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Editorial preface to the *Service Science* special issue on Multi-actor Value Creation in Service Innovation

Collaborative Value Creation in Service Innovation

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This special issue of *Service Science* is devoted to investigating collaborative multi-actor value creation in service innovation. Collaboration is an intrinsic technical characteristic of service. It has generated an abundant literature in economics and management science. Paradoxically, this fundamentally cooperative nature of service production fades and is much less explored when it comes to the issue of innovation in services. This underestimation of collaboration in the dynamics of innovation is closely linked to the underestimation, until recently, of innovation in services itself.

Beyond their supposed intangibility, services are interactive and co-produced, which means that their implementation requires various forms of collaboration between the producer and the consumer or user. From previous research we know that collaborative multi-actor value creation calls for orchestrated social action among the different stakeholders involved (cf., Lempinen and Rajala, 2014). The co-creation of value becomes more complex as the number of participants in the co-creation activity increases.

As services are dominating the present-day business landscape, the research into service innovation has become more versatile including, for instance, topics such as the perspective of multi-actor service systems, collaborative innovation and the relationships between actors in diverse service businesses. The underlying reason driving economies and societies toward service-centric operations is the increasing significance of intangible assets (i.e., relationships, information, and knowledge) in inter-organizational value creation. Besides the growth taking place in service sectors, services are essential in advancing the development of business-to-business exchange.

Recent research in collaborative innovation for service emphasize the need for specific network leadership and resource integration capabilities, because advanced service entails complex configurations of people, technologies, organizations, and shared information. Traditional approaches to innovation may fail to ensure beneficial outcomes within such configurations.

This special issue explores the perspectives on collaborative value creation in both consumer business and business-to-business contexts, placing special emphasis on multi-actor service systems. The papers in this issue seek to improve our understanding of the constituents of value in both business and consumer settings and the conditions of its co-creation. In particular, the research conducted for this special issue pays a great deal of attention to the processes, practices, means, and challenges of value creation in service innovation. The papers show that in addition

to the orchestration of the social action in collaboration partnerships, collaborative value creation also calls for favorable conditions. This special issue uses numerous methodological approaches to advance the conceptual clarity and to offer fresh empirical insights on the topic.

This editorial preface is organized into three sections. In the first section, we discuss the shift of the theoretical focus from collaboration in service production to collaboration in service innovation, in the perspective of value creation. In section two we present the different contributions to this special issue. The article concludes with a discussion of some possible new avenues of research on multi-actor value creation for service innovation.

1 From collaboration in service production to collaboration in service innovation

While the theoretical definition of services and their production was established, in particular, on the basis of the notion of *interaction*, the theory of innovation in services was only belatedly concerned with this issue. Indeed, services studies concentrated on the recognition of innovation in services and of its possible specificities before considering the modalities of its implementation, especially in its collaborative form.

1.1 Collaboration in service production

In economics and in management science, the theory of services was built on the idea that services have two major characteristics: intangibility and interactivity¹. Service economics and service marketing have centered on the analysis of how these two intrinsic technical characteristics affect the production of value.

In this special issue, we will not address the question of intangibility in services. Instead, we will focus on the question of interactivity. This interactivity that describes an exchange relationship of information, knowledge, but also of materials during the production of the service is expressed by a variety of terms: service relationship, co-production, co-creation, collaborative innovation, interaction, and partnerships in service.

Interaction in service builds on a relationships that have sometimes been contested in pursuit of productivity: this is the purpose of the service industrialization strategies advocated decades ago by authors like Levitt (1976), and that manifest today by the rise of formulas for efficiency in diverse service sectors. However, service relationships are needed for value creation. In different service firms and organizations, we often see a horizontal and vertical extension of these relationships. The vertical extension reflects an increase in cooperation with customers and other stakeholders, who become essential partners in the co-creation of value. This is not only true in private firms, but also in public organizations where we see, for example, the rise of collaboration in services design, which draws on users to develop public actions, especially at the local level. The horizontal extension reflects the increasing number and diversity of actors involved in the collaboration.

