

ENVIRONMENTAL DEGRADATION AND ECONOMIC REFORMS: EMPIRICAL EVIDENCE

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Overview

The early 1990s marked the end of command-based policies in former member nations of the now defunct Soviet Union. They become transition economies (TECs) in the early 1990s and embarked an era of market-based economic reforms in response to pervasive political, social and economic pressures. Economic liberalization, macroeconomic stabilization, restructuring and privatisation and institutional reforms were the main ingredients of this transformation process (Williamson, 1993). These reforms were termed Type I reforms while Type II reforms included the design and enforcement of laws, regulation and supportive institutions to buttress and facilitate the functioning of the market-based reforms (Svejnar, 2002).

The transition process vividly exposed the broad-scale environmental degradation that took place during the command-based regime in these countries (Soderholm, 2001). High levels of airborne particulates from industrial and household sources; widespread contamination of soil and water from toxic chemicals and nitrates; and a persistent negligence of nuclear safety and waste management issues were some of the common and urgent environmental problems identified in the fifth European Community Environmental Action Programme (EAP) for Central and Eastern Europe in 1993. The legacy of industrial inefficiency, obsolete and polluting technologies coupled with weak environmental management and regulation prior to their economic reforms had exacerbated ecological woes in the region.

A central principle of the EAP was that the process of economic reforms and restructuring associated with the transition were expected to eliminate the perverse incentives that underlay many of the ecological problems of the centrally planned economies (Hughes and Lovei, 1999). The importance of effective environmental policies; institutions and investments in supporting the market-based reforms improving the environmental performance of developed economies was also recognised. Now, 20 years after the commencement of economic reforms by European and Central Asian TECs, it is possible relying on available empirical data to determine the extent to which their market reforms resulted in environmental improvements such as reduced air pollution. Has the prediction of the fifth EAP been vindicated? The purpose of this paper is to investigate empirically the extent to which this is true for reductions in carbon dioxide (CO₂) emissions by this group of countries.

The paper is organised as follows: After the introduction the second section reviews the relevant literature on the relationship between economic reforms, environmental regulations and environmental quality. Section 3 describes the econometric methodology and data used while the results are presented and discussed in section 4 along with relevant policy implications. Section 5 concludes the paper.

Methods

A Dynamic Panel Data Model.

Results

Our results suggest that reforms in competition policy and corporate governance are the significant driver of emissions reductions in the region. Therefore, advances in competition policy and governance reforms are desirable given the available scope to extend these reforms. The Kyoto Protocol had no significant effect in reducing emissions levels while the relationship between economic growth and emissions seems weak based on our results.

Conclusions

Reducing energy use by increasing energy efficiency and investments in renewable energy are necessary to reduce the carbon emissions level and mitigate the adverse impacts of climate change in the region.

References

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