STATISTICAL VERIFICATION AND FURTHER IMPROVEMENT OF THE MODELS FOR CARBON DIOXIDE EMISSIONS

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The link between economic growth and environmental pollution depends on many factors such as the size of the economy the vintage of the technology and the demand for environmental quality. On the basis of this consideration there have been in the last few years several studies on the link between economic growth and environmental pollution. Some researchers showed that the functional relationship considered is either log linear, log quadratic or log cubic. In several cases researches have found evidence in favor of an inverted U "Environmental Kuznets" Curve (EKC). This behavior implies starting from low income levels, carbon dioxide emissions tend to increase but slower space. But after certain level of income emissions start to decline as income further increases. This study attempts to shed further light on this issue by using a data set covering more than one hundred countries around the world for thirty six years (1960-1996) by considering an alternative functional form called "Ever Increasing Model"(EIM). In this model CO_2 emissions will be increasing with the income level and reaching to a saturation value. A comparative study of the three models Linear Model(LM), EKC, and EIM carried out in this study to show that EIM is also as statistically significant as the other two. To show the superiority of IEIM, comparative study of the three models ILM,IEKC and IEIM is also carried out. Finally we concluded that since the three different models (*LM,EKC* and *EIM*) gave the same results we cannot use any one of them to do future predictions. Finally we concluded that since the three different models (*LM,EKC* and *EIM*) gave the same results we cannot use any one of them to do future predictions. Therefore policy makers should recognize the deficiencies of the theory behind the *EKC* and should rethink whether EKC is suitable for drawing policy prescriptions as there is another relationship EIM which is different from *EKC* exists.