

A Statistical Approach to Air Pollution in Mexico City and It's Impacts on Well-Being

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Abstract : In recent years, Mexico City has presented high levels of atmospheric pollution; the city is also an example of inequality and poverty that impact metropolitan areas around the world. This combination of social and economic exclusion, coupled with high levels of pollution evidence the loss of well-being among the population. The effect of air pollution on quality of life is an area of study that has been overlooked. The purpose of this study is to find relations between air quality and quality of life in Mexico City through statistical analysis of a regression model and principal component analysis of several atmospheric contaminants (CO, NO₂, ozone, particulate matter, SO₂) and well-being indexes (HDI, poverty, inequality, life expectancy and health care index). The data correspond to official information (INEGI, SEDEMA, and CEPAL) for 2000-2018. Preliminary results show that the Human Development Index (HDI) is affected by the impacts of pollution, and its indicators are reduced in the presence of contaminants. It is necessary to promote a strong interest in this issue in Mexico City. Otherwise, the problem will not only remain but will worsen affecting those who have less and the population well-being in a generalized way.

Keywords : air quality, Mexico City, quality of life, statistics

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