

Remanufacturing : A Lucrative Untapped Clean Growth Strategy

Professor Winifred Ijomah,

The University of Strathclyde and Director Scottish Institute for Remanufacturing

Extended Abstract

Sustainability is critical global concern yet a key solution remanufacturing is little known leaving its huge potential largely untapped. Remanufacturing produces products at as-new quality with as-new guarantee but at 65% of conventional manufacture costs and greatly reduced environmental impacts (www.remanufacturing.eu/about-remanufacturing.php). The practice is a critical for a Low Carbon Economy and is a key pillar of the Circular Economy; which is a prerequisite for resource efficient manufacturing. The United Nations International Resource Panel report that in comparison to conventional manufacturing (linear production), remanufacturing can reduce virgin material usage by 80 to 98 % and production waste by 90 % while avoiding 79 to 99% of embodied material, energy and emissions as well as 57 to 87% of process energy and emissions (https://www.oneplanetnetwork.org/sites/default/files/from-crm/re-defining_value_the_manufacturing_revolution_summary_industry_english_web.pdf). In spite of these benefits remanufacturing is under-utilised because of a lack understanding and awareness. In this lecture I will provide the fundamentals of remanufacturing, defining and differentiating it from alternative value retention processes (e.g.; repair, reconditioning/refurbishment, recycling,) , explain how its advantages come about, discuss the challenges and barriers to wider use of remanufacturing and provide a glimpse of global remanufacturing status. Finally, I will use my research to illustrate the types of work being undertaken to optimise and mainstream remanufacturing

Title: Remanufacturing : A Lucrative Untapped Clean Growth Strategy