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**Systemic products and value creation process
in healthcare networks**

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Abstract

Dynamic development of the medical services sector in Central and Eastern Europe (CEE) creates demand for analysis and evaluation of medical organisations operating in this sector. This issue deserves attention both from the theoretical and practical point of view. The purpose of the article is to identify and describe forms of systemic products and network structures in healthcare networks in the context of value creation, and consequently to develop theoretical-descriptive models of value creation on the medical market. The research was conducted in 2014 by means of an exploratory, case research method. Semi-structured interviews in the form of a standard questionnaire with the manager of a professional services unit and the analysis of secondary data allowed for collection of the research data.

Keywords: systemic products, value creation, healthcare.

JEL Classification: M31.

Introduction

Essential to any business network is the underlying system through which it produces a value. Creating and capturing the value reflects the two fundamental functions of all organisations: 1) creating the value in ways that differentiate them from the competition and 2) develop core competencies that are different from those of competitors [Shafer et al. 2005]. In order to create the value for the end customer, networks need to employ their core competencies in core processes so that something valuable to the customer is created.

This value-system construct is based on the notion that each product/service requires a set of value creating activities performed by a number of actors forming a value-creating system [Möller & Rajala 2007]. Nowadays, it can be observed that the interest in the value net concept in the healthcare system is growing. Progressing integration of the medical sector actors is indicated by the emergence of healthcare value nets and systematic product development. The purpose of the article is to identify and describe the forms of systemic products and network structures in healthcare in the context of value creation, and consequently to develop theoretical-descriptive models of value creation on the medical market. The paper presents a fraction of empirical research which has been aimed at identification and description of the value creating process and systemic product structures in the healthcare system in CCE. This paper has been divided into several sections. The first section focuses on the introduction followed by a value-creation system, healthcare value networks and a systemic product in the healthcare literature review. The further part of the paper presents research objectives and research methodology, as well as a discussion and conclusions.

1. Value-creation system

Marketing is about managing profitable customer relationships. The twofold goal of marketing is to attract new customers by promising superior value and to keep and grow current customers by delivering satisfaction [Armstrong & Kotler 2007]. Creating value for customers has been recognized as a key concept in marketing [e.g. Drucker 1954; Rust & Oliver 1994; Sheth & Uslay 2007; AMA definition of marketing; Chartered Institute of Marketing definition of marketing], making the value and value creation an important research subject [Grönroos 2011]. At the general level, the customer value has been referred to as an overall assessment [Zeithaml 1988], a function of consumption behaviour [Sheth, Newman & Gross 1991], perceived quality adjusted for the relative price [Gale 1994], an emotional bond [Butz & Goodstein 1996], relationship [Payne & Holt 2001], personal perception [Woodall 2003], and subjective personal introspection [Holbrook 2005]. In the article it is assumed that the value for customers appears when, after being assisted by the provision of resources or interactive processes, customers are or feel better off than before [Grönroos 2008]. Features of healthcare services quite considerably contribute to their distinctive character and, at the same time, affect the value offered to the customer/patient. On the basis of their skills and knowledge and with full observance of norms and rules prevailing in a healthcare services area, medical services firms provide services which are designed to solve problems of their customers. Customers' participation is vital and indispensable for this cooperation [Bitner et al. 1997].

By “value-creating system” Parolini [1999] means a set of interlinked activities that create value for final customers. In order to leverage at best their resources and competencies, firms should not limit their perspective to their value chain (set of sequential activities) or, even worse, to their direct suppliers and customers. In conceiving their strategy, they must take into account the whole value-creating system within which they operate, and, if possible, assume the point of view of the final customer [Parolini 1999].

The value creation approach is based on the fundamental idea that, by knowing the customer's value creation process, the provider can better identify problems faced by the customer with respect to his or her business activity. In fact, the provider can even notice the problems and concerns that the customer himself or herself cannot see [Storbacka et al. 1999]. By providing a solution to these problems, the provider can offer a more valuable relationship to the customer than other competitive providers [Hirvonen & Helander 2001].

Creation and delivery of the value for the customer, being the prerequisite for a competitive edge, is especially significant with respect to system-based healthcare services. An increasingly common system character of products and services has its origins in the customer's perception of their value, namely their existence in a definite and developed system of products and/or services and in their user networks. Possible benefits gained from the purchase and from the use of system products depend on existence and operation of other related products or services [Parolini 1999; Matysiewicz 2014].

