ABSTRACT

Pakistan is one of the countries that is most affected by the adversative impacts of climate change. This thesis targets to explain the nexus among the variables; structural changes, energy consumption, economic growth, urbanization, and carbon dioxide gas emissions in Pakistan by employing time series data from 1972 to 2020. Autoregressive Distributed Lag (ARDL) model is used to examine the empirical cointegration, short-run, and long-run dynamics. The long-run and short-run estimations showed that energy consumption and economic growth worsen the atmosphere and urbanization ensures a clean environment. However, structural changes may negatively impact the environment in the short term, but they may not have a negative long term effect. It is recommended that generating energy from renewable sources will help to minimize Co2 emissions. In the meanwhile, the government must implement strict laws and regulations to impose carbon taxes on major economic sectors, with a specific focus on the green economy.

Keywords: *Co2 emissions, Structural changes, Energy consumption, Economic growth, Urbanization, ARDL, Pakistan, Environment, Time series data*