The Role of Capacity Regulations in Compliance

Itziar Lazkano*, Linda Nostbakken**

*University of Wisconsin-Milwaukee

** University of Alberta

Abstract

Production quotas can restore efficiency in industries characterized by production externalities, such as resource industries and industries with environmental regulations. However, with imperfect quota enforcement, firms may have incentives to build up excess capacity relative to their quotas. Firms with excess capacity may, in turn, have stronger incentives to violate quotas. We investigate the relationship between enforcement, compliance and capital levels in the short and long run. In the short run, excess capacity leads to increased illegal production but a well-functioning quota market may alleviate the problem. Furthermore, we show that the tougher the enforcement, the lower the firms' production capacity. With tradable quotas, the quota price strengthens the effect of tougher (or weaker) enforcement. At the aggregate level production quotas do not fully internalize the production externality when enforcement is imperfect. In such situations, additional management instruments are required to correct the firms' incentives to build up excess capacity, which exacerbate the non-compliance problem.