

Water Quality and Environmental Treatment Facilities

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<<Abstract>>

It has been argued that investment in basic treatment facilities could have both a direct, positive effect and an indirect, negative effect on water quality. Using a two-stage least-squares method we have shown that the net effect of investment in basic treatment facilities on water quality in Korea is positive and statistically significant. Nevertheless, the findings also reveal a statistically significant, negative relationship between the volume of wastewater and water quality. These findings can be interpreted to suggest that facilities construction has not kept pace with treatment demands. Alternatively, these findings may also reflect firm behavior regarding wastewater discharge in the face of regulatory enforcement. We thus propose and test a novel model that is capable of simultaneously considering interactive behavior on the part of both firms and regulators and the resulting water quality this interaction gives rise to. The model and results draw attention to the importance of optimally balancing efforts to build wastewater treatment facilities with efforts to set and enforce regulatory standards.

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