

## IDENTIFYING (TERRITORIAL) TENSIONS IN THE SERVICIZED VALUE CHAIN

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### ABSTRACT

**Purpose:** To understand the tensions that servitization activities create between actors within networks.

**Design/methodology/approach:** Interviews were conducted with manufacturers, intermediaries and customers across a range of industrial sectors.

**Findings:** Tensions relating to two key sets of capabilities are identified: in developing or acquiring (i) operant technical expertise and (ii) operand service infrastructure. The former tension concerns whom knowledge is co-created with and where expertise resides. The latter involves a territorial investment component; firms developing strategies to acquire greater access to, or ownership of, infrastructures closer to customers. Developing and acquiring these capabilities is a strategic decision on the part of managers of servitizing firms, in order to gain recognized power and control in a particular territory.

**Originality/value:** This paper explores how firms' servitization activities involve value appropriation (from the rest of the network), contrasting with the narrative norm for servitization: that it creates additional value. There is a need to understand the tensions that servitization activities create within networks. Some firms may be able to improve servitization performance through co-operation rather than competition, generating co-opetitive relationships. Others may need to become much more aggressive, if they are to take a greater share of the 'value' from the value chain.

**Key words:** servitization infrastructure, capabilities, territory

### 1. INTRODUCTION

Servitization is recognized as a mechanism for manufacturing firms to achieve revenue growth and develop competitive advantage as their core markets stagnate, products become commoditized and global competition increases (Baines et al. 2009; Vandermerwe and Rada 1988). However, it is clear from extant literature that profits, generally assumed to be an outcome of servitization activities (Antioco et al. 2008; Wise and Baumgartner 1999), are not guaranteed. Financial outcomes are mixed (Baveja et al. 2004) and firms can struggle to realize even modest benefits (Brax 2005; Gebauer et al. 2005; Oliva and Kallenberg 2003; Reinartz and Ulaga 2008; Windahl et al. 2004).

Many servitizing firms focus on increasing capabilities (Raddats and Burton 2014) in up-stream (building relationships with other OEMs) and down-stream (getting closer to customers) activities. This process potentially involves manufacturers appropriating both operant and operand elements of other suppliers' activities, leading to changes to and potential tensions in the relationships between network actors which could impact the success of servitization. New lenses are needed to explore the complexities of the process; hence the concept of 'territory' (Brighenti 2010) is introduced to provide further insight into these dynamics.

### 2. LITERATURE REVIEW

Servitization is recognized as a network activity, particularly when it involves the delivery of advanced services (use- or results-orientated product services systems [PSS]) (Tukker 2004). An advanced service is: *"a capability delivered through product performance and often featuring; relationship over extended life-cycle, extended responsibilities and regular revenue payments"* (Baines and Lightfoot 2013 p.22). Value is created through activity delivered by actors both internal and external to the focal manufacturer (Kowalkowski, Kindström and Witell 2011). Thus, successful servitization consists of manufacturers (historically OEMs with product-related expertise) developing capabilities involving a network of actors working together, to create an improved value outcome (Raddats et al. 2014). If

customer processes are taken over, then the manufacturer must develop new service approaches (Paiola *et al.* 2012) and integrate products/processes from multiple actors (Davies, Brady and Hobday 2007). This could involve developing improved relational capabilities (Baines and Lightfoot, 2013; Storbacka 2011). As such, a manufacturer may develop 'internal' capabilities, 'external' capabilities (outsourced) or 'mixed' (capabilities co-developed with other actors) (Paiola *et al.* 2012).

The focal manufacturer's perspective is generally dominant when considering this servitization capability development (e.g. Ulaga and Reinartz 2011). Manufacturers assume responsibility for undertaking processes that other actors previously performed for themselves (Mathieu 2001; Spring and Araujo 2013). The problem with this perspective is that while it considers manufacturers' effectiveness at developing new capabilities, it does not consider the perceptions and likely responses of other actors involved in the network, to this servitization activity.

The process of developing new service capabilities in order to create value for the manufacturer involves investment in operant and operand resources in existing, and wider, geographic territories on a temporary or more permanent basis (Gertler 1995). This process can cause internal changes in both manufacturers and customers in terms of activities, processes and focus, meaning that the manufacturer's capabilities and activities potentially overlap with activities of other actors in the value chain. Co-creation of value can take place with the interaction of the operant and operand resources of two parties (Cova and Salle 2008). This may be the case where roles and activities have been negotiated and assumed over a long time period. We contend, however, that during the servitization process tensions occur as the manufacturer attempts to develop capabilities that involve them moving into 'spaces' historically occupied by other actors. Thus, rather than pure realization of immediate and beneficial co-creation of value for all parties, tensions emerge as manufacturers attempt to servitize, which can destroy value. Actors may not want to engage in co-creation of value as they strive to defend 'territory' they perceive as theirs. The suggestion is then, that as firms servitize, they create flux in relationships and potentially the wider network.

