Smart Manufacturing for EU growth and prosperity

Service implementation in product firms: The role of new entrants

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According to the last European Rental Association (ERA) market report the European Rental industry have had an average annual growth over the last few years of 2% despite the uncertain economic conditions. This growth is catching the attention of global investors, and rental fleets/inventories are rising fast. Why are we observing this preference in the use over the ownership of equipment, vehicles or machinery?

This question is reflective of the broader interest for the growing field of study of service implementation in product firms. Product and service firms have been conventionally thought of as largely independent entities, but evidence seems to suggest that there are potential synergies between products and services, which ultimately can enhance firm performance and consumer satisfaction. The business strategy consisting in adding services to product offerings in product firms is known as *servitization*.

In servitization, product firms broaden their focus from products to services. However, services themselves are not homogeneous. They differ substantially in their level of risk, level of competition, and potential to create competitive advantages. There are therefore various forms of servitization; some manufacturers create wealth through offering a wide range of 'break-fix' (intermediate) services, while others develop a few more sophisticated (advanced) outcome based contracts. Examples of the latter include Rolls-Royce TotalCare solution and Xerox delivering 'pay-per-click' scanning, copying and printing of documents.

From a globalization perspective, servitization fits well with the argument that exploitation of economies of scale has become obsolete at the turn of the century. With the rapid rise of Asia's engagement in global production, firms in advanced economies (i.e. Europe or US) need to increase customization while maintaining high levels of scalability and efficiency to develop a competitive advantage. That is, new competitive conditions require a better understanding of what drivers and bottlenecks can enable manufacturing sectors to transit to more innovation-intensive and difficult-to-imitate business models based on services and digital upgrading of products that will sustain their competitiveness in the medium and long term.

This transformation is widely adopted by European manufacturers. Recent study seems to indicate that around two thirds of European product firms are adopting services as mechanism to capture value from the entire product's lifecycle. This means that when it comes to understanding customers, an important fraction of industrial product firms are aware that firms and households are increasingly demanding smart products with digitally enhanced capacities. Therefore, new technologies offer the possibility to extract more value from intermediate and final products.

However, it is still unclear if incumbent product firms are able to capture this additional value; or alternatively, if new entrants can alter the traditional dominant position of manufacturers in the supply chain. In the recent years our work has been devoted to better understanding power interrelations dynamics after product firms trigger the service journey.

The implementation of services demand significant changes to the relationship between manufacturers and other relevant players in the supply chain as providers, partners and intermediaries. Advanced services are underpinned by the internet and a broad use of different digital technologies. The access to these technologies depends mostly on the expertise of individuals, and only residually on financial resources. The lack of dependency on capital reduces the cost of entry into the manufacturing business and new entrants can invade part of the territory normally thought for large manufacturing firms exploiting economies of scale.

As said before the competitiveness of product firms implementing services depends mostly on the capabilities to develop a better understanding of customer requirements, customization, and not as much to the scalability in production. To gain consumer understanding and to implement processes of value co-production, product firms implementing services have principally moved downstream in their supply chain, pursuing implementation of advanced services in their offerings. Downstream strategies focus mainly on effective use of marketing, sales volume and turnover during the entire product lifecycle.

New entrants are normally thought of as small, whereas there are examples of large corporations that were born as internet firms that move into the production business (i.e. Google) or at least influence the distribution channels of product firms (i.e. Amazon). In our recent work we show that Amazon has established downstream and is appropriating an important fraction of product firms' value. Their expertise in the e-business sector has provided the capacity to better engage with customers, blocking the relationship between publishers and readers. This downstream movement has allowed Amazon to capture value from the digitization of the sector, something that incumbent firms seem to be unable to do.

With the increase of the sharing (or zero-marginal-cost) economy, customers can also develop the role of new entrants capturing value. In an older piece of work we showed how a process of consumer empowerment has happened in the music industry. In essence peer-to-peer networks can be considered in this instance as a new entrant blocking the access of producers to final consumers, and therefore negatively affecting the revenues of music firms.

Our previous research has focused on industries moving from products to digital services, but some evidence is needed to understand supply chain disruptions of service implementation in core manufacturing sectors. Our research in progress with colleagues at Aston University focuses in a key original equipment manufacturing industry in the United Kingdom, the road transport industry. This industry involves large tyre and truck manufacturers employing thousands of blue-collar workers. Our preliminary qualitative research seems to indicate that their market power is being diluted due to the entrance of knowledge intensive business services (KIBS) firms in the sector. Again, KIBS firms entered the industry with the aim to support manufacturers in their provision to digital services, but over time they started to grow and increase their market power, threating the dominant position of incumbent manufacturers.

Overall, the role of new entrants is definitely important in the provision of new digitally-enhanced services in product firms. However, the research trying to enlighten how these new organizations relate to incumbent firms falls short and therefore, besides our preliminary findings, there is not a clear-cut answer to the question of who benefit the most from servitization, incumbents or new entrants. Moving forward different market equilibriums might arise, and perhaps collaborative arrangements can open opportunities to share the increase of value capture. This is precisely our current aim of research and we hope to share our results with MAKERS community soon.

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