These forms of collaboration in service production generate value in a variety of ways: economies of scale, economies of variety, agglomeration economies, and building of trust in the

¹ Previous research has identified four intrinsic technical characteristics of service, often translated in the marketing literature by the acronym IHIP, which stands for intangibility, heterogeneity, interactivity, and perishability.

collaborative relationships. At the same time, they raise difficulties, including the costs of coordination, leadership problems, cultural conflicts, value sharing, and confidentiality issues.

1.2 The steps in the construction of innovation studies

Innovation economics, like many other fields of economic theory, was built on a manufacturing landscape. Economic analysis has long considered that the services are not concerned with innovation. The main conclusion was that services either innovate negligibly or not at all. The conquest of "innovation studies" by the services has been incremental. It is possible to account for the gradual recognition of the field of service innovation studies, and the construction of its legitimacy, through successive changes, which reflect progress in the general theoretical perspectives (Gallouj and Savona, 2009; Gallouj and Djellal, 2015).

1. *Denial phase*. Services are not considered to be a area for innovation, or they do so only to a negligible extent. The focus of innovation research is primarily on technological and manufacturing business.
2. *Assimilation/technologicistic phase 1 (passive)*. Services are laggards in terms of innovation. They merely adopt, passively, technological innovations designed and produced elsewhere, which are used as exogenous inputs.
3. *Assimilation/technologicistic phase 2 (active)*. Services actively adopt technological innovations (mainly ICTs), by incorporating them into their production process through a thorough organizational engineering activity (endogenization). They may even, participate in their production.
4. *Demarcative/service-oriented phase*. Services produce specific forms of innovation that are mainly non-technological, that's why they are hidden, invisible to traditional indicators (such as R&D, and patents).
5. *Integration/synthesis phase*. The boundaries between goods and services are blurred and an integrative analysis is required to reconcile goods and services, technological and non-technological innovation in the same theoretical framework. This integrative perspective is at the heart of many theoretical approaches including the economy of functionalities (Stahel, 1997), the experience economy (Pine and Gilmore, 1999), the Service-Dominant Logic (Vargo and Lusch, 2006), the new perspective in "Service science" (Maglio and Spohrer, 2008), the Lancasterian approach in service characteristics (Gallouj and Weinstein, 1997; Garcia-Windrum and Goñi 2008; Gallouj and Toivonen, 2011).

Once innovation in services has been recognized, the analytical focus has shifted towards the conditions of its implementation, and particularly towards the possible forms of cooperation for innovation.

1.3 Different models of innovation organization and different models of cooperation

Just as in the technology industries, the question of the practical arrangements for the organization of innovation in services is addressed by opposing two models: the linear and closed model, on the one hand, and the open model, that is to say, interactive or collaborative model, on the other.

The linear model describes a planned and systematic innovation process, which sequentially articulates, without feedback loops, R&D, production and marketing phases. In management

science and in industry practices, this linear model resulted in very specific new goods design and production methodologies, known under the generic name of New Product Development (NPD). In a perspective that could be again described as assimilationist, and which is called New Service Development (NSD), some service management experts (Scheuing and Johnson, 1989; Edvardsson and Olsson, 1996) advocated an application of these formalized methods to services.

However, given their interactive dimension and their coproduction by the customer, the service activities often seem to fit, by definition, in open and interactive models. Open innovation, popularized by Chesbrough (2011), if not a conceptual breakthrough, is at least a useful metaphor that covers a range of internally and/or externally cooperative models, more or less sophisticated and formalized, that we outline.

