

Driving Plastic Circularity within the Food Packaging Industry: Barriers, Drivers, and the Role of Plastic Packaging Taxes

ABSTRACT

The affordability and versatility of plastic have driven its extensive use, but its linear production-consumption model poses significant environmental challenges. In response to rising plastic packaging demand, the European Union introduced policies like the Single-Use Plastics Directive, the Plastic Levy and the Packaging and Packaging Waste Regulation, to curb single-use plastic consumption, promote recycling, and advance the circular economy. This encouraged some countries, including the United Kingdom, Spain, and Portugal, to implement plastic packaging taxes aimed at addressing circularity issues. Together, these developments create a relevant policy landscape for investigating how circularity is progressing with the food packaging industry, which remains highly dependent on single-use plastics. This study explores how the transition towards plastic circularity is being materialized, driven, and hindered within the food packaging industry across the United Kingdom, Spain and Portugal. Based on secondary data and interviews with plastic resin and film producers, packaging converters, recyclers, food and beverage brand representatives, and retailers, this research identifies key circular practices: eco-design (covering material selection, recyclability, lightweighting), enhanced recycling, waste-to-energy recovery, and, to a lesser extent, reusable packaging solutions. The analysis highlights seven dimensions shaping circularity: collaboration along the value chain, innovation, material chemical properties, culture, operational challenges, market conditions, and regulatory frameworks. Among regulatory drivers, the Packaging and Packaging Waste Regulation emerges as a key catalyst through mandates for recycled content and recyclable-at-scale packaging by 2030. In comparison, plastic packaging taxes provide only limited incentives, primarily encouraging marginal increases in recycled plastic use. This research helps managers identify the barriers to overcome and the drivers to leverage in advancing plastic packaging circularity, enabling more effective resource allocation. It also provides guidance for policymakers in designing more coherent tax and regulatory frameworks by comparing the respective influence of plastic packaging taxes and packaging regulations. Finally, it contributes to environmental policy debates by highlighting targeted measures needed to support more transformative practices, such as the deployment of reusable packaging.