (AHEAOS) were computed the same way, using the same weights, except that seasonally adjusted series on average hourly earnings excluding overtime were substituted for the Durable and Nondurable Manufacturing industries. Indirectly, then, it is possible to do the same adjustments on compensation per man-hour by defining

$$CPMAS_G = CPM_G * (AHEAS/AHE_{TP})$$

$$CPMAS_G = CPM_G * (AHEAOS/AHE_{TP}) \ ,$$

where the subscript TP stands for "total private."

Capital Data

The data for capital stock for the goods sector is based on investment in the same sector in 1972 dollars. The data are taken from the NIPA tables. Gross investment in the goods sector is defined as Private Purchases of Producers' Durable Equipment; minus Tractors, Agricultural Machinery (except tractors), and Mining and Oilfield Machinery; plus Private Purchases of Structures; minus Nonresidential Structures for Mining Explorations, Shafts, and Wells, and minus Residential and Nonresidential Farm Structures. This series is available annually and is assumed to fluctuate quarterly like total private fixed investment.

We then used the perpetual inventory method with an annual depreciation rate of 0.1 to construct a quarterly series of real capital after we had obtained a benchmark for 1974:1 in the following way.

A preliminary benchmark was based on a 1929 benchmark from the Survey of Current Business and historic investment. This appeared to be too low, because the public sector did most of the investment during WWII and gave much of the equipment away to the private sector after the war. We then used the following reasoning. Since we have

$$dK/dt = I - \delta K \ ,$$

we can solve for K to get, in any period,

$$K = \frac{I}{d \ \log K/dt + \delta} \ .$$

The growth rate d log K/dt was first computed as the sample average resulting from the capital series with the preliminary benchmark. After having checked that the investment-output ratio was close to average in 1947:1, we recomputed $K_{47:1}$ from the above formula. This gave a new average growth rate, which again gave a new value of $K_{47:1}$. After a few iterations this procedure converged and gave a benchmark and an average growth rate that were mutually consistent.

Output data

The only variable left to define is gross output of the goods sector, denoted Q. There are no data directly available for this gross output, so it had to be constructed from NIPA data and the other data sources above. In terms of the NIPA we define the goods sector as the business nonfarm sector (BNF) plus the household sector (H) minus the energy sector (E). GNP originating in the Q-sector can then be defined as

$$GNP_G = GNP_{BNF} + GNP_H - GNP_E .$$

The accounting identity for the goods sector gives

$$GNP_G = Q - A - E ,$$

where A and E are deliveries from agriculture and energy, respectively, including imports. Inverting this relation and substituting from the preceding formula gives gross output as

$$Q = GNP_{BNF} + GNP_H - GNP_E + A + E .$$

Since data are published for all the RHS variables, this formula can be used for construction of a data series for Q.

As a practical matter, then, we measure PQ in value terms as

$$PQ = GNP_{BNF}^{N} + GNP_{H}^{N} - GNP_{E} + p_{A}A + p_{E}E ,$$

where the superscript N denotes nominal figures and p_A, p_E, A, and E
are as defined above. GNP_{BNF}^{N} and GNP_{H}^{N} are taken directly out
of the existing NIPA tables. GNP_{E}^{N} is not directly available. An
annual series for total mining (M) is published. This was compared with
value added in coal mining and crude petroleum and natural gas as
published in the I-O tables for 1947, 58, 63, 67, 68, 69 and 70. Since
no significant time trend was detected in the ratio of the two, GNP_{E}^{N}
was assumed to be the average ratio of the two, times GNP_{M}^{N}. This
annual series was converted to a quarterly one by linear interpolation
and proper extrapolation at the endpoints. Since GNP_{E}^{N} corresponds
to a very small fraction of PQ we do not think this procedure introduced
much error.

