

Multi-license Scheme: An Optimal Waste Management Policy under Asymmetric Information

Takayoshi Shinkuma¹ and Shunsuke Managi²

Abstract

A waste discharge license from the enforcement agency has been introduced in environmental policies especially waste management system. It is required for all waste related activities in each country. Almost all of them at present use only one type of license. This study focuses on the regulatory process at the licensing stage.

We show that the imposition of single license scheme in the industry will not solve the waste pollution problem and therefore environment will not generally be best protected. We characterize the optimal waste management policy and recommend the multi-license scheme. The recommended multi-license scheme overcomes three difficult problems in waste management policy; the heterogeneity of waste management firms, asymmetric information, and non-compliance behavior of the waste management firms and the disposer. For the multi-license scheme to function properly, the government needs to set the fine imposed on non-compliance behavior at a sufficiently high level. However, the minimum level of the fine is not infinitely high.

Keywords:

License scheme, Waste management, Asymmetric information, and Compliance

¹ Faculty of Economics, Kansai University

² Faculty of Management, Yokohama National University