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TITLE: POWER INTENSITY OF INDIAN ECONOMY: A STUDY OF SECTORAL VARIATION IN INPUT OUTPUT FRAMEWORK

AUTHORS: SHARMA, SHALINI ;

EMAIL: shalini.p1@gmail.com

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ABSTRACT:

Energy is the pivot of all economic activities. It is the driver of growth. As the economy moves from lower to higher stages of growth, energy requirements are enhanced also get widely diffused over sectors, regions and groups. In India, demand for energy has actually been running much ahead of supply, making power emerge as a constraint to growth. Attempts to generate energy for self use often escalate cost, diluting cost advantage of Indian economy. For households cost of self generated energy reduces consumption of other goods, impacting on living standard. Per capita consumption of energy is an important indicator of growth. Inter-County and inter - regional comparison of energy index constitutes an important tool of economic analysis. Inter-temporal comparison reflects movement of business/ economy and society along development path through time. Besides, technological up gradation of production and improvement in living conditions also raise energy requirements. The paper focuses on the changing energy intensity in Indian Economy. It examines the impact of technological change the energy requirements of different sectors of the economy. These have been analyzed in input output framework. Technological change has been endogenised by the use of 3 different coefficients matrices, A0, A1 and A2 relating to 1993-94, 1998-99 and 2003-04. The study will furnish the base for forecasting future energy needs of India. This will provide a bench mark for examining the plan programmers of energy development during the plans. An input output model has been developed to determine both direct and indirect energy needs of the economy. The models are given below: $X_0 = (I-A_0)^{-1} f_0$.1) $X_2 = (I-A_1)^{-1} f_1$.2) $X_3 = (I-A_3)^{-1} f_2$.3) Where X is gross output vector, f is final demand vector, having energy as the only non-zero element of final demand, (I-A)⁻¹ is Leontief Inverse. This model will be supplemented by estimation of backward, forward and residentiary linkages.