



De La Salle University – Dasmariñas
GRADUATE PROGRAM

**Economic Relationships of China's Energy Consumption,
Energy Indicators and Selected Economic Variables, 1990-2002**

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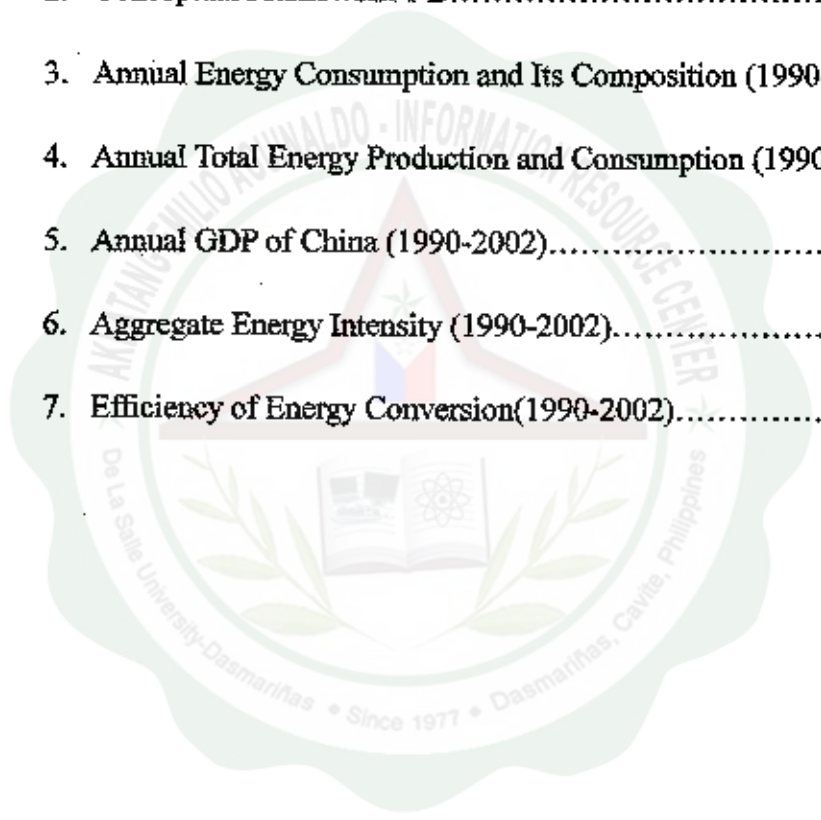


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ABSTRACT

Title: Economic Relationships of China's Energy Consumption, Energy Indicators and Selected Economic Variables, 1990-2002

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Summary

The study sought to conduct the assessment on the energy production and consumption along with energy indicators and selected economic variables, and find out the relationships of them in China. To meet such goal, the researcher employed the concept of Aggregate Energy Intensity and Energy Elasticity and developed a fundamental model for the Total Energy Consumption in China. The conceptual framework is that the Total Energy Consumption in China was affected by changes of Population, GDP, Aggregate Energy Intensity, Energy Intensity and Efficiency of Energy Conversion; the selected energy indicators, namely, Aggregate Energy Intensity, Energy Elasticity and Efficiency of Energy



Conversion was affected by the Total Energy Consumption compositions, namely, the consumption of coal, oil, gas and hydro. In this study, the descriptive statistics technique and both simple and multiple regression analysis were used to analyze those indicators and their effects to the total energy consumption in China.

Estimation results showed that: a) Total Energy Consumption in China was significantly related to Population, GDP, Aggregate Energy Intensity and Efficiency of Energy Conversion, But it was not supported by the Energy Elasticity. b) Aggregate Energy Intensity was affected by the consumption of coal, oil, gas and hydro; Energy Elasticity was affected by the consumption of coal, oil and gas, not affected by the consumption of hydro; Efficiency of Energy Conversion was only affected by the consumption of hydro, not affected by the consumption of coal, oil and gas. c) the energy consumption continues growing, Total Energy Production is behind Total Energy Consumption, coal still dominates China's energy consumption. Oil is the scarcest source, but its consumption growth rate is the fastest among the four primary energy. Strengthening oil security and diversifying oil purchase is necessary. Gas and hydro still accounts for tiny part in the total energy consumption mix. Popularize Renewable energy such as nuclear, solar, wind, biomass and strength energy



conversation can release the energy consumption strain effectively. d) Aggregate Energy Intensity was declining in China, which means China now is using less energy to support its economy development. Energy Elasticity lasts in a low level, which reflects the growth rate of energy consumption is slower than the growth rate of GDP, but at the beginning of new millennium, it seems to go high. Efficiency of Energy Conversion improved some during this period, which is an important part of Energy Conservation.

