Input- output analysis of energy use in agricultural sector of Iran

Abstract

Energy sector as one of the key and affecting sectors on the economy and it's analysis of interaction with other parts of production sector and how influences decisions and policies' relating to them on sectors is very important. Because Energy is used in process of agriculture production, is a very important factor in agriculture. This study examines the quantity relationship of used energy in agricultural sector. Thus we applied technical coefficients matrix, Leontief inverse matrix, Ghosh inverse matrix and backward and forward linkage coefficients agricultural sector (as an energy intermediate demand) and energy sectors (petroleum and natural gas, coke and oil products, electricity and water). For this, last country's statistical input- output table (1380 input- output table) is used. The input- output table which is one of the most important tools of economy structure analysis, forecasting and planning is the only known economical model which enables us to study interaction of different economic activities. The results of this study show that the most direct and indirect demand was for water to produce one unit of Agriculture. Petroleum and natural gas, coke and oil products and electricity are next priorities. Also, petroleum and natural gas, coke and oil products and water affect on the value- added of Agricultural sectors. The sector of water has highest on Agricultural value-added in comparison with other sectors. Inverse, the impact of electricity on Agricultural value- added is few. Because there is a high relationship between water and Agricultural sectors, a saving policy in water consumption would be benefit for Agriculture developing if it continues in path of its growth.

Keywords: Energy use, Agricultural sector, Input- output analysis

University of Zabol
Graduate school
Faculty of Agriculture
Department of Agricultural Economics

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Supervisor:
Dr. M. Salarpour

Advisor:
Dr. A. R. Karbasi

By:
M. Babanejad Afghan

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