SERVICE INNOVATIONS: NEO-SCHUMPETERIAN PERSPECTIVE

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Summary: *The article deals with short analytical review of theoretical approaches to the investigation of services and service innovations from Neo-Schumpeterian perspective. The main approaches to services classifications are taken into consideration. The evolutionary stages of main standpoints on service innovation processes are examined.*

Keywords: *services, service innovation, Neo-Schumpeterian, classification*

1. INTRODUCTION

Since J. Schumpeter (1934) innovation has been considered to be a key factor of market competition and a main source of economic growth. Our comprehension of innovation process has been built only on studies of manufacturing sectors. This state of things is determined mainly by high deal of shares of industry in economy. Since mid of XX century started the deindustrialization process of developed economies (for instance, 1955 in the US, 1950 in the UK, 1973 in France and 1980 in Japan). Fast growth of service sectors over past decades has been focus of attention to the innovation processes in services. But actually service innovations literature is sparse, and the problem has not been discussed fundamentally yet. This article will be concentrated on the short analytical review of theoretical approaches to services classification and patterns of innovation in services firm.

2. INNOVATIONS IN SERVICE SECTORS

In our opinion, one of the key problems in service innovation theory is a generalizations complexity concerning service innovations because of their heterogeneous nature. The same reason determines difficulties of service activities classification. There are few approaches to services classification represented in table 1.

Table 1: Services classifications

Author	Classification
The Office for National Statistics (ONS) – UK National Accounts	Distribution, hotels and catering; transport storage and communications; business services and finance; and government and other services. (Services which concern interactive mode of production are not including in the classification)

UN Statistics Division – International Standard Industrial Classification of All Economic Activities (ISIC Rev.4)	G (Wholesale and retail trade; repair of motor vehicles and motorcycles); H (Transportation and storage); I (Accommodation and food service activities); J (Information and communication); K (Financial and insurance activities); L (Real estate activities); M (Professional, scientific and technical activities); N (Administrative and support service activities); O (Public administration and defence; compulsory social security) P (Education); Q Human health and social work activities); R (Arts, entertainment and recreation); S (Other service activities); T (Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use); U Activities of extraterritorial organizations and bodies)
I. Miles in accordance with the Statistical Classification of Economic Activities in the European Community (NACE)	G (wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods – 'trade services'), H (hotels and restaurants – HORECA, meaning hotels, restaurants, catering), I (transport, storage and communication), J (financial intermediation), K (real estate, renting and business activities), L (public administration and defence; compulsory social security), M (education); N (health and social work), and O (other community, social and personal service activities)
J. Howells & B. Tether	Services engaged in the physical transformation, particularly of goods - i.e., services that act oil goods. A good example is road transport, handling and storage (including logistics). Services engaged in the transformation of information – i.e., services that are engaged in information processing. Data processing services are a good example here. Services engaged in the provision of knowledge based services – i.e., services for which knowledge based 'services' are their principal product. Examples include design and related services. Services which are aimed at the transformation of people – i.e., services which act on people, providing physical and/or mental/emotional changes. A good example is care for the elderly.

Source: [1, 2, 3, 4]

The variation of services specific characteristics (intangibility, coproduction, and dependence on Information Communication Technologies (ICT) is put into the basis of classifications outlined above. Services heterogeneity determines appropriate nature of service innovations. Therefore exists the problem of working out of general innovation theory for manufacturing and service activities. In general, four approaches to industrial and service innovations can be identified (M. Kanerva, I. Miles, J. Howells, and B. Tether): neglect, assimilation, demarcation, and synthesis.

Historically, the first – neglect approach, has been supposed to lead to technological and productivity changes, which take place only in manufacturing firms. Service activities have been considered as residual areas, and service innovations have been ignored. This approach has been predominant in economic literature until the 1990s.

In accordance with the assimilation approach innovations in manufacturing and services have been considered as similar ones. The same indicators can be used for measurement of innovative activity in services and industry as well. In some papers this approach is named 'technocratic' [5], because it is assumed that new technologies (especially ITC) are crucial for service innovations. Within the scope of this approach L. Soete and M. Miozzo, using Pavitt's taxonomy of industrial innovation firms, have identified different technological

