

SERVICE BUSINESS MODEL AND PERFORMANCE

Unpacking the complex relationship

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Extended Abstract

Servitization is a complex process for capturing value and hence the link between the implementation of services and firm performance is blurred (Cusumano, Kahl, & Suarez, 2014; Baines, Bustinza, & Vendrell-Herrero, 2015). There have been different attempts to clarify the servitization-performance link quantitatively. Suarez, Cusumano, and Kahl (2013) designed a longitudinal analysis of 464 firms from the US Software industry for the period 1990-2006. Their model takes the percentage of service revenue as a measure of the service business model which is related to profit margin as a measure of firm performance. They found a U-shaped relationship, in which the point of minimum profit occurs when service revenues are 56% of total revenue. Kastalli and Van Looy (2013) designed an intra-firm analysis, constructing a panel dataset comprising the operations of the 44 subsidiaries of Atlas Copco for the period 2001-2007. Their measures of firm performance and service implementation are the ratio subsidiary profits over subsidiary sales and total subsidiary sales in service respectively. They found a cubic relationship; whilst initial increments of service sales have a positive impact on subsidiary performance, this effect gradually diminishes with the growth of service sales. When service sales are relatively large the positive effect gradually increases again. Kohtamäki, Partanen, Parida, and Wincent (2013) designed a cross-country survey with 91 Finish machine equipment manufacturing firms. Survey data allowed for the construction of a scale for the degree of service within the business model, and performance is captured in data on sales growth between 2008 and 2011. Consistent with the work of Suarez et al. (2013) they also found a U-shaped relationship.

The identification of non-linear relationship between the adoption of service business model and performance is academically sound but difficult for practitioners to use or apply in their businesses. In seeking to address this recent literature has introduced moderator variables to better assess this complex relationship. Kastalli, Wiengarten, and Neely (2014) proposes coupling servitization with product innovation processes to enhance long-term profitability. Benedetti, Neely and Swink (2015) posit that servitization is associated with a high risk of bankruptcy and therefore firms deciding to servitize can expect supra-returns in exchange of internalizing risk.

However, to the best of our knowledge there are no theoretical explanation of why the relationship between service implementation and firm performance is not linear. The present research contributes to this debate by exploring the differences between business model and strategy. According to DaSilva and Trkman (2014) whereas a business model is a description of the current (short-term) resource base, strategy is the enhancement of current resources to sustain long-term competitive advantage. It

is hypothesized that the misalignment between the service business model and service strategy can explain part of the complex relationship between servitization and performance observed.

The hypothesis is tested through an extensive survey of 350 senior executives from large manufacturers' in Europe, North America and Asia. Large companies are here classified as those with minimum annual revenue of \$1 billion. Parametric Technology Corporation (PTC), in partnership with Oxford Economics, conducted the survey by the beginning of 2014. "Service" was defined "to mean all processes and services that surround a product after the initial sale until the conclusion of the customer's use"¹. To frame the servitization business model, a second order construct was developed which is composed of two dimensions: product-service configuration, and product-service alignment. These dimensions are consistent with the DaSilva and Trkman (2014) business model framework and cover the combination of resources and associated transactions, in this particular case, to configure a product-service system. The construct is linked to standard performance measures such as profit margin and profit change. Structural Equation Modelling (SEM) was used to allow analysis of several hypothesized relationships simultaneously; an approach which is methodology usual in servitization studies (Bustinza, Parry, & Vendrell-Herrero, 2013; Parry, Bustinza, & Vendrell-Herrero, 2012). Furthermore, the role of sector and size as moderators of the relationship between servitization business model, servitization strategy and performance is explored.

Scales analysing the new construct "servitization business model" and "servitization strategy" are validated through confirmatory analysis. Results support the hypothesis tested. Conclusions shed light onto the importance of the alignment between service business model and service strategy as a catalyst of the effect of servitization on performance. The work discusses academic and managerial implications.

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¹ <http://ptc.com/solutions/enterprise/service-lifecycle-management/continuum/ebook>

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