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Seyed Kamal Sadeghi[1]

The Investigation of Relationship between CO_2 Emissions and Water Pollutant in Iran (Environmental Economics Approach)

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Abstract

The main objective of this paper is to investigate the long-run relationship between per capita income and environmental quality indices. For this purpose, we used the CO_2 emissions and biological oxygen demand (BOD) per worker as a proxy for measurements of air and water quality. In this paper we used the Johansen's co-integrating technique for estimating the long run relationship between CO_2 emission and water pollution with explanatory variables such as population density and growth rate of urban population. The results of this paper show that the EKC curve is confirmed for Iranian economy over the period of 1980 -2009. Moreover, the population density and urban population growth rate have positive and significant effect on the environmental degradation. The other results of this paper show that the elasticity of CO_2 emission with respect to the population density is more than of water pollution and one percent increase in population density have led to 2.06 increases in CO_2 emission.

Keywords: EKC, Air Pollution, Organic Water Pollution, Johansen's Co-integrating Technique.

1- Assistant Professor , University of Tabriz.

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