

Call for papers

INTEGRATION OF PRODUCT-SERVICE INNOVATION INTO GREEN SUPPLY CHAIN MANAGEMENT: EMERGING OPPORTUNITIES AND PARADOXES

*Special Issue proposal for **Technovation***

Guest editors:

Prof. Oscar F. Bustinza, University of Granada

Dr. Ferran Vendrell-Herrero, University of Birmingham

Prof. Charbel Jose Chiappetta Jabbour, EMLYON Business School and Affiliated Prof., Lincoln International Business School

Product firms have been changing their portfolio of offerings, increasingly providing service in addition to their traditional product offerings; a process named servitization (Baines et al., 2017; Vandermerwe and Rada, 1988). Servitization –understood as a product-service innovation– includes the different technology-enabled business models to achieve competitive advantage through the provision of customer knowledge-based services during the entire product lifecycle (Bustinza et al., 2018). On contemporary competitive environments, this product-service innovation needs to be conceptualized to be economically, socially, and environmentally sustainable (de Guimarães et al., 2021).

From an economic perspective, services often have higher margins than products (Anderson et al., 1997), and changed the customer's cost structure so making operations more sustainable (Jovanovic et al., 2021). While the economic impact of servitization has been thoroughly analysed (see Wang et al., 2018 for a review), more research is needed for assessing the social and environmental impact of servitization (Baines et al., 2017). The call for further research on these issues is particularly important considering that servitization has been conceptualized as a disruptive innovation as it implies critical technology shifts (Tongur and Engwall, 2014). The latter results in entire supply chain network firm's structural power affected due to servitization strategies (Ziaee Bigdeli et al., 2017). Even when the effect of servitization on supply chain management (SCM) is an ongoing consolidated topic (Bustinza et al., 2013; Vendrell-Herrero et al., 2017; Shah et al., 2020 among others), little is known as to the effect on Green Supply Chain Management (GSCM).

GSCM is part of the Sustainable Supply Chain Management, an extended perspective on environmental management based on internal and external practices looking after the achievement of an organization's social, environmental, and economic goals for improving the long-term firms' performance (Carter and Rogers, 2008). GSCM emphasizes on specific practices for the implementation and maintenance of environmental management systems, and the development of products with lower environmental impact (Jabbour and Santos, 2008). Therefore, the role of products development on configuring GSCM is a well analysed topic. Nevertheless, as the only way for firms to address the search for sustainability is by involving the entire supply chain (Vachon and Klassen, 2008), the disruptive role of innovative services on reconfiguring the green oriented firms' supply chains is, as stated before, silent on the servitization literature.

Specifically, the introduction of service outputs by traditional product firms constitutes a major managerial challenge as service requires different management principles, structures, and processes (Oliva and Kallenberg, 2003; Vendrell-Herrero et al., 2020). For these reasons, there are differences between product and service supply chains making frameworks in the former inappropriate for services (Bustinza et al., 2013; Johnson and Mena, 2008; Ukko and Pekkola, 2016). Different sets of key SCM processes appear in the literature (see for example Ruel et al., 2021). The Global Supply Chain Forum (GSCF) framework includes eight key SCM processes (Cooper et al., 1997; Croxton et al., 2001) whereas Ellram et al. (2004) presents six key processes for services.

To sum up, there is a lack of studies analysing the supply chain processes and practices required during servitization from a both economically, socially, and environmentally sustainable perspective. GSCM have been operationalised in the literature without explicitly taking the role of product-service innovation into account and it is expected that servitized supply chains could differ in many aspects including, but not limited to: local and multinational firms; the application of lean principles; the effective utilisation of business process modelling and demand/supply simulation in servitization processes; the role of sustainable supply chain management in reconfiguring business ecosystems, etc. Therefore, new research is needed to identify the key successful GSCM practices behind servitized value chains.

Features of the Special Issue Manuscripts:

This special issue of *Technovation* intends to identify and quantify the key GSCM processes, leading practices related to the servitization. Papers are invited the broad area of GSCM for Servitization and key GSCM processes. The guest editors invite papers with an original perspective and advanced thinking on those topics and related issues. Novel and original papers covering the theoretical framework proposed and based on solid empirical evidence should include, but not limited to, the following:

- Comprehensive state-of-the-art reviews that present an integrative view of the reported contributions on GSCM practices related to innovative servitization. Manuscripts should explicitly propose future research avenues
- Novel theoretical framework propositions for new key GSCM processes associated with innovative servitization
- Theoretical advancements of the management of the implementation of GSCM practices across the multiple firms and functions involved in the servitization process
- Real-world case studies analyzing key concepts needed to design and manage servitization in supply chains for national and international contexts
- Identification and measurement of critical constructs regarding key GSCM processes during servitization journey
- Assessment of the impact of GSCM processes on environmental, economic and operational performance in dynamic servitized contexts
- The development of sustainable servitized supply chains through efficient GSCM processes
- Analyzing the linkages between processes and functions to be operationalized within and between firms' business ecosystems during servitization
- Business process modelling and demand/supply simulation in servitization context
- Methodologies applied to manage the supply chain design for competing on green-oriented business ecosystems

- Innovative data collection procedures on GSCM, and database creation that facilitates a robust management leading to a sustainable supply chain
- The role of innovation and nested technologies for developing new services to support a sustainable product lifecycle (beginning-, middle-, and end-of-life services)
- Paradoxes of innovative servitization as performance paradox (higher costs and lower profits when manufacturers develop services), ambidextrous innovation (co-existence of product and service's centric capabilities), digitalization paradox (non-increased profits from digitalization as digital services revenues are offset by an upward spiral of increasing costs), etc. in the context of GSCM
- Trade-offs, tensions and potential ripple effects of innovative servitization on GSCM

This special issue is restricted to original contributions that have not been published yet and are neither under consideration by any other journal at present. Case-based, conceptual and empirically-based papers are encouraged for submission. Moreover, we recommend that authors pay explicit attention to the managerial and policy implications of their findings.

Submission guidelines

Authors should check the Guide for authors on the *Technovation* journal web site for details on formatting their submissions. Manuscripts submitted to the special issue will be subject to a first rigorous screening by the Guest Editors who will make decisions regarding desk rejection and progression to review. The Special Issue is subject to the normal double-blind review process established by *Technovation*. For any query, please contact the Guest Editors.

Proposed special issue announcement: Friday, January 14th, 2022

Proposed submission deadline (Full manuscript): Friday, December 30th, 2022

Proposed final publication of the special issue: Friday, December 29th, 2023

An online "meet-the-editor" session will be organized in November 2021 and "paper developmental workshop" will be organized with the authors of the papers that have been invited to revise and resubmit during the annual conference on business servitization, November 2022. Presentation/attendance at the workshop neither guarantees acceptance of papers for publication and nor is attendance at the workshop a precondition for acceptance into the Special Issue. More information for both events will be available in the conference webpage, www.servitization.org

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Prof. Oscar F. Bustinza is Professor of Management at the University of Granada, Spain. His work aims to analyse drivers of firm's boundaries choice, demand chain management, and service innovation based upon data driven analysis. He has served as guest-editor for special issues on Servitization in internationally recognized journals such as *International Journal of Production Economics*, *International Marketing Review*. Prof. Bustinza's research has been published in the *Journal of Supply Chain Management*, *International Journal of Operations & Production Management*, *Technovation* and *British Journal of Management* among other outlets. Prof. Bustinza was Principal Investigator on Service Innovation in MAKERS, a H2020 over €1 million project that supported an EU-wide network of researchers. Prof. Oscar Bustinza is also P. I. of a Ministry of Economy and Competitiveness (Spain) funded piece of research which examines the servitization of business.

Dr. Ferran Vendrell-Herrero is a Reader in the Economics of Strategy and Innovation at the University of Birmingham, UK. Ferran's research aim is to uncover innovation, digitization and internationalization dynamics of small and large organizations in manufacturing and creative industries. Across these themes he has made a distinctive contribution through publications in top academic journals, including the *Journal of International Business Studies*, *Journal of World Business*, *International Journal of Operations and Production Management*, *International Journal of Production Economics*, *Technovation*, *Industrial Marketing Management* and *International Business Review*. He has served as co-guest-editor in a number of special issues in leading journals, including *Technovation*, *Regional Studies* and *International Journal of Production Economics*. He is founder and scientific director of one of the leading European conferences on servitization, *International Conference on Business Servitization (ICBS)*.

Prof. Charbel Jose Chiappetta Jabbour. He is a Professor II at Emlyon Business School (France), and an affiliate professor at Lincoln International Business School, UK. He serves both *Journal of Cleaner Production* (Elsevier), and *Sustainable Production and Consumption* (Elsevier), as an Associate Editor. He has served as guest-editor of a number of Special Issues in leading journals, such as *European Journal of Operational Research*. His research has been published in A-level journals, including *Journal of Business Ethics*, *European Journal of Operational Research*, *International Journal of Production Economics*, *Technovation*, among others.