2. Healthcare value networks

According to Kähkönen [2010] a value net is a dynamic, flexible network in which actors create value through collaboration [e.g. Allee 2003; Bovet & Martha 2000a; 2000b; Jarillo 1998; Parolini 1999]. Healthcare organisations develop value nets in order to increase their chance of survival and growth. Healthcare value nets concern service-oriented collaboration between at least two independent entities which build an economic and business relationship [Powell, Koput, Smith-Doerr 1996]. Networks in the field of medical services come from a joint effort made by already existent companies (although operating on a smaller scale) to search for new market opportunities in the field of exploring new markets, to identify new customers and to create new, often more integrated market offers which can better meet customers' expectations. The process of integration of medical services can be divided into three main networking areas: functional, clinical and the medical system [Fleury, Mercier 2002, p. 59].

The integration process affects all of these components. It entails restructuring with respect to medical practices, service offer and organizational structure adoption.

3. The concept of systemic product in healthcare

Network cooperation in which actors create the value through collaboration may result in systematic product development. The systemic product is a product that satisfies a definite set of consumer needs and expectations; it is not confined to one single need or option, but can satisfy more than one need simultaneously. The distinctive feature of a systemic product is that it consists – also in a physical and spatial sense – not only of one, but of a few (or even several) products.

Network cooperation, technological advancement and an increasingly high level of expectations lead to development of systemic products in healthcare. This tendency is particularly noticeable in the private healthcare sector. Medical centres are becoming institutions which offer healthcare services that are highly advanced with respect to technology, science and quality. Such products are not only purchased by patients, but also individually tailored and customised with participation of patients. The following elements can be included in the composition of the structure of systemic products in healthcare:

- Medical service – a predominant element of the systemic product, directly related to the patient's need.
- Ambulatory services – they perform supplementary functions and support the diagnostic process.
- Pharmaceutical products – they perform supplementary functions, and support the treatment process.
- Technical products – they include equipment of a medical unit, technical equipment that supports the process of diagnosis and treatment.
- Financial/insurance products – they provide insurance protection of the patient (financing the process of treatment).

All the elements mentioned above are offered together in the form of a medical package.

4. Research method and results

The objectives of the research was to identify and describe forms of systemic products and network structures in healthcare in the context of value creation, and consequently to develop theoretical-descriptive models of value creation on

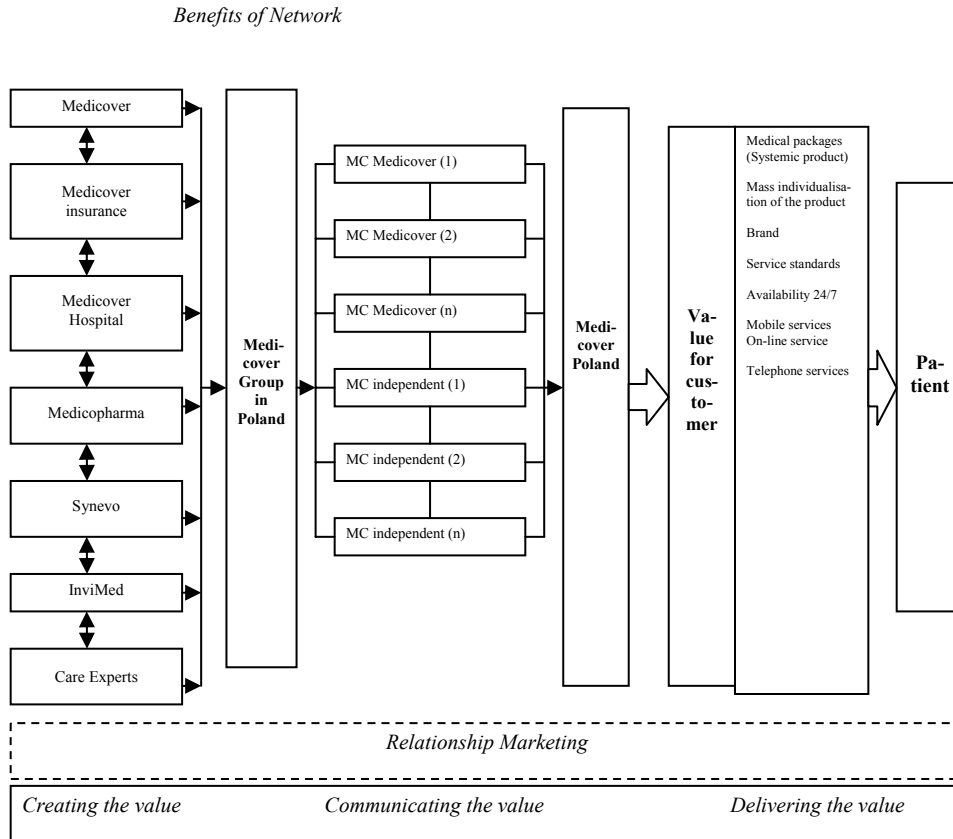
the medical market. The research was conducted in 2014 by means of an exploratory, case research method. The selection of the case study was based on the market share and network size. The research design was qualitative and exploratory in nature. As stated by McCracken [Grants McCracken 1988], qualitative research does not survey the terrain, it mines it, and therefore can be seen as more intensive than extensive in its objectives. Similarly Eisenhardt [1989] focuses on utilising a case-based approach for theory-driven research. Both semi-structured interviews based on a standard questionnaire with the manager of a professional service unit and the analysis of secondary data allowed for collection of the research data. The standard interview lasted over an hour and was sometimes followed by a discussion and additional questions. The questionnaire consisted of the following thematic parts:

