A STUDY OF ENVIRONMENTAL EFFICIENCY IN A MULTI-LEVEL PRODUCTION SYSTEM USING DATA ENVELOPMENT ANALYSIS

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Abstract

Environmental pollution has resulted in global warming, extreme weather conditions, and degradation of ecological balance. National leaders across the globe started to realize that ecological difficulties are transboundary when nations that are affected by serious environmental crises are far away from the source of the problem. However, the eco

The developed framework in my thesis addresses the issue of measuring and controlling emissions at different levels. The models do not presume any *predefined* functional form of the production systems. Thus, the use of Data Envelopment Analysis (DEA) allows the production frontier to be driven entirely by the existing production mixes. In addition, the underlying principles of linear programming problems

production system continues to underplay the abatement targets. Hence imposition of agreements by target setting and compliance do not necessarily ensure emission reduction. If commensurable improvement on emission standards is to be achieved, the leading units need to set the benchmark for the poor performers to follow. However, units face different external factors e.g., politico-