
Editorial: Intellectual capital and service productivity

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1 Introduction

In today's business landscape both manufacturing and service industries are dealing with new challenges. The increase of the pace of change, the fluidity of the market, the evolution of the consumers' behaviours and the complexity of the world business dynamics are forcing organisations to adopt management innovations capable of driving

both an improvement of their productivity and a development of the organisational value creation capacity. These issues assume a particular relevance in service organisations. Indeed, it is widely recognised that a development of the service industries, in terms of productivity and value creation, contributes to wealth generation (i.e., a better satisfaction of citizens' wants and needs), to the creation of new job opportunities by opening up new business opportunities and to the improvement of the performance of traditional manufacturing industries. However, service organisations present an intrinsic complexity related to the specific nature and characteristics of the produced outputs and the features of their business models which are strongly based on the employment and exploitation of intangible and knowledge resources.

By definition service is something intangible and its production is fundamentally based on knowledge processes and resources. Service organisations, generally, require few physical assets and, thus, the relative significance of intangible resources is emphasised in service industries (Kujansivu and Lönnqvist, 2007). For example, the role of service brands and company image has an impact on how the customer experiences the service offering (Grönroos and Ojasalo, 2004). It can be even suggested that in the most knowledge intensive service organisations not much more than knowledge resources are actually needed. Furthermore, it can be claimed that also in the case of more capital intensive service industries, such as the airline industry, it is the knowledge assets – e.g., a well-known brand, strong customer relationships and other partnerships, innovative business models as well as creative and committed key personnel – that distinguish the most successful companies from the rest.

Recognising the strategic relevance played by intangible and knowledge resources in service organisations, an important research issue is to understand how service organisations can improve their productivity and value creation capacity by measuring and managing their intellectual capital (IC) components.

2 Improving service productivity

The service research field is fairly established and has rather long traditions. However, during the recent years the academic attention on services has increased significantly. It has even been suggested that there is a need for a specific scientific discipline for services management (Chesbrough and Spohrer, 2006). The studies focused on service management have stressed the need of measuring and managing service productivity as a key issue as well as they have pointed out the challenges related to the measurement of services (Djellah and Gallouj, 2008). Many of these challenges stem from the characteristics of services, such as the intangibility and heterogeneity of service products, the inseparability of service production and consumption, and the perishability of the service after it has been used (Mills and Margulies, 1980).

Similarly to manufacturing organisations, service organisations are challenged to continuously improve productivity. Both in the case of globally operating and competing companies as well as in locally operating – public or third sector – welfare organisations there is a need to make sure that service production is effective and efficient and that resources are optimised, properly allocated and exploited. For this reason a key target for service organisations is the improvement of the productivity of their service operations. To denote this issue the concept of *service productivity* is used in the service management literature in order to highlight the different interpretations of the productivity concept –

originally based in manufacturing and agriculture industries – in the context of services (Grönroos and Ojasalo, 2004; Johnston and Jones, 2004; Parasuraman, 2002). The traditional interpretations of productivity pay great attention on the ratio between outputs and inputs. In this case productivity improvement is related to the ability to optimise the use of inputs and/or the quality and quantity of outputs. However, in the case of service productivity a fundamental role is attributed to customers. Indeed, in the production of services the customers (business customers or individual consumers) can be considered an integrated part of the value chain because they provide the inputs to activate the operations and they consume the services as they are produced, judging the quality of the output. In addition, the customer often has an active role in the actual service production process. Therefore, the relationship between customers and service organisations has a fundamental importance in understanding the factors and dimensions affecting service productivity.

In today's economy it is important to adopt a holistic view of the organisation, which considers the stakeholders rather than just the customers as the beneficiaries of the organisations' output production. Thus, the investigation focus of service productivity has to be moved from a mere customer-based approach to a wider stakeholder-based approach. This requires an understanding of the relationships between service industries and stakeholders. This change in perspective allows an expansion of the interpretation of service productivity to include the concept of value creation. Therefore, the issue of organisations' service productivity improvement is not only about the ability to optimise the use of resources to produce a service, but most importantly the capability to generate value. In other words, the key is to fully satisfy stakeholders' wants and needs as well as to involve them in the value creation dynamics by means of their engagement as contributors of input and resources.

3 Why IC management matters

In the last decade an active research stream has been developed in the management literature with a focus on the measurement and management of IC. This research stream has been originated by the confluence of different research disciplines focusing their attention on the role and relevance of the intangible and knowledge resources affecting business performance. A starting point in this stream is the recognition that in today's knowledge economy the intangible and knowledge resources play a fundamental role in the organisational value creation dynamics (Lev, 2001; Schiuma et al., 2007; Sveiby, 1997). Therefore, the assessment and management of an organisation's IC forms the basis for understanding the value of an organisation and the dimensions influencing business performance improvements.

As the IC research stream has been developed in the past decade, today many frameworks and tools are available to understand, analyse, measure and manage the intangible and knowledge assets acting as organisational value drivers, i.e., strategic factors affecting the success of an organisation. These research results are offered as a body of knowledge to address the issue of service productivity improvement.