1. *The chain-linked model.* The first solid theoretical formulation of the opening is proposed by Kline and Rosenberg (1986) under the domination of chain-linked model. Unlike the linear model, this model is characterized by the multiplicity of actors and places of innovation and the fundamental character of interactions between them at different points in the innovation process.
2. *A variety of non-formal and non-programmed modes of innovation.* The opening in terms of innovation is expressed in the service firms and organizations through the implementation of a number of non-programmed or emergent models that we simply mention here: model of rapid application, practice based model, bricolage innovation model and ad hoc innovation model (for an overview see Toivonen and Tuominen 2009; Gallouj and Weinstein, 1997; Fuglsang, 2010; Toivonen, 2010 and Fuglsang and Sørensen, 2011). These micro-models closely related to the process of learning by doing, using, interacting describe various mechanisms intended to produce interactive and incremental frugal innovations.
3. *The consultant-assisted innovation model.* This cooperative model describes the role played by consultants and more generally knowledge-intensive business services in the innovation of their industrial or service clients (e.g., diffusion of knowledge and of innovation, co-production of innovation).
4. *User-driven innovation models.* Open innovation also covers the dynamics of innovation in interaction with customers and users. Statistical works are unanimous in stressing that customers are the main sources of ideas for innovation in firms. In contemporary economies, this opening towards the clients or users is leveraged by two phenomena: 1) the research and innovation promoted by customers or users in some areas; and 2) the strategies implemented by some companies to involve customers in different ways and to varying degrees in innovation. Examples include the critical role of patients' associations in research and therapeutic innovation, crowdsourcing and the use of social media in business innovation (see, for example, Uratnik's contribution in this special issue).
5. *Innovation networks.* The open innovation finally covers the innovation dynamics in interaction with multiple partners within networks or innovation systems. These cooperative models established to describe the dynamics of industrial and technological innovation are gradually opening to services. Among the recent theoretical contributions focused on services one can mention the multi-agent framework for service innovation proposed by Windrum and Garcia-Goni (2008) and the concept of public-private innovation network in services developed within the ServPPIN EU project (Gallouj et al., 2013).

2 The contents of the special issue

This special issue explores perspectives on collaborative value creation for service innovation. The call for papers invited new research initiatives on multi-actor innovation for service, including the social, economic and technology perspectives to service and value creation. We hope that this issue of *Service Science* will improve the understanding of multi-actor value creation in service innovation, which is important for both research and practice. The theoretical backgrounds of the articles are rooted in multiple disciplines, encompassing technology studies, industrial marketing, management, institutional theory, and innovation studies. In addition, the articles in this issue represent an interesting diversity in research settings and methodologies.

Puneet Kaur investigates the recent emergence of social media-based brand communities and the underpinnings of user participation in service provider-hosted online communities. The study raises the questions of user participation as a hurdle for the sustainability of service provisioning, because of the limited understanding of the factors that affect users' intention to continue participating in online communities. To address this gap, the study examines the factors that affect teenagers' intention to continue participating in Facebook-based brand communities. The relationship between users' attitudes, activity levels and continuation intentions are explored, in tandem with the role of social and individual factors in forming the attitudes toward participation. The findings suggest that self-efficacy, hedonic motivation, reciprocal benefit and social influence affect users' attitude towards participating. Yet, self-efficacy was found to be the most influential factor among the users in the sample. The findings contribute to the discussion of service providers' intentions to use social media-based brand communities for user-centric service innovation.

Cong Feng and **K. Sivakumar** investigate the role of collaboration in service innovation. Their study analyzes the impact of service innovation on firm performance for manufacturing and service firms. The findings indicate that innovativeness plays an important role in the performance of service firms. Moreover, the analysis suggests that vertical and third-party collaboration fosters innovation in service firms. This research sheds new light on service innovation by providing insights on the comparative impact of different types of collaboration in service innovation.

Christian Kowalkowski, **Daniel Kindström** and **Per Carlborg** investigate triadic value propositions, which brings an interesting perspective to collaborative value creation. Triadic value propositions make an example of reciprocal resource-integration promises and value alignment mechanisms. The authors show that in a triadic setting, any change in the relationship between two of the actors will also affect relationships with the third, influencing resource integration and value creation at value constellation level. The study analyzes the effects of a new service initiative on the relationships between actors in a manufacturer-dealer-user triad. In so doing, the study contributes to the understanding of inter-organizational collaboration by investigating the origins and effects of changes in the relationships among business partners at the organizational and network levels.

Miha Uratnik studies interactional service innovation with social media users and shows that the pervasive availability of social media is changing the way organizations interact with users in service innovation. His paper highlights not only the co-production, but also the co-creation, relationship. It explores how the organizations leverage interactional service innovation (non-technological innovation and complex meta-change in cooperation with their clients) using social

media. The findings indicate that organizations interact with the social media to reduce diseconomies of scope. Yet, in so doing, they may co-destroy value.