This highlights a potential gap in industrial marketing literature with respect to articulating the fluidity of the exchange environment and draws attention to spatiality, territory definition and boundary setting in affecting exchange. There are, of course, some exceptions to this gap. Network horizons research suggests a bounded space within which actors interact, sitting within a more global total business environment (e.g. Holmen and Pedersen 2003). Research examining actor position within industrial networks (Henders 1992; Johanson and Mattson 1992) also implicitly recognizes the notion of space existing at the point of interaction between actors and Henders (1992) identifies the temporal aspect to this space. But, as outlined above, servitization often requires firms to move into new territorial spaces within their (dyadic) relationships. In terms of defining the notion of 'territory', Brighenti (2010, p53) suggests that it "is better conceived as an act or practice rather than an object of physical space". As such (territorial) space can encompass many aspects, including political, legal and economic elements (Sassen, 2006). Thus, "territories exist at a multiplicity of different scales and degrees of visibility, in a state of constant proliferation and transformation" (Brighenti, 2010, p54). In terms of servitization, territories could include most activities that one actor perceives as their own through, repeated activity; for example: logistics management services, product maintenance, service provision and training.

Thus, this research contends that whilst some firms may be able to implement servitization strategies in order to improve performance through co-operation rather than competition, (generating what have been termed co-opetitive relationships, (Bengtsson and Kock 2014)), servitization can also create tension in the relationships between the actors involved. Through the process of servitization, actors may be perceived as invading territorial spaces that are seen by other actors to 'belong' to them. "Territorial practice is an imaginative mechanism whereby someone is initially recognized as an

intruder or insider (or other equivalent qualification) in relation to one's territory" (Brighenti 2010, p58). According to Brighenti (2010), territory also has 'expressive and functional components, the latter including such key concepts as power, resource access, control and defence. Thus, the existence and consequences of the resulting friction, tension and potential resistance when actors perceive their territories to be threatened, may help to explain why servitization has not always been successful in creating increased value for businesses.

Thus the following research questions emerge: Do tensions in servitization arise when one party (the manufacturer) attempts to assume a position of power within a particular *territory* and other parties perceive their power, in an over-lapping territory, is being threatened. If so, can the particular territories, where tensions emerge, be identified, and associated implications for servitizing businesses highlighted?

### 3. METHODS

A qualitative approach was adopted due to a paucity of understanding of the nature of territorial spaces critical to the process of capability development in servitization. Thus an exploratory approach was adopted, to shed light on the underlying causes of human action (Miles and Huberman 1994) with regard to territory. Nine, in depth, semi-structured interviews were conducted with senior executives across nine UK business-to-business (B2B) organizations that have experienced servitization as prime manufacturer, customer or intermediary. The prime manufacturers selected in these networks were those: (i) providing advanced services, (ii) with a manufacturing heritage and (ii) a technological innovation pedigree. Managing directors or key sales/service/strategy personnel of the prime manufacturers were contacted and interviewed, or they suggested interviewees at the organization and/or at other organizations in their network. At the customer organisations Managing Directors or Operations/Supply Chain Directors were interviewed. High-profile industrialists and key strategic personnel, from a number of industrial contexts, were purposively sampled in order to build a representative sample of respondents capable of delivering informed insight on the spaces involved in developing the capabilities driving servitization in advanced services.

Semi-structured interview guides were developed, including questions around organizational change required to implement servitization, and enabling/inhibiting factors. Respondents were guided towards providing narrative stories (Gabriel and Griffiths 2004), that contextualized their organizational servitization experiences. Interviews were recorded, transcribed and sense checked by respondents before being thematically coded. Template analysis (King 2004) was applied; loose *a priori* capability codes emerged from literature (King *et al.* 2002). These were then implemented as an initial template that was then added to (in particular with emerging territorial codes) during the research, as suggested by King (2004). The template developed via iterative analysis of the servitization experience narratives and relevant literature, allowing the researchers to identify emerging territorial/tension themes via detailed examination of the text (Crabtree and Miller 1999; King 1998). The resulting output was a set of over-lapping territories where different forms of tension, resulting from the servitization process, could be identified.

### 4. RESULTS

The results, summarised in Tables 1 and 2, show a multiplicity of territorial spaces, in which, or related to which, tensions can be identified which may hamper attempts to successfully servitize and increase value for the focal manufacturer. Table 1 below identifies tensions internal to manufacturers and customers; as actors within both organizations strive to defend their territories.

<b>Territory: between actors INTERNAL to:</b>	<b>Tension</b>
<b>Manufacturer</b> Between all staff within manufacturer and between management and staff.	Product focused culture threatened. Staff or particular SBUs reluctant to engage or senior management do not want to go too far into particular services markets for strategic/ cultural reasons.
	Financial cost-based decisions by accountants to protect SBU budgets lead to failure to deliver solutions which have the potential to create more value than can be saved through cost-cutting.
	Danger of cannibalizing customers' territory and thus product sales through service innovation: creates tension between product and service SBUs.
	Increased pressure from managers on their staff to learn new processes in order for the firm to successfully operate in a new territory.
	Manufacturer's retention of upskilled staff in order to dominate market space in terms of expertise can be threatened: Trained staff may leave to join competitor, thus strengthening their territorial presence whilst weakening the focal firms'.
<b>Customer</b> Tension related to (i) surrendering or (ii) regaining territory (related to customers' staff), to or from, manufacturer or (iii) retaining dated operand infrastructure which thwarts implementation of new service systems	Will not purchase/ reduce purchase frequency if they have the operant capability to challenge process or to self-serve doing a particular process cheaper for themselves.
	Internal friction from staff within potential customers who act against adopting servitized offerings to protect their jobs.
	Internal procurement staff may be risk averse (to avoid internal tension) and therefore avoid pushing for changes needed to servitize.
	Restrictive operand IT systems of the customer may prevent implementation of certain services.
	Risk of over-outsourcing critical operant expertise: the customer may want to bring people back inside their business

