

Extended producer responsibility and trade flows in waste: The case of batteries

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Abstract

In the debate on international waste trade, the focus on resource efficiency and recycling has gradually begun to accompany the focus on negative environmental externalities. In this context, we examine the impact of Extended Producer Responsibility (EPR) on the export of waste batteries (WB). EPR is considered as a key policy for the “marketization of waste”. WB are a hazardous waste that also contain a high concentration of critical raw materials. As such, they are of strategic importance for the recovery of critical resources, while at the same time requiring proper environmental management. Therefore, it is crucial to understand where WB are treated and how this is affected by related policies.

Our results, based on difference-in-difference models in a gravity framework, show a consistent increase in WB exports after EPR implementation compared to the trend for other wastes. This result is likely to be an indirect consequence of the ability of EPR to support growth in waste collection rates, more accurate tracking of transboundary waste flows, and specialization of national waste management systems. In particular, WB exports appear to be directed to countries with more advanced waste management systems, more stringent environmental regulations, and limited endowments of the mineral resources typically contained in batteries.