JP Journal of Mathematical Sciences
Volume 1, Issue 2, 2011, Pages 85-97

ANALYSIS ON THE INTERDEPENDENT RELATIONSHIP BETWEEN ENERGY INTENSITY, TECHNICAL PROGRESS AND ECONOMIC GROWTH

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Abstract

The interdependent relationship between energy intensity, technical progress and economic growth is analyzed by using economic growth theory. Based on this, this paper does empirical analysis. It reveals that: (1) the planning objectives of annual average per capita GDP growth rate at 7.5% and the annual average energy consumption decline rate at 4.3% are feasible, but the negative effect of energy intensity reduction on economic growth cannot be ignored. If the economy keeps growing at a fast pace, the further reduction of energy intensity will be more difficult. (2) The growth of human capital efficiency in our country is insufficient. The feasible ways to reduce energy consumption are capital alternative and technology progress. (3) If the capital investment growth is fixed, the degree of energy consumption reduction must be adapted to the technological progress.

Keywords and phrases: energy intensity, technological progress, economic growth, human capital efficiency, capital alternative.

Received May 17, 2011; Revised August 5, 2011

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