

**Economics  
Seminar  
Series  
2020**



**SOUTH ASIAN UNIVERSITY  
FACULTY OF ECONOMICS**

***Seminar***

***Modelling production of bad outputs:  
theory and empirics***

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**Date:** March 5, 2020  
(Thursday)  
**Time:** 2:30 p.m.  
**Venue:** Mezzanine Floor, Multipurpose Hall  
Akbar Bhawan, Satya Marg  
Chanakyapuri, New Delhi

**All are Welcome**

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**ABSTRACT**

Emission generating technologies has been recognized an important area in the analysis of market externalities and policy formulations aimed at efficient mitigation of inimical effects on social welfare of the production of bad outputs. The joint-production models reflect that emission generation is a by-product of the production process and the production of marketed output cannot be separated from pollution abatement activities. These models have been used to assess the effect of regulation in terms of reduction in marketed output while reducing the pollutants. These models differentiate between regulated and unregulated technologies. Regulated technologies assume that the reduction in pollution is costly, either in terms of reduced marketed output or employment of more inputs, while the unregulated technologies consider that the pollution can be disposed of in free. For the regulatory scenario, the disposability of pollutants involves two approaches: weak disposability (WD) and by-production (BP). The WD approach, propounded by Rolf Färe and his colleagues in the mid-1980s is more popular in the literature. According to this approach, good and bad outputs are null-joint and the bad outputs are weakly disposable. However, the WD approach fails to satisfy the materials balance conditions. Murty et al. (2012) object to the free disposability of inputs, which result in emissions and show that the bad outputs are the unavoidable by-products of the production process of marketed output, rather than the joint products. In the empirical exercise, we follow both the approaches and compare the results obtained, using a common data set.