The relationship between IC and productivity in a service company can be analysed from different perspectives. Here we stress the twofold role of IC as an input factor and as an output factor. First, IC can be considered an important input factor and a driver of

productivity. Indeed, IC resources act as important resources affecting the fluency of the work processes and the quality of the output. This perspective recognises that IC components are at the basis of the operations of service organisations. For example, as the production of many services is a human resource-driven activity the role of human capital is essential to perform high value added services. However, the dimensions of social and networking capital as well as intangible organisational capital, such as culture, routines, atmosphere, identity and so on are fundamental drivers of service productivity due to their capacity of affecting human resource performance. Furthermore, the active role of the customer is emphasised in service production stressing the importance relational capital, i.e., resources embedded in the relationships between the company and its customers and other partners. On the other hand, some of the IC factors are created during or based on the service delivery process. For example, while a consulting project or an engineering design project delivers a certain service output to the customer the process may also result in enhancing (or deteriorating) the service provider's image, in improving the employees' competence, in developing a better structured service delivery process (based on feedback) and in collecting new knowledge about the customer's needs and preferences. Thus, IC factors should be viewed not only as inputs for the service process but also as output or outcome factors. This perspective is particularly significant for understanding how service organisations create value for stakeholders and support wealth creation in society.

From the above considerations it emerges that IC management holds a key role in the management of services as an enabler function to drive service productivity improvement and value creation. So far this promising research issue has not gained much attention in the academic discussion, although the potential of the issue was noted by Gummesson (1998) over ten years ago. The goal of this special issue is to highlight the significance of this topic and to encourage both scholars and managers to think how to better exploit the concepts and tools of IC management for the purposes of developing the productivity of service organisations.

4 Contents of the special issue

Assuming that IC management can contribute to answering the need of developing interpretative and normative perspectives for improving service productivity, this special issue sparks the scientific conversation about how the IC research stream can contribute to shed light on some of the main challenges identified by the service management literature. By linking IC and service productivity management issues together we have posed the following research questions:

- How to link the management of knowledge resources to the improvement of service quality and to the outcomes of service delivery?
- How to measure service productivity when the output is intangible and cannot be counted similarly to goods (physical products)?
- IC in service companies: what is the role of IC in a service organisation and what are the characteristics in different service industries?
- IC management: how different service companies manage IC in practice?

- Innovations in services: how to leverage different types of IC to create productive services?
- Value creation process in services: how is customer value created and how can it be measured?
- Knowledge-intensive services (KIS): how to manage companies for which knowledge is their key input and output?

The six papers included in this special issue touch upon some of the themes and questions suggested above but obviously many of them remain to be explored in further research. This issue contains papers exploring different service industries and discussing about the topic at different levels, including both micro and macro levels. The question of measurement as well as what to measure is examined in many papers.

In the first paper, Tatsuya Inaba and Shigenobu Miyazaki present a case study in which the service performance of a retailer is examined. Their paper presents a novel application for measuring service performance by using radio frequency identification (RFID) based automated data capturing. From IC point of view the paper illustrates that new technological tools can be useful in capturing and analysing information (a specific knowledge asset) which exists in the organisation but which is difficult to capture with traditional means in a cost-effective manner.

The second paper by Maiju Vuolle examines mobile business services, and in particular a mobile office application used by knowledge workers and sales people. The focus of the paper is in understanding and measuring the productivity impacts that are caused by the use of the service, i.e., the paper examines productivity from customer's perspective. The productivity impacts consist of tangible benefits such as the ability to accomplish tasks that need a rapid response as well as more intangible ones such as better situation awareness. Focusing attention on the intangible outcomes (along with the tangible ones) illustrates the role of IC components as output factors as discussed above.

While the first two papers can be characterised as technology-oriented studies the next two papers focus on IC and productivity at the level of a city. The third paper by Koray Velibeyoglu and Tan Yigitcanlar presents an evaluation methodology for the tangible and intangible assets of city-regions. Thus, the discussion on IC is lifted from a company-level perspective to a regional level. The paper introduces a theoretical framework to conceptualise a strategic planning mechanism, so called 6K1C framework, which is part of the strategic planning process of continuous improvement of overall public sector performance. The paper suggests that both tangible and intangible regional assets play an important role in the knowledge-based development of post-industrial city-regions.

In the fourth paper, Aki Jääskeläinen continues the discussion on IC and productivity in the context of a city but focuses on the point of view of the city as a service provider. Based on prior literature and interviews the paper identifies the key factors affecting public service productivity. The findings highlight, from IC perspective, that also in the case of city organisation knowledge assets represent some of the key input factors for service production.

The two final papers focus on knowledge-intensive service work. This theme provides an especially fertile ground for discussing about how to transform knowledge assets into customer value (i.e., how to put IC into productive use) because of the nature of this type of organisations.

The fifth paper written by Francesco Sole and Daniela Carlucci examines knowledge intensive business services (KIBS). In particular, it deals with the description and assessment of service value dimensions from a business customer's perspective. If the goal is to understand the issue of service productivity it is necessary to take into account not only the internal efficiency of the service provider but also the value of the service as viewed by the customer. As a result the paper presents eight value dimensions as the building blocks of a conceptual model proposed for assessing the value created by KIBS for business customers.

Finally, in the sixth paper, Paula Kujansivu and Liisa Oksanen present a study examining the productivity of white-collar workers. The study is based on applying a specific knowledge work productivity measurement model (originally developed to be used at company-level) in order to understand some of the macro-level challenges related to productivity development especially within white-collar workers in Finland. As many of the drivers of knowledge work are related to IC the study provides interesting empirical insights about the concrete issues on which the managers of knowledge intensive organisations should perhaps focus their attention.

We are aware that this special issue represents a first step towards the development of studies aimed to define descriptive and prescriptive IC-based frameworks to support both the development of the theory and the practice of service management. This scientific conversation was first started at the *International Forum on Knowledge Asset Dynamics (IFKAD) 2008*. Based on the conference we have selected and invited as proposals most of the papers published in this special issue. We call for more research about the issues discussed above and we are keen to put forward our scientific conversation.

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