- network organisation in which the audited entity operates;
- marketing network and process of creating value for the customer;
- assessment of the network level.

Secondary data sources included published industry reports, annual reports, press releases, website data and statistics from the Polish Central Statistical Office.

The company selected for the research is a healthcare network organisation. The case study is represented by Leader, a multinational company which has been actively involved in development of a network of medical entities in CEE since 1995. Currently, it runs 100 centers and cooperates with a network of independent medical entities in 14 countries. The company provides healthcare services to one million patients.

Leader can be assigned to the current network. It is a network of individuals with a very secure and stable basis of operation. The relationship between network elements indicates development of a network of a vertical and horizontal connection. The main objective of its operation is to increase its access to complementary resources, to boost operational efficiency, to meet growth opportunities, and gain access to a wider group of customers.

Figure 1. The value creation process and systemic product structure in healthcare networks

Its important feature is the hierarchical coordination of the distribution network. The network is integrated, formal and highly structured as well as open to new entities. In addition to the distribution network (horizontal relationships), Leader is responsible for value delivery and creation of a network of its own units (initiating, taking over) focused on enrichment and comprehensive service offer (value creation/systemic product). The relationships between them are vertical and based on the value added. Value creation system itself is well illustrated in the network, and the network itself has a relatively stable resources and processes forming a specific customer value (Fig. 1). The units responsible for value creation are an integral part of Leader, and the relation between the units and Leader are highly structured and formal.

Leader attaches great importance to communication, and therefore uses a lot of internal communication tools such as trainings, conferences, regular infor-

mation meetings as well as the Intranet and teleconferencing. It is noteworthy that, due to its dominant position on the market, Leader enjoys greater freedom in gaining information from network partners than the partners themselves. Network units are obliged to maintain regular contacts and to report its performance to Leader. However, it is a common practice for Leader not to share certain information and not to disclose it to other network partners, which reveals a unilateral character of this communication [Matysiewicz, Babińska, Smyczek 2014].

Conclusions

The main conclusions of the research suggest that the company under the research falls into the category of the so-called present networks. The operation of these networks is based on solid foundations, and is oriented on building relations between network components and, simultaneously, on developing both vertical and horizontal networks. The main objective of the network operation is to increase its access to complementary resources and to gain a wider customer portfolio, as well as to boost effectiveness and get new market opportunities. These networks are also characterised by hierarchic coordination of distribution within the network; they are formal and significantly structured, but also open to new elements. The value-creation system is well defined in the surveyed company. Leader's system is highly structured and standardised. It offers systematic products (medical packages) which are highly advanced in terms of their structure (components), technology and patients' expectations. The system does not assume any consumer involvement in the process of value creation.

It should be borne in mind that the research has some limitations, which, however, can be turned into advantage for future research. The key limitation of the study is its orientation on one market of health care services. The behaviour of market entities, especially on the market of consumer goods, is certainly different, which affects the value creation process. It should be also emphasised that the research was conducted in big cities of Poland, whereas in smaller towns or villages, the behaviour of patients and medical unit managers may vary. Nonetheless, it is believed that focusing on different markets, analysing the phenomenon in smaller population areas as well as sampling different segments will contribute to better understanding of the market behaviour.

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