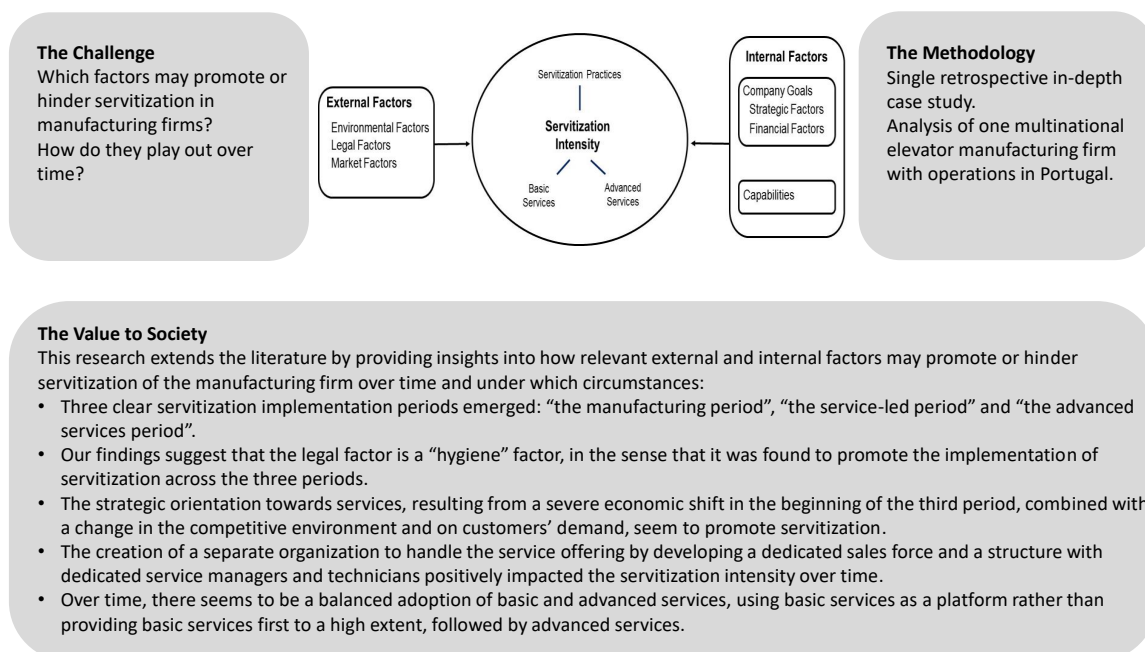


# How do external and internal factors promote or hinder servitization over time? An in-depth case-study in the elevator industry

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## 1 The Challenge

Today an increasing number of manufacturing companies is competing through a portfolio of integrated products and services. This is a service-led competitive strategy and the process through which it is achieved is commonly referred to as servitization. Integrated product-service offerings can be distinctive, long-lived, and easier to defend from competition of lower-cost economies, being a conscious and explicit strategy for market differentiation. Much research has been dedicated to the design and benefits of integrated product-service offerings from a manufacturer perspective, but mostly from an organisational level. More recently, some authors suggest that the organisational environment may also affect servitization of the manufacturing firm. Thus, servitization seems to be driven from both the outside and within the company. Notwithstanding, only a limited number of empirical studies have investigated in a holistic

manner how external and internal factors impact servitization. Given that servitization is considered a long-term, often incremental process, there is also a strong need for studies on the implementation process of servitization over time. In order to address these gaps, this study provides insights into which factors may promote or hinder servitization in manufacturing firms and how they play out over time. Specifically, we conduct an in-depth case study of a manufacturer in the elevator industry in an European country. The elevator industry was chosen because it was one of the first to initiate servitization and today is highly servitized, covering a broad spectrum of service offerings, from base to advanced ones. Elevators are long-lived, technically complex equipment that demand high safety requirements and therefore ongoing maintenance and inspection. This case allows for the examination of long-term dynamics of servitization over time, fulfilling the purpose of this research.

