

Waste Management in Agri-Food Processing Sector in Sri Lanka: Triggering the Firms' Compliance to Environmental Regulation

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Abstract: The purpose of this study was to examine empirically the impact of a system of private (market) and public (regulatory) incentives for a firm to comply with the environmental management practices recommended by the Ministry of Environment for the agri-food processing sector in Sri Lanka. Four specific environmental management practices recommended by the Ministry to manage solid waste generated in a firm were of particular interest in this analysis, including: (1) 3R system, (2) composting unit, (3) biogas unit, and (4) good manufacturing practices. It was hypothesized that the: (i) cost and financial implications; (ii) increased internal efficiency of the firm; (iii) market-forces such as sales, commercial pressure and reputation, and (iv) government regulation can have a significant influence on agro-processing firms. With the support of a structured questionnaire, the data were collected by means of a face-to-face interview with the owner/top executive of firms (n=153) that did not adopt a single SWMP indicated above and belonging to five sub-sectors based on the type of product (i.e. processed foods, coconut products etc.) and their size (from very large to very small). The data revealed that firms did not comply with any of the above recommendations by year 2009, but were supposed to adopt which by the end of year 2011. The data were subjected to Kruskal-Wallis Test for analysis. The outcome highlights that prevailing government regulation and liability laws on solid waste management did not trigger firms to comply with them. Further, firms' voluntary actions on adoption of these practices are constrained by the costs/financial implications faced. Moreover, market forces and internal efficiency did not play a key role in this regard. However, it was observed that relative impact of these incentives varied significantly with respect to the firm/plant characteristics such the type of and scale/size of firms. This highlights the importance of bringing strict regulation into the industry to ensure firm compliance with environmental regulation. Simultaneously, care must be taken to strengthen the base of positive market incentives faced by individual firms to prevent them from full or partial exit from the industry due to strict regulation.

Keywords: Economic Incentives, Environmental Quality Management, Food Processing Sector, Regulation, Waste Management Controls