INTERNAL AND EXTERNAL EMISSION CONTROL UNDER PRICE AND QUANTITY CONTROL SCHEMES

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ABSTRACT

Environmental impact has become one important measure of companies' performances. For carbon emission reduction purpose, both internal and external emission control approaches can be applied. However, coordination between the financial performance and the carbon emission can be challenging, especially when consumer demand is affected by emissions. With economic modeling approach, this paper investigates tradeoffs between firms' financial performance and emission from various operational activities under internal and external emission control schemes. Particularly, this paper addresses how to use emission pricing schemes internally throughout firms' operational activities to provide strategic direction on emission reduction.