Price and quantity of deliveries from agriculture are defined
exactly as the input data described above. For energy, there is a slight
difference. The reason for the difference is that the purpose now is to
add back in the items that were subtracted off for the construction of
value added in the NIPA tables. Consequently, the point is to use
definitions that are similar to the ones used by the Bureau of Economic
Analysis rather than definitions that we think are more theoretically
satisfactory. In particular, whereas the price of energy in this data
base does not include the price of natural gas, the BEA deflates sales of
natural gas at the wellhead by the Bureau of Mines average value.

For the present purpose, then, a quarterly price index for natural gas was constructed on the basis of this annual average value series. Quarterly fluctuations were obtained by regression on the natural gas WPI (changes in definitions necessitated several regressions), the crude oil and coal WPI's, and a time trend. $P_E E$ (in value terms) was then computed as the "oil aggregate" excluding natural gas, plus the "coal aggregate" plus natural gas times the quarterly natural gas price index.

As an attempt to take into account the changing weights in the computation of constant dollar figures in the NIPA, E was constructed as a Divisia quantity index based on the "oil aggregate" excluding natrual gas, the "coal aggregate," and natural gas, with weights determined by the crude oil WPI, the coal WPI, and the price of natural gas described above. Gross output in real terms was then computed in 1972 bill. dollars as

$$Q = GNP_{BNF}^{R} + GNP_{H}^{R} - GNP_{E}^{R} + A + E \ .$$

The superscript R stands for "real," i.e. measured in 1972 bill. dollars, and the GNP figures are taken from the NIPA tables in the same way as above.

The price of output is computed as the ratio of PQ to Q.

List of Variables:

Energy Data

BCPROD: Production of lignite and bituminous coal, thousands of short tons

BCCONS: Total consumption of lignite and bituminous coal, thousands of short tons (1951:1 - 75:4)

BCRET: Retail deliveries of lignite and bituminous coal, thousands of short tons (1951:1 - 75:4)

ACPROD: Production of Pennsylvania anthracite, thousands of short tons

ACEX: Exports of Pennsylvania anthracite, thousands of short tons

ACIMP: Imports of Pennsylvania anthracite, thousands of short tons (1947:1 - 63:2)

CPPROD: Production of crude petroleum, mill. bbl.

CPDEM: Indicated demand for crude petroleum, mill. bbl.

RRIMP: Imports of refined petroleum products, mill. bbl.

NGLPR: Production of natural gas liquids, mill. bbl.

NGLDEM: Total demand for natural gas liquids at plants and terminals, mill. gal.

NGPROD: Natural gas marketed production, mill. cf., not seas. adj. (1967:1 - 75:4)

NGEX: Natural gas exports, mill. cf., not seas. adj. (1967:1 - 75:4)

NGIMP: Natural gas imports, mill. cf., not seas. adj. (1967:1 - 75:4)

NGSTOR: Natural gas, net stored underground, mill. cf., not seas. adj. (1967:1 - 75:4)

NGC: Natural gas consumption, mill. cf.

HP: Hydroelectric power production in utilities and industrial establishments, bill. kwh., not seas. adj.

NP: Electricity produced by steam nuclear plants, net bill. kwh (1970:1 - 75:4)

CPWP67:   Wholesale price index for crude petroleum, 1967 = 100

CLWP67:   Wholesale price index for coal, 1967 = 100

PNG: Bureau of Mines average value of natural gas at the wellhead, $/mill. cf.

OILAGQ: "Oil aggregate" in 1972 bill. $ (incl. CPDEM, RPIMP, NGLDEM, NGC)

COLAGQ: "Coal aggregate" in 1972 bill. $ (Incl. BCCONS-BCRET/2, ACPROD + ACIMP - ACE ,HP, NP)

OILAGV: "Oil aggregate" in current bill. $

COLAGV: "Coal aggregate in current bill. $

PEE   Value of primary energy input to the goods sector, bill. $

PE: Price index for primary energy, 1972:2 = 1

E: Quantity of primary energy input to the goods sector, 1972:2 bill. $

Data for Inputs from Agriculture

FCRNSA: Farm cash receipts from marketings and CCC loans, bill. $, not seas. adj.