## 2 The Methodology

Case research is considered one of the most powerful research methods in operations management, in particular for examining how and why questions, as well as longitudinal issues. It is also suitable for developing new theory. The case method was adopted because it permitted the collection of rich qualitative data through participant observation. As a manager of the manufacturing firm analysed, the lead author was directly involved in managerial decisions, allowing him to leverage on his field experience and to contribute with new and unique insights to the subject matter. Due to the concerns over confidentiality, access to in-depth fieldwork is not easily granted to outsiders. The literature recognises the knowledge-yielding character of inquiry from the inside, and legitimises the contribution of industry practitioners to management research. Participant observation provides an opportunity to gain access to events and groups that otherwise would be inaccessible to the researcher. Furthermore, the researcher may also perceive reality from the viewpoint of someone inside the case study rather than external to it. Despite its advantages, this data collection technique may lead to some potential biases: the influence of the researcher over participants behaviours, the impact of the researchers own beliefs, and the potential lack of objectivity, for instance following a commonly known phenomenon and become a supporter of the group or organization being studied. Finally, the researcher may not have sufficient time to take notes or to raise questions about events from different perspectives, as a detached observer might. To mitigate these potential problems, interviews were conducted by two researchers, with one researcher handling the interview questions, while the other recorded notes and observations. Therefore, the interviewer has the perspective of personal interaction with the informant, while the note taker retains a different, more distant view. In order to enhance reliability and validity, a research protocol was developed, using the conceptual framework (Figure 1) as a lens for analysis. This protocol contains the procedures and general rules that should be followed during data collection and indicates from whom or where different sets of information are to be sought. The core of the protocol is the set of questions to be used in interviews. It outlines the subjects to be covered during an interview, states the questions to be asked and indicates the specific data required. This ensured that all areas of enquiry were covered. A single case was chosen, because it is an unusually revelatory, extreme opportunity for research access and may lead to deep insights that are unobtainable in quantitative studies. Thus, single-case research typically exploits opportunities on a significant phenomenon under rare or extreme circumstances. Up-Down Elevators was selected because of: i) in-depth access to the company (people and archival documents); ii) access to relevant information over 60 years (from 1955 until 2016); iii) the firm not only produces goods (elevators) but also provides all sort of services to the installed base. Following the triangulation principle, our data consists of a wide range of material: semi-structured interviews with senior managers, memos of workshops with the company key decision makers, the company internal documents and presentations, data on delivered goods and services, brochures about the historical development of the company, publicly available information and site visits and participant observation by the author on the company premises during the research period. Since interviews are a highly efficient way to gather rich, empirical data, we used numerous and highly knowledgeable informants who view the focal phenomena from diverse perspectives. These informants included organizational actors from different hierarchical levels, functional areas, groups and geographies. The interviews lasted 60-120 minutes and were conducted over a period of two months. Throughout the study, following each interview a thematically arranged outline describing the covered issues was written. Interviews were carried out until theoretical saturation was reached, that is, when no new information emerged. A total of 15 semi-structured interviews was carried out: 2

Co-CEOs, 2 senior service managers, 2 senior new installation managers and 7 service managers and 2 new installations managers. All of them were recorded. Detailed write-ups were prepared and sent to the interviewees to validate the data and maintain participant engagement in the research process. Data were collected, and then documented and coded, in order to reduce and map it into categories. From the literature review and the conceptual framework we created a provisional start list of codes prior to fieldwork. Thereafter a pattern analysis of the data was conducted in order to look for causality.

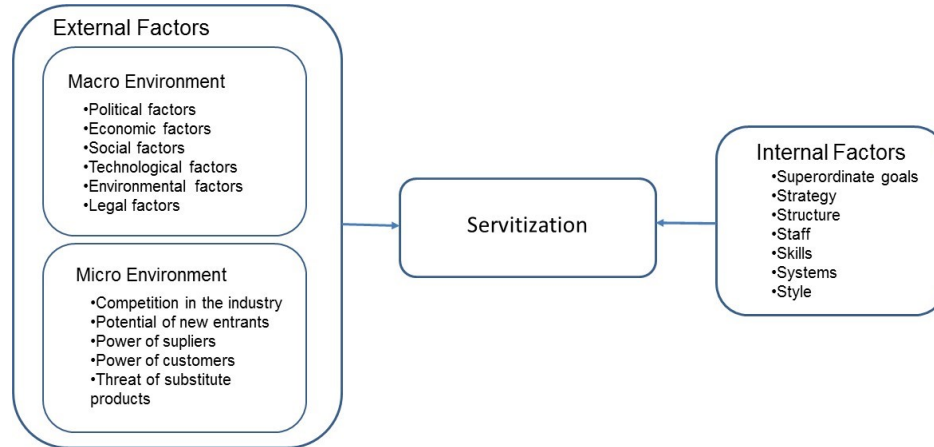


Figure 1: Conceptual Framework

### 3 The value to Society

Much research has been dedicated to the design and benefits of integrated product-service offerings. However, only a limited number of empirical studies have considered the factors that impact servitization over time. This research extends the literature by providing insights into how external and internal factors promote or hinder servitization of the manufacturing firm over time and under which circumstances. From the analysis, three clear servitization implementation periods emerged: the manufacturing period, the service-led period and the advanced services period. Our findings suggest that the legal factor is a hygiene factor, in the sense that it was found to promote the implementation of servitization across the three periods. The strategic orientation towards services, resulting from a severe economic shift in the beginning of the third period, combined with a change in the competitive environment and on customers demand, seem to promote servitization. Furthermore, in the second period competition promotes servitization, leading the manufacturer to provide new services and existing services not only to the installed base but also to the captured base (elevators installed by other manufacturers). But this factor also seems to hinder servitization intensity, since competition may lead to a reduction of service prices. Furthermore our findings indicate that the creation of a separate organization to handle the service offering by developing a dedicated sales force and a structure with dedicated service managers and technicians positively impacted the servitization intensity over time. The change from a traditional to a servitized manufacturer required significant organizational changes in language, values, design process and organization design. A separate organization unit protected the emerging service culture with its metrics, control systems and incentives. It also seemed to be easier to initiate service orientation in the corporate culture and therefore improving direct service profitability, the quality of customer relationships and the selling of more services over time. Today it also helps the manufacturer to diffuse knowledge across the network and to better manage the service personnel.

First, our findings are consistent with other authors, with servitization intensity building on product-basic services combinations, by adding advanced services, but without ever giving up the supply of products and the provision of basic services. Second, our findings provide new insights into the provision of basic and advanced services. Over time, there seems to be a balanced adoption of basic and advanced services, using basic services as a platform rather than providing basic services first to a high extent, followed by advanced services.