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How Regulations Impact Product Innovation: Lessons Learned for the Introduction of Circular Economy Requirements.

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The energy consumption of domestic energy-related products in particular, contributes significantly to greenhouse gas emissions. The Ecodesign and Energy Labelling directives are two policy measures that aim to reduce the energy consumption of these products in the European Union. These directives are also used as a tool to support industrial competitiveness and innovation. It is therefore important to optimise aspects of these regulations that influence innovation, as this directly corresponds to the energy-savings potential of domestic energy-related products. Hence, this paper assesses the development of the Ecodesign and Energy Labelling directives, with the aim to identify those factors that have helped and hindered product innovation. The study is based on a qualitative analysis of primary data collected through a series of expert interviews selected from: European Commission members, industry experts, academics, trade associations and product manufacturers. The interview participants were guided through semi-structured interviews, with a total of 25 different interviews conducted and subsequently transcribed. Thematic analysis was used to formulate the respective interview transcripts in the form of themes, to represent the regulatory factors that influence product innovation. The results of the study indicate that Ecodesign and Energy Labelling regulations till now, have had both a positive and negative impact on product innovation. It was found that these impacts are generally dependent on the market and nature of a particular product. The main themes identified were; the energy label classification system; the legislative process itself including key stakeholder engagements and the length of the process; the stringency and ambitiousness of minimum energy performance requirements; the role of industry in setting standards; the representation of actual product use in testing standards and procedures; and the implementation of effective market surveillance activities. Additionally, this paper identifies that the goals of the directives need to focus more on reducing absolute energy consumption, not just improving the energy efficiency of products, as this will enable more significant energy savings. The introduction of circular economy requirements was also discussed by interview participants. The potential for the new EU CE initiative to have a significant impact on product innovation was identified. However, the implementation and measurability of such requirements appears to be the main uncertainty surrounding the effectiveness of these additional regulatory measures.