

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Annals of Economic and Social Measurement, Volume 4, number 3

Volume Author/Editor: Sanford V. Berg, ed.

Volume Publisher: NBER

Volume URL: <http://www.nber.org/books/aesm75-3>

Publication Date: 1975

Chapter Title: Announcements: 1963 87-Order Input-Output Tables Containing Disaggregation of the Energy Sectors

Chapter Author:

Chapter URL: <http://www.nber.org/chapters/c10412>

Chapter pages in book: (p. 459 - 460)

## ANNOUNCEMENTS

### 1963 87-ORDER INPUT-OUTPUT TABLES CONTAINING DISAGGREGATION OF THE ENERGY SECTORS

In 1963 86-order input-output tables, the energy sectors are defined to consist of the four sectors listed below (the two-digit and the four-digit numbers represent the industry classification code for the 86-order and the 367-order tables, respectively). (i) Coal Mining (7)... Coal Mining (07.00); (ii) Crude Petroleum and Natural Gas (8)... Crude Petroleum and Natural Gas (08.00); (iii) Petroleum Refining and Related Industries... Petroleum Refining and Related Products (31.01), Paving Mixtures and Blocks (31.02), Asphalt Felts and Coatings (31.03); (iv) Electric, Gas, Water and Sanitary Services (68)... Electric Utilities (68.01), Gas Utilities (68.01), Water and Sanitary Services (68.03). From the list we excluded government enterprises—federal, state, and local. It is immediately apparent from the list that Petroleum Refining and Related Industries (31) includes Paving Mixtures and Blocks (31.02) and Asphalt Felts and Coatings (31.03) which are not energy. Also, Electric Gas, Water and Sanitary Services (68) includes Water and Sanitary Services (68.03) which is not energy. The correction definition of the energy sectors should consist of Coal Mining (07.00), Crude Petroleum and Natural Gas (08.00), Petroleum Refining and Related Products (31.01), Electric Utilities (68.01), and Gas Utilities (68.02). It is obvious that three subsectors containing impurities, Paving Mixtures and Blocks (31.02), Asphalt Felts and Coatings (31.03), Water and Sanitary Services (68.03), should be expunged to arrive at a correct definition of the energy sectors. Otherwise, 86-order tables as they were published could produce grossly inaccurate energy data to the users.

Following the formal delineation of the energy sectors described above and utilizing 1963 367-order tables, disaggregation was operated on the energy sectors. The disaggregation operation was performed after expunging three impure subsectors (31.02, 31.03, and 68.03) from the energy sectors and aggregating them into a single and separate sector that gave rise to 87-order input-output tables. Therefore, in 87-order tables, Industries (31) and (68) correctly represented energy data. In other words, in 87-order tables, Petroleum Refining and Related Industries (31) correctly represented Petroleum Refining and Related Products (31.01) while Electric and Gas Utilities (68) again correctly represented aggregates of Electric Utilities (68.01) and Gas Utilities (68.02). 87-order tables were compiled following the definitions of transfers and other definitions of B.E.A. in an exactly equivalent manner excepting the effect of disaggregation described above.

The compilation of complete 1963 87-order disaggregated energy input-output tables was partly supported by Contract DACA 31-73-C-0058, U.S. Army Corps of Engineers and the computation was provided by Mathematics and Computation Laboratory, Office of Preparedness, General Services Administration. Completed set of tables included the tables of interindustry transactions, the

technology, and the Leontief inverse. From the examination of 87-order transactions table, it was found that aggregates of three impure sectors (31.02, 31.03, and 68.03) exhibited a row and a column that contained large figures in value terms in the cells. Therefore, the net effect of disaggregation of the energy sectors on transactions table was in the reduction of the transactions entry in the cells in the rows and the columns of industries (31) and (68) indicating overestimates in energy transactions in 86-order table.

Indeed, 86-order tables as they were published also contained nontrivial errors in the coefficients of technology and total requirements. Two examples are given. Take the 31st row and the 12th column of the technology matrix. In 86-order table, the technology coefficient in the cell reads 0.02728. In my 87-order table, the technology coefficient in the same cell reads 0.00594. Again take the 31st row and the 12th column of the Leontief inverse matrix. The coefficient in the cell reads 0.04109 in 86-order table as opposed to 0.01892 in my 87-order table. The consequence of all these observations is that, if applied in predicting energy requirements, 86-order tables as they were published could grossly overestimate total energy requirements for the economy.

It should be added that partially disaggregated energy 86-order tables are available for 1958 [U.S. Department of Commerce, *Survey of Current Business*, November, 1969]. The cited tables disaggregate Electric, Gas, Water and Sanitary Services (68) for energy but do not provide disaggregation for Petroleum Refining and Related Industries (31). Therefore, my tables should not be considered equivalent to the cited tables in the definition of the energy sectors.

Inquiries concerning 87-order tables may be made by contacting the author: Kern O. Kymn, Visiting Professor of Economics, Virginia Polytechnic Institute and State University, Reston, Virginia 22090.

#### COMPUTER PROGRAMS FOR BAYESIAN STATISTICAL ANALYSIS

The Computation Committee of the Seminar on Bayesian Inference in Econometrics (NBER-NSF) seeks information about operational computer programs designed for Bayesian statistical analysis. Those who have such information are invited to send the following: name of program, purpose, input, output, computer language and machine, documentation, and conditions of availability to researchers. Information about programs under development is also of interest and should be categorized that way, including expected date of completion. Please send this information to Professor S. James Press, Faculty of Commerce, University of British Columbia, Vancouver 8, Canada.