Table 1: Tensions relating to territories internal to Manufacturer or Customer

Table 2 below identifies tensions relating to territorial issues outside the focal manufacturer.

<b>Territory: EXTERNAL to the manufacturer</b>	<b>Tension</b>
<b>Tension between competitors and manufacturer</b>	Increasing battle for territorial space between suppliers in the supply chain if the entire market is shrinking.
	Competition as a barrier to territorial servitization: use of local service.
	Larger geographic market territories (e.g. U.S.) harder to reach physically with service offers and contain more local small competitors.
<b>Tension between Intermediaries and manufacturer</b>	Basic servicing of 'commodity' operand resources offered by cheaper 'man and van' operators threatens manufacturers who need to develop sufficient installed base in order to make service offering financially viable in the market space.
	Higher specification technical support- remote monitoring/ predictive monitoring being 'designed in' by primes to protect territory by dissuading customers from using cheaper local service providers. High innovation costs could push prices higher than customers can afford – allowing space again for cheaper local providers.
	Intermediaries' territorial space dependent upon the success of the prime. Pressure from other component suppliers on prime to defend joint

	territory by investing to defend the main product platform.
	Dependency on 3rd party capabilities in order to occupy new territorial space: Operand service infrastructure and operant technical expertise.
	Friction and resistance as firms take over management of intermediaries' supply chains.
	Mergers and Acquisitions in the supply chain due to tougher market for intermediaries reducing number of operators. Potential for their prices to then escalate as they build monopoly positions in the market.
<b>Tension between customer and focal manufacturer</b>	Pressure for increased geographical territorial coverage in servitization from the customer: Tensions build over provision of complete geographic coverage by supplier vs maintaining profit from these extended activities.
	Tension over what is and is not included in service agreements (and, therefore, extent of territorial space surrendered to the manufacturer, versus kept in house) because of a lack of service/operation cost transparency- the customer not knowing what/when/how/the cost of what the manufacturer is doing for their fee.
	Pressure from customer for operant skills transfer-they want the knowledge of how to service products themselves in order to take back operational territory.
	In periods prior to contract renewal customer may share less insight with a manufacturer to ensure parity between competing suppliers. This retraction of co-creating activity equates to a reduction in the manufacturer's territorial control in this period, which can reduce the efficiency of value co-creation.
	Manufacturers need to defend the product life span of large plant and this provides a lever for their customer to encourage them to keep working together. It is in the interests of the manufacturer to extend the product's lifecycle in order to sell more product to defend their brand's territory in the market
<b>Tension between manufacturer and government influence over the legal environment</b>	Legislation controlling transfer of contaminated product across geographical borders restricts business processes and decisions to enter particular geographic spaces.
	Political interpretation of EU Legislation and subsequent implementation and adoption in the UK is perceived as too restrictive compared to other countries, restricting processes.
	Over complication and excessive number of 'partners' in public private partnerships due to legislation

Table 2: Tensions relating to territories External to Manufacturer

## 5. DISCUSSION AND CONCLUSION

This study is one of the first to specifically address the tensions arising at the intersection of actors' perceived territories, for advanced services. The development of advanced service offerings should enable customers to better perform their business processes (Baines 2013). However, to ensure co-creation of value, firms need to develop new approaches to service specification, delivery and payment (Baines and Lightfoot 2013), that account for network actors' potential reactions to perceived territorial threats. Template analysis has facilitated the identification of overlapping and related territorial tensions to the successful provision of advanced services. Territorial tensions should be a concern for servitizing firms at internal, external micro (customer/ intermediary/manufacturer) and macro environment (political legislation) levels. Future research should investigate how the impact of these tensions might be minimised.

### 5.1 Implications for Practice

Managerial implications of this research include the need for manufacturing firms, developing advanced services, to better understand how their actions might be perceived as territorial aggression and to also develop capabilities to determine which 'territories' they should help their network to defend and which they may need to challenge. Strong leadership is needed to re-position the company as a provider of advanced services in the eyes of its key stakeholders in such a way, and with sufficient transparency, that all parties, be they employees, suppliers, intermediaries, shareholders, customers and customers' employees, can see that any territorial advantage they may need to sacrifice will be compensated by a resulting long-term value gain. All actors in the manufacturer's network potentially possess unique, complementary capabilities for the co-creation of value through developing advanced services (Raddats, *et al.* 2014). Equally they all possess the potential to disrupt this value creation if they feel that their territory is under threat, and the change associated with the servitization process is inherently perceived as threatening by many.

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