Building on the service innovation literature, **Julia Jonas, Angela Roth and Kathrin Möslin** explore stakeholder integration for service innovation in medium-sized German enterprises. The authors take a service-dominant logic perspective to studying stakeholder integration as a multi-dimensional process in service systems. In so doing, the study broadens and contextualizes previous research. It also identifies which internal and external stakeholders are being integrated in service innovation, in which stage of the process and in which mode. It explores stakeholder integration as a multi-dimensional process in medium-sized IT and manufacturing firms and suggests that stakeholder integration is predominantly implemented as reactive integration. Conversely, the reciprocal co-creative exchange between stakeholders, is habitually practiced only among intra-organizational units. The study examines the challenges that stakeholder integration poses for service innovation.

Jaakko Siltaloppi, Kaisa Koskela-Huotari and Stephen Vargo extend the research on innovation for service by conceptualizing the emergence of novel solutions in service ecosystems. In so doing, the study introduces institutional complexity as a driver of innovation in service ecosystems. The authors pay special attention to the way in which actors that are embedded in diverse institutional arrangements can create new solutions that change the prevailing institutional arrangements that guide and constrain their action and cognition. Interestingly, the multiplicity of institutional arrangements is found to reduce the taken-for-grantedness of institutions, which is suggested to trigger actors' conscious problem solving activities. In addition, the authors submit that toolkits of institutional arrangements allow actors to solve problems by recombining available resources in novel ways. The paper contributes to service science and S-D logic by laying the foundation for a more comprehensive understanding of innovation driven by institutional complexity.

Ville Eloranta, Lauri Orkoneva, Esko Hakanen and Taija Turunen, suggest that service platforms play a key role in driving changes in manufacturers' service networks. Drawing on research in strategy, the authors posit that in dynamic environments, firms must base their strategies on flexibility. The study explores the ways platforms can be used to foster change and co-adaptations in manufacturers' service networks. The findings indicate that platforms enable the alignment of the needs and requirements of participants, increase the capacities of value propositions, and facilitate resource sharing among the participants. The study calls for more research on the systemic approach to service and solution business, beyond the servitization literature, which focuses on dyadic relationships and equilibrium-seeking endeavors in the service business.

3 Avenues for further research on multi-actor value creation for service innovation

The set of papers selected for this special issue provides an overview of current issues in the multi-actor innovation for service. Many of the findings are generalizable across contexts, disciplines and industries. However, such generalizations call for more context-specific research on multi-actor collaboration for service innovation.

The papers in this special issue have focused on the multiplicity of actors collaborating to create value, but they do not address the multiple forms of value itself. Indeed, the value created can be

defined and evaluated according to a number of registers, which reflect different conceptions of the product, value and performance. It is thus possible, by mobilizing convention theory to distinguish beyond the industrial world (the world of volume), other worlds favoring other systems of value definition and justification, for instance the market and financial world (favoring monetary and financial value), the relational or domestic world (favoring interpersonal values, empathy and trust consolidated over time), the civic world (that of social relations based on the concern for equal treatment, fairness and justice), the world of reputation (the production of a good image of the organization is a form of value). The value produced by an organization or a nation can be evaluated according to these different registers, which may be either complementary or competitive (Djellal and Gallouj 2008). However, our understanding of collaborative value creation for service innovation is far from complete.

Themes to be explored in the future include the relationship between collaboration in service innovation and the sustainable development of the entire service business – in its environmental, ecological and societal dimensions. Services and service innovation are often assumed to be green because of their intangibility. Yet, this may be a myth. Services are probably more tangible than we think because collaborative innovation does not only take place at the heart of the service production, but increasingly involves the dynamics of social innovation at the heart of their use. The problem is that collaboration and interaction often involve physical encounters, which may be harmful to the environment (Fourcroy et al., 2012).

Given its evolution, and particularly its hybridization with technical systems, such as IT-enabled multi-actor platforms of service production and use, the "service" object that was originally a fuzzy but simple object has become a complex, systemic object within its collaborative ecosystems of production and use. Hence, research on service should be capable of explaining increasingly sophisticated and scalable technical systems, as well as the interplay of human actors and multiple organizations in complex socio-technical systems. If one wishes to understand how these complex human-centered service systems (Maglio et al., 2014) work, a strictly disciplinary vision is inadequate. One must mobilize and confront approaches and methods from numerous disciplines such as economics, management, sociology, psychology, computer science, operations research and industrial engineering. This is the goal of the search for the foundation of service science (Chesbrough and Spohrer, 2006; Maglio et al., 2010).

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