IA: Agricultural imports, bill. $, not seas. adj.

AGEX: Agricultural exports, bill. $, not seas. adj.

CFMINV: Change in farm inventories, bill. $, seas. adj.

FWPI67:   Wholesale price index for farm products, 1967 = 100

PAA: Value of inputs from agriculture to the goods sector, bill. $

PA: Price of inputs from agriculture, FWPI67 normalized to 1972:2 = 1

A: Quantity of inputs from agriculture, 1972:2, bill. $

Labor Data

CPMPNF: Compensation per man-hour for all persons engaged in the private nonfarm sector

CPME: Compensation per man-hour for all persons engaged in the energy sector

MHPNF: Man-hours of all persons engaged in the private nonfarm sector

MHE: Man-hours of all persons engaged in the energy sector

CPMG: Compensation per man-hour of all persons engaged in the goods sector

MHG: Man-hours of all persons engaged in the goods sector

AHETP: Average hourly earnings of production or nonsupervisory workers (AHE) in the total private nonfarm sector

AHEMI: AHE, mining

AHEC: AHE, contract construction

AHEN: AHE, nondurable manufacturing, not seas. adj.

AHENSA: AHE, nondurable manufacturing, seas. adj.

AHENEO: AHE, nondurable manufacturing, excluding overtime, not seas. adj.

HENOSA: AHE, nondurable manufacturing, excluding overtime, seas. adj.

AHED: AHE, durable manufacturing, not seas. adj.

AHEDSA: AHE, durable manufacturing, seas. adj.

AHEDEO: AHE, durable manufacturing, excluding overtime, not seas. adj.

HEDOSA: AHE, durable manufacturing, excluding overtime, seas. adj.

AHETU: AHE, transportation and utilities (1964:1 - 75:4)

AHEWR: AHE, wholesale and retail trade

AHEF: AHE, finance, insurance, and real estate

AHES: AHE, services (1964:1 - 75:4)

AHEM: AHE, total manufacturing, seas. adj.

AHEMEO: AHE, total manufacturing, excluding overtime, seas. adj.

AHEAS: AHE, total private nonfarm sector, adjusted for interindustry shifts in employment.

AHEAOS: AHE, total private nonfarm sector, adjusted for interindustry shifts in employment and overtime in the manufacturing industries

CPMAS: Compensation per man-hour of all persons engaged in the goods sector, adjusted for interindustry shifts in employment

CPMAOS: Compensation per man-hour of all persons engaged in the goods sector, adjusted for interindustry shifts in employment and overtime in the manufacturing industries

WL: Value of labor input to the goods sector, bill. $

WB: Index of CPMG, 1972:2 = 1

WP: Index of CPMAS, 1972:2 = 1

WO: Index of CPMAOS, 1972:2 = 1

Capital and Output Data

INV: Investment in structures and equipment in the goods sector, 1972 bill. $, at quarterly rates.

K: Stock of capital (structures and equipment) in the goods sector, 1972 bill. $

GPBNFN: GNP of the business nonfarm sector, bill. $

GPBNFR: GNP of the business nonfarm sector, 1972 bill. $

GNPHN: GNP of the household sector, bill. $

GNPHR: GNP of the household sector, 1972 bill. $

GNPEN: GNP of the energy sector, bill. $

GNPER: GNP of the energy sector, 1972 bill. $

PQ: Gross output of the goods sector, bill. $

Q: Gross output of the goods sector, 1972 bill. $

P: Implicit deflator of gross output of the goods sector

Cost Data

COST: Short-run variable cost of the goods sector (PAA + PEE + WL)

MA: Short-run variable cost share of inputs from agriculture

ME: Short-run variable cost share of primary energy

ML: Short-run variable cost share of labor

MQ: Ratio of total revenue to short-run variable cost (PQ/COST)

Miscellaneous Data

CPI67:   Consumer price index, 1967 = 100

M: U.S. money supply (M_1), bill. $

G: U.S. government expenditure, 1972 bill. $

POP: U.S. population, thousands