

Towards and Empirical Analysis of Relations between Territorial Servitization and Place Leadership

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Abstract

The introduction of digital-based services and technologies within production processes and products challenges local productive systems with traditional specializations in manufacturing. Territorial servitization is a potentially feasible solution, since it is compatible with the place-based division of labour and decentralized organization featuring many such systems in old industrialized countries. However, it asks for a coordinated set of structural factors underpinned by specific systemic conditions. An appropriate place leadership (PL) plays an important role in regulating the coordination of systemic conditions. However, if either structural factors are weak or place leadership is based on a closed club of private interests, TS trajectories may be entrapped by inertia or even deliberate resistance to change. This paper aims to pave the way for an empirical analysis of such phenomena. We build on a previous work on the relations between local manufacturing configurations,

specialization in service activities, and systemic performances in contemporary Italian local productive systems. The results indicated the possible presence of TS trajectories only when specific knowledge intensive services are localized in the manufacturing area. We propose a variation that allows a first control of PL's possible impacts.

Keywords: Territorial servitization; place-leadership; local productive systems; empirical analysis.

Introduction

We build here on two recent papers that touch upon, respectively, conceptual and empirical sides of a line of research on territorial servitization (TS) in local productive systems featuring a manufacturing specialization driven by SMEs. The first paper (Bellandi and Santini, 2019) presents a novel conceptual frame to explore how types of place leadership (PL) could combine with structural patterns impinging on territorial servitization (TS) trajectories of different strength. Here, PL might help or obstruct rerouting of a manufacturing Local Productive System (LPS) towards a product-service system specialization (PSS). The second paper (Bellandi et al., 2019) presents an empirical analysis on Italian cases, and aims at shedding light on the roles played by different classes of knowledge intensive business services (KIBSs). KIBSs enter manufacturing processes and have different impacts on both TS and performances of different types of LPS.

After recalling the main results of the two papers above, we discuss the problem of identifying statistical variables related to PL in LPS. According to the first paper, we propose some possible proxies of PL to combine them with the frame of the second paper and implement a comprehensive empirical analysis.

Place leadership in emerging product-service systems: A conceptual frame

Since TS is a systemic and place-based trajectory (Lafuente et al., 2017), its strength and stability depend on an appropriate combination of specific structural factors innervating a place (Gomes et al., 2018). LPS present different patterns of local entrepreneurial, institutional structures, and embedded specialised competences. Bellandi & Santini (2019) recall a specification of such factors in terms relevant to TS trajectories: I. a multiplicity of specialized competences within and around the manufacturing value chain, which represents a potential demand for highly specific KIBS; II. an institutional context of local and multi-scalar governance that lowers local transaction costs and fosters collaborations between manufacturing SMEs and KIBS providers; III. an entrepreneurial drive that expands the experimentation of new business models and new institutional mechanisms. The level and quality of the three factors trigger different types of TS trajectories, from Strong TS (STS) to Mild, Weak, or even Unstable TS. STS trajectories are related to patterns of high levels in all three factors. LPS manufacturing firms systematically exchange knowledge with new local or localized KIBS. Advanced services combine with manufacturing processes and product functionalities, playing a role as innovation bridges. STS trajectories allow the convergence to PSS. In case of weaker patterns in one or more factors, feasible TS trajectories have a lower strength and may be conducive at best to the surfacing of some niches of product-service solutions within the traditional manufacturing system.

The strength of the three factors depends on the availability of a set of specifically adapted systemic conditions, such as training structures for digital-aware skills and business culture, digital infrastructure and intermediary platforms (online marketplaces, social media and creative content outlets, application distribution

platforms, price comparison websites and collaborative economy platforms). Influencing, building or adapting systemic conditions imply the exercise of high-level strategic (Schumpeterian) functions within the institutional and business context. Bellandi and Santini (2019) relate such strategic functions to the concept of PL (Sotarauta & Beer, 2017). The same PL may be stronger or weaker, being more or less able to have an impact on structural factors. In some cases, a contestable and composite leadership is constituted on the capability to mobilize a large part of the local endowment, mediate conflictual views and interests, and support positively the factors of stronger TS trajectories. In other cases, systemic conditions are driven by few actors enjoying entrenched positions of local economic and political power, and they may express a deliberate resistance to change if solutions reconciling rents for the elite and rerouting are not found.

Agglomerative patterns of manufacturing and service activities

The empirical analysis in Bellandi et al. (2019) presents two parts. The first is aimed at detecting localization patterns of service activities in Italian LPS in the last decade, distinguishing knowledge intensive services (KIS) for the business sector (KIBS). It focusses on the classification proposed by Cusumano et al. (2015): knowledge-intensive financial services are related to the smoothing services, which do not alter the product functionality; knowledge intensive market services and other knowledge intensive services are identified with adapting services that expand the product functionality and trigger processes of reconfiguration in the local system; high-tech knowledge intensive services correspond to the substituting services that increase the capability of firms to offer alternative service solutions to buyers.

The second part of the analysis focuses on a subset of manufacturing LPS, and exploits the service localization patterns detected in the first part of the analysis. The aim is to assess association patterns between service localization and socio-economic LMA characteristics. Therefore, an additional set of variables of performance and competitiveness (ISTAT, 2015d) is taken into account, as well as socio-demographic and industrial organization features available for the year 2011-2013. A Multiple Correspondence Analysis detects significant statistical associations among such variables, and a Cluster Analysis highlights groups of local systems featured by the same characteristics.

The results highlight a strong association between high-performing manufacturing LPSs, both IDs and large-enterprises LPSs, and specific categories of KIS: Knowledge intensive market services and Knowledge intensive financial services. However, only the cases where manufacturing activities are highly associated with adapting and substituting services appear to be candidates to host strong TS trajectories. Instead, smoothing services supporting local manufacturers in a traditional way still dominate. Here, there is a high risk to maintain the system's path stuck to weaker TS trajectories.

LPSs with weaker or even bad performances are associated to Other KIS or Low KIS. An important issue concerns Other KIS. They include for example basic training activities that, *per se*, are necessary to the regeneration of human capital and therefore to support the enhancement of the local multiplicity of specialized competencies towards TS. On the other hand, a relatively high presence of such services may signal just an excessive role played by public employment, and this seems not conducive to stronger TS trajectories.

Two further steps for an empirical analysis

We propose eventually two further steps towards an empirical analysis of the relations between TS, structural factors and PL in LPS featured by a traditional manufacturing specialization. The first concerns the empirical identification of the variables in the conceptual frame above. Multiplicity can be related to longitudinal measures of number and concentration of employment within and without the main specializations of the LPS; the quality of the institutional context to measures of social capital; the strenght of the entrepreneurial drive to measures of firms' demography, i.e. of entrepreneurship capital. PL is identified, within the related specialized literature, by means of surveys on case-studies or the analysis of meta-data on limited sets of local systems or regions. Direct proxies are difficult to find in general statistical datasets. Indirect proxies may concern higher or lower concentration of employment in larger plants, higher or lower concentration of innovation sources (patents or other), higher or lower indexes of open government or vice-versa or corruption in local PA, broader or narrower diffusion of cultural activities, higher or lower rate of participation to local elections, etc. The second step concerns the interaction of some variables related to PL with the clusters of LPS identified by the empirical analysis on Italy recalled above. The aim is to test if stronger (weaker) TS and/or performance are confirmed by signals of stronger (or weaker) structural factors and PL. This will be just an exploratory analysis, since at the moment very few sets of data are available at the appropriate territorial level for the proxies we are looking for. We work here just on data related to multiplicity and to concentration of local employment and diffusion of cultural activities, and present related results.

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