

52 – An Analysis of the Drivers of Substitution of Dangerous Flame-Retardants in Electronics in Sweden

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Reducing the risks that chemical substances may cause for people and the environment can be achieved by the substitution of hazardous chemicals by less hazardous alternatives. While the willingness to switch to safer chemicals has been studied among consumers of products, there is a lack of research on what drives the substitution of chemical substances by manufacturers and intermediate firms. In this study, we surveyed companies that sell, distribute and/or import electronic products in Sweden to investigate firms' preferences and behavior towards the use of safer alternatives to flame-retardants in electronic appliances placed on the Swedish market. By means of a choice experiment, we are able to identify the relative importance of four levers for chemical substitution, namely health and environmental effects of flame-retardants, chemical regulations in Europe, the final price of the product and a label that discloses tax reductions connected to the use of safer flame-retardants. The data collected allow us to determine firms' willingness to pay to switch to safer alternatives, and compare this willingness of pay to the compliance cost of existing regulations such as the Swedish tax on electronics and the European Chemical Regulation REACH. Our results also allow us to inform policy makers how to better foster chemical substitution towards safer chemicals and even test the effect of complementary market-based/information disclosure policy interventions that increase the effect of current regulations.

Biographical note

Jessica Coria is Associate Professor at the Department of Economics, University of Gothenburg. Her main research interest is the optimal design of environmental policies. For that purpose, she does both theoretical and applied work, though most of my work is within modeling of environmental regulation.