



INDUSTRIAL MANAGEMENT



Seminario Permanente en Diseño, Gestión y Optimización de Procesos  
Industriales y de Servicios

*Seminar on Design, Management and Optimization of Processes in Industry and  
Services*

## “The bullwhip effect and the variability trade-off in circular economy supply chains”

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**Summary:** Remanufacturing practices are gaining ground in modern societies due to their pursuit of circular economies. Together with meaningful economic and environmental opportunities, these systems introduce additional degrees of uncertainties over traditional manufacturing. This presentation explores remanufacturing supply chains through the lens of the bullwhip effect, i.e. the dynamic phenomenon through which the variability of consumer orders is amplified as they move up the supply chain. We discuss how such supply chains can be dynamically designed to reduce cost, improve product availability, and create a stable working environment for employees and suppliers by considering a fundamental trade-off.

**BORJA PONTE** holds a Lectureship in Operations Management at The Open University Business School since March 2018. Prior to that, he defended his viva at the University of Oviedo (Spain) in December 2016 and worked as a Research Associate at Cardiff Business School from January 2017 to March 2018 on a Circular Economy project with several organisations, such as the European Remanufacturing Network and British Telecommunications. His research revolves around the dynamics and economic performance of supply chains. His latest research primarily focuses on closed-loop supply chains, which are gaining strategic importance as stepping stones towards economic, environmental, and social sustainability. His work in the supply chain field has recently granted him the 2018 Best Thesis Award at the University of Oviedo as well as the Prize CEL Universidad in its 2019 edition.