trajectories in services and divided service firms into four categories: 'supplier-dominated', 'scale-intensive', 'specialized suppliers' and 'science-based' [6]. This classification system is based on differences in the technological regime. F. Castellacci, from ICT and Fordist perspectives, has adopted the concept of technological paradigm-regime-trajectory to examine patterns of innovation in service firms. He has divided these firms into four categories: advanced knowledge providers, mass production goods, supporting infrastructure services, and personal goods and services [7]. Another sectoral taxonomy has been proposed by R. Evangelista. In this taxonomy, service sectors are divided in accordance with the overall innovative performance of firms, the nature of the innovation activities, the different knowledge bases (tangible/intangible; codified/tacit) underlying the innovation processes, and the different patterns of interaction through which service firms innovate. Three main sectoral categories are identified: technology users heavily relying on the use of tangible technological assets (for instance, transport, wholesale and waste disposal); science and technology-based and technical consultancy sectors, specialized in the provision of codified knowledge (such as research and development, engineering and technical services); interactive and IT based sectors (such as financial services, advertising and business services) whose distinctive feature consists of innovating through software and close interactions with customers and clients. Thus, the assimilation approach has suggested patterns of innovation in manufacturing and services to be identified by the technological regime [8].

The demarcation approach has been accented on non-technological activities in services. Organizational and marketing innovations have been in focus of attention. The key statement of the 'demarcation' researchers –services studies need new theories and special analytical instruments. For example, research and development indicators cannot be an adequate measure of high-tech level and knowledge-intensity for service firms. Major studies of service innovations are concentrated on interactive mode of service production and organizational innovation. Service firms tend to introduce organizational innovation rather than manufacturing. J. Sundbo has considered three types of organizational innovation: top-strategic, network, and professional organizations [9]. F. Djellal and F. Gallouj have investigated six patterns of organizational innovation: professionals in partnership, managerial, traditional industrial, neo-industrial, entrepreneurial, and craft model [10]. Knowledge-intensive business services (KIBS) are striking example of the importance of 'producer – client' interaction for service production, as long as customer's personal qualities make decisive influence on the production results. The process of total customization favours the greater involvement of customers into the innovation process. The involvement of providers, customers, suppliers, and partners in co-creation of value added advantage forming of new collaborative business model.

The synthesis approach has been built on integration of assimilation and demarcation approaches. Technological and non-technological activities for service and manufacturing firms have been considered. The pioneer attempt to use synthesis approach has been carried out by F. Gallouj and O. Weinstein who have proposed to adopt K. Lancaster's model of multidimentional space of product characteristics for service and industrial innovations [11]. V. Souitaris, from synthesis perspective, has verified Pavitt's taxonomy empirically [12]. H. Hollenstein has sorted out five categories of service firms: science-based high-tech firms with full network integration, information technology-oriented network-integrated developers, market-oriented incremental innovators with weak external links,

cost-oriented process innovators with strong external links, low-profile innovators with few external links [13].

We support the synthesis approach despite the arguments in favour of the demarcation approach to the study of service innovation, which would shift the focus the study of services in general, to a differentiated consideration of the various types of services. This background gives opportunity to masterpiece analysis including appropriate indicators that provide deeper understanding of innovation processes on a whole economy scale. The synthesis approach can help in analysis of internal and external differences of innovations concerning goods and services production, even more in study of service production by industrial companies and goods production by service companies. In fact service and industrial innovations have significant differences as well as similarities. The demarcation approach emphasizes important features of services and service innovations, which are specific for industrial innovations, although the majority of industrial innovations researchers ignore them. Manufacturing and services interlace frequently [14] and many industrial companies acquire the features of services, and the production of a number of services are more like industrial ones (at least Postfordist). An important argument in favour of the synthesis approach to the study of services and manufacturing is phenomenon of "servicisation" or "servitisation" of production in all sectors of economy. As a rule it is connected with the desire of industrial companies to produce services, which are complementary towards their core activities. In the latter case, the services acquire the character of "tying products", including those associated with the provision of the actual tangible products, such as after-sales service. Sometimes "servitisation" manifests promoting the product through various services – finance, insurance, technical support, software, etc. This phenomenon is often expressed in focusing of manufacturing companies on providing parallel services for the main purchased product. Such strategies, along with service innovations, significantly influence direction of innovation trajectory affected with service-dominant logic. Within the frame of this approach, services are considered less as "nonmaterial values", but as a process or relationships. Consequently service is a result of every economic activity both of service and manufacturing firms.

3. CONCLUSIONS

Review of the last decades scientists and policy makers approaches shows changes both in attitude towards services themselves and in service innovation processes. The evolution standpoints conventionally can be divided into four stages: neglect, assimilation, demarcation and synthesis. The first stage has assumed a complete denial of service innovation activities which are regarded as a residual area. The assimilation approach has identified the nature of industrial and service innovations. The demarcation approach is built on apart theory for service innovations. The synthesis approach has taken into account similarities and differences between industrial and service innovations in forming general theory of innovation. It should be underlined that the majority of contemporary researches are based on the synthesis approach as dominant one.

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