

- Thesis Title: **“A Panel Co-integration Analysis: Effect of Institutional Quality on Environmental Degradation in SAARC Countries”**

Name of Student: **Shahid Imdad**

Supervisor Name: **Dr. Hafsa Hina**

ABSTRACT

This study is proposed to analyze the impact of institutional quality on environmental degradation and the turning point of the Environment Kuznets Curve (EKC) in SAARC Countries. For the sake of detailed analysis basic EKC model and extended EKC model; in which institutional quality and the population density joined income and income square to determine the environmental degradation. Panel of four countries (India, Pakistan, Sri Lanka and Bangladesh) is chosen whereas data is observed from 1980-2013. Macro panel non-stationary techniques would be undertaken for this analysis. Im, Pesaran and Shin (IPS) (1997) reports that all the series are integrated of order one except population density. After this, Pedroni (1999) test for co-integration have considered to check the long run relationship. Co-integration is detected for both models while taking CO₂ as dependent variable but for SO₂ as dependent variable co-integration is experienced for extended model (EKC with institutional quality) only. Further this long run relationship between the variables would be estimated through Dynamic Ordinary Least Square (DOLS), test proposed by Kao and Chiang (2000). Estimated results report that institutional quality improves environmental situation and also correct the turning point to minimizing magnitude. Finally, error correction mechanism for panel study is applied on the basic and extended EKC models. According to the ECM disequilibrium in the environmental degradation is corrected significant for all models in a period ranged from 0.24 years to 0.28. Institutions improve the environmental situation in the short run for CO₂ but not for SO₂. EKC is not proved for both CO₂ and SO₂ in short run. Last but not least institutional improvement leads to the environmental betterment as well to have more detailed view of EKC theory. Key Words: Environmental degradation, SAARC, EKC, CO₂, SO₂, Institutional Quality, Income, IPS, ECM