

## Generalized Progress of Abatement Technology: Incentives Under Environmental Liability Law

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**Abstract** This paper considers the incentives environmental liability creates to improve pollution abatement technology. Our analysis considers technical progress in end-of-pipe abatement and in the production technology used, thereby generalizing the approach taken by Endres et al. (Environ Resour Econ 36:341–366, 2007). We establish that this generalization has drastic repercussions on incentives under negligence liability, while the performance of strict liability is not compromised. Furthermore, it is demonstrated that the social desirability of investment in abatement or production technology (or both) decisively determines how ex-ante and ex-post regulation fare with respect to welfare maximization in the case of negligence liability.

**Keywords** Emission abatement technology · Induced technical change · Environmental liability law · Generalized progress

**JEL Classification** H 23 · K 13 · Q 58