

Title: Balancing benefits and risks of product-service system offerings: A case study in manufacturing

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Highlights

- Dynamic analysis of the introduction of a service-oriented business model.
- Exploration of benefits and risks for customers and providers.
- Customers benefit from operational outcomes and profits in the long run.
- Providers show improved results in all the financial outcomes.
- Servitisation enables an attractiveness principle structure.

ABSTRACT

Manufacturing companies are transitioning towards service-oriented offerings. When designing a competitive product-service system (PSS), clear trade-offs emerge regarding manufacturers' and clients' potential benefits and risks. A thorough model-based case study in a leading manufacturing company that introduced a PSS solution to the machine tools market in Brazil enabled exploring the managerial and financial benefits and risks for customers and providers. The developed simulation model makes explicit several trade-offs companies might face when transitioning from ownership-based to service-based offerings. From one point of view, PSS enables customers to experience gains in flexibility, operational efficiency, and lower indebtedness in the long run. From the other, providers benefit from improved results in all the financial outcomes. The results show that the PSS model enables moving from a "limits to growth" system archetype structure, where indebtedness due to acquisition decreases the investment capacity of the client company, to an "attractiveness principle" structure, where the subscription of new machines becomes an option to meet demand needs that unfolds as less harmful to the financial health of the company.

Keywords: Servitisation, service-oriented business models, manufacturing, business management, risk management