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Environmental Kuznets Curve for Air Pollution in Bangkok: Is There a Calm after a Storm?

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Abstract

Over the past decade, Bangkok's air quality has deteriorated drastically. Several pollutants have exceeded the WHO air quality guidelines. This can be contributed to several government policies, which prioritise economy over environment. The main arguments are that for a country to develop it must first sacrifice the environment and that only a rich nation can properly address environmental problems. In other words, economic growth is both the cause and cure for environment degradation. This argument is supported by the Environmental Kuznets Curve hypothesis (EKC), which states that first environmental problems increase as the country's income per capita grows, then reaches a tipping point, after which the environment will improve. The EKC has been interpreted by many as indicating that Bangkok's air quality can be improved but only after Bangkokians are rich enough. However, until now the EKC which underpins policy directions in Thailand has not been tested. Therefore, the existence of an EKC for Bangkok was tested using a panel data set of city-specific, annual ambient levels of several pollutants such as nitrogen dioxide (NO_2), sulfer dioxide (SO_2), tropospheric ozone (O3), and particulate matter (PM10). The results show that that there is no support for the typical inverted U-shape relation between various pollutants and income per capita. The results, however, do support a monotonic increase of pollutants in income. This indicates that there is no evidence for an Environmental Kuznets Curve in Bangkok's air pollution and that, without any immediate actions to combat the problem, the worse is yet to come.

Keywords: Air pollution, Bangkok, environmental Kuznets Curve

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