**Ambidextrous product-service innovation of MMNEs:**

**Performance implications**

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**Extended Abstract**

Recent studies show how developed countries’ manufacturing multinational enterprises (DMMNEs) have turned increasingly to PSI or *servitization*,a business model innovation based on selling integrated products and service bundle solutions (Bustinza, Gomes, Vendrell-Herrero, & Baines, 2017a; Bustinza et al., 2013) as a way to compete against emerging market manufacturing multinational enterprises (EMMNEs). The capacity of providing innovative technology integrated into product-service offers enables DMMNEs to differentiate and compete against low-cost EMMNEs (Gomes et al., 2018; Lafuente et al., 2017). Evidence from previous studies seems to suggest that product firms can obtain higher export performance based on the complementary aspects of sales dynamics between products and services (Bustinza et al., 2017b). Nevertheless, PSI requires a critical organizational transformation of MMNEs incorporating new services into their traditional product offerings. Combining products with integrated services requires ambidextrous capabilities, as firms must be able to possess not only exploration and exploitation capabilities (Cunha et al., 2018), but also the capacity to shift the innovation process by performing research and development (R&D) activities simultaneously with service delivery. Through co-creation, service innovation overlaps with the exploratory and exploitative R&D activities (Vendrell-Herrero et al., 2018; Visnjic, et al., 2013). Our study investigates how this form of innovation affects interrelationships between the exploration and exploitation capabilities of MMNEs.

Previous studies have demonstrated that MMNEs must adjust their activity system design and product offerings to respond better to new market needs. Although the international business literature has studied the relationship between international expansion of MMNEs, (Bigdelli et al., 2018; Vendrell-Herrero et al., 2018), no previous study has investigated the effect of ambidextrous PSI on MMNE performance. Since PSI for new international markets requires redesign of the activity system, it must encompass exploitation (existing processes), exploration (new knowledge), and the simultaneous interplay between exploitation and exploration known as strategic ambidexterity (Cunha et al., 2018).

Our research fills this gap and contributes to the international business, strategic ambidexterity and innovation literatures by analysing the effect of ambidextrous PSI on the performance of both developed and emerging market MMNEs. In doing so, we focus on testing the importance of strategic ambidexterity for product firms implementing service innovation. More specifically, we analyse the precise interplay between exploitation and exploration in the context of PSI required to ensure the highest firm performance.

We derived the sample through an online questionnaire. The items measured manufacturing practices oriented to PSI strategies involving exploitation and exploration, as well as firm performance. The final sample of regions/countries with sufficient observations for individual analysis was composed of 338 MMNEs with headquarters located in four countries. By adding geographical context as a variable moderating our pathway analysis tested through Structural Equations Modelling, we will better understand heterogeneities in PSI development across regions and contextualise organization of production within different business environments.

The final sample is distributed evenly across the sectors analysed–aerospace and defence, automotive and transportation, commercial and cargo airlines, electronics and high tech equipment, heavy and industrial equipment, medical devices and equipment, and white goods manufacturing.

Contrary to traditional organization of product development, which begins with research and development (Exploration) and is followed by product design and cost-benefit analysis (Exploitation), our results show that the optimal development of service innovation in product firms should start with service design, followed by the necessary technological research on how the service can be implemented. To the best of our knowledge, ours is the first quantitative study to test this process of reverse innovation.

Our results also show that there seems to be an inherent heterogeneity of successful PSI development. Using a unique survey-based sample of MMNEs headquarters in Canada/the US, China, Europe, Japan and the UK, our research shows the different effects of exploration and exploitation to explain firm performance throughout these countries. While most of the countries follow the sequential Exploitation🡪Exploration🡪Performance pathway, the sequential path is more important in China than in the other countries/regions. This path dependence is consistent with the fact that emerging economies are in the knowledge-leveraging production phase. Our research suggests that MMNEs from developed countries are in the knowledge-generating production phase (Bustinza et al., 2013) and can specialise in Exploration (US, UK, Canada) or Exploitation (Europe) activities.

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