MARKETING OF KNOWLEDGE BASED SERVICES
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Abstract

The issues discussed in this paper refer to the contemporary role of services in the knowledge-based economy. The author identifies the fields of services that currently constitute the so-called economy development carriers and names them knowledge-based services. Educational, research, and information and communication, as well as business services are particularly significant in this group of services. Despite the diversity of the enumerated services between industries, their common feature is offering customers the basic value in the form of professional knowledge based on the intellectual capital of individual service organisations. The author, relying on the concept of customer value management as a process, discusses the significance of marketing at four successive stages of the process and exhibits unique values offered to the customers who purchase knowledge-based services.

Keywords: knowledge, services, marketing, university, research institution
Introduction

In the knowledge economy a vital role is played by the domains of services referred to as the economic growth drivers, which include educational, scientific and research services, information and communications services, and business services. Regardless of their industry-specific differences, these services are similar in that their essential value for the customer is professional knowledge developed based on the intellectual capital of service providers.

This paper discusses the four stages of the process through which knowledge-based service providers create value for the customer, including the role that marketing plays in this process. The present analysis takes into account the unique character of knowledge, competencies and qualifications offered by knowledge-based organizations.

Knowledge as an intangible asset of an organization

Intangible assets based on knowledge are by definition immeasurable, flexible and dynamic and cannot be exhausted in the process of their proper exploitation. The literature on the subject offers diverse approaches to knowledge as an intangible asset of an organization, of which several will be presented in this paper.

The dictionary defines knowledge as the entirety of information and skills gained through education, information and skills relating to a particular area, a branch of science or the state of knowing or understanding a particular fact or situation. For H. Davenport knowledge is information enriched with experience, context, interpretation and reflection, so it is accumulated in the process of personalisation of information as a result of analysis, feelings, experiences, educational background or intuition of an individual.

On the other hand, I. Nonaka and H. Takeuchi define knowledge as validated convictions. Some Polish authors including I. Hejduk and W. Grudzewski believe knowledge is information applied in practice. A broad definition of knowledge was formulated by A.K. Koźmiński, who considers knowledge as an intangible and difficult to imitate asset of an organization comprised of useful information that other people have no access to and are incapable of using.

It is worth noting that any field of science dealing with the phenomenon of knowledge and cognition such as philosophy, psychology, sociology or pedagogy uses

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3 See. M. Pluta-Olearnik, Rozwój usług w erze społeczeństwa informacyjnego, PWE, Warszawa 2006, p. 56.
such definitions of knowledge that best suit its own purposes.

Given the volatility of an organization's external environment, its clients in particular, management strategies call for the broadly understood perfecting of both knowledge-intensive activities and the knowledge management process. According to G. Kobyłko and M. Morawski it is necessary to restructure the whole knowledge management process so as to focus on designing and accelerating knowledge rather than on mere information processing. Knowledge management embraces the processes of knowledge creation and codification (giving a suitable form to knowledge), as well as knowledge transfer (including transmission and absorption of knowledge) that facilitate the attainment of an organization's goals.4

In the literature on knowledge and knowledge management there is a proliferation of knowledge classification systems. Consequently, we can distinguish the following types of knowledge:

- explicit vs. implicit knowledge,
- Know-What, knowledge about facts,
- Know-Why, knowledge explaining the world,
- Know-How, knowledge consisting mainly of skills,
- Know-Who, knowledge about who is in possession of knowledge that is of interest for us.

Still another classification based on the extent to which we are aware of possessing knowledge and the degree to which we use it distinguishes among the following types of knowledge:

- knowledge possessed used and unused,
- knowledge possessed but subconscious, knowledge not possessed but desired, knowledge needed but unrealised (“I don't know that I don't know”).

In addition, we can talk about the following levels of knowledge:

- individual,
- team,
- organizational.5

The examples given above of different knowledge definitions and classifications point to different concepts of causal relations (cognitive aspect of knowledge), but also show how closely knowledge relates to skills development (practical aspect of knowledge).

Knowledge-based economy and society

A knowledge-based economy emerges where the level of concentration on knowledge, information and tangible and intangible assets and their configuration network dynamics are the highest. The participants in the knowledge economy with a stake in its further growth and interested in strengthening their position in the marketplace ought to support the key branches of the knowledge economy, elsewhere described as drivers of the economic growth. These sectors include:

- education,
- science and research and development,
- advanced technology industries,
- business services related to knowledge economy,
- services supporting the growth of information society.\(^6\)

The knowledge economy can be discussed in macroeconomic or microeconomic terms.

In microeconomic terms, the knowledge economy is “an economy where there operate many enterprises that build their competitive advantage based on knowledge where knowledge is defined as an intangible and difficult to imitate organizational resource containing all sort of useful information that others can neither possess nor use”.\(^7\)

From the macro-economic perspective, “the characteristic feature of the knowledge economy is a rapid development of the economic domains that are related to information processing and the enhancement of knowledge, meaning high-tech industries, technologies and services fostering the growth of an information society”.\(^8\)

According to the World Bank the knowledge economy is supported by the six pillars of the innovation system, education system, institutional and business environment, regional factors, ICT systems, and knowledge management in an organization.\(^9\)

The Triple Helix model suggests that the development of the knowledge economy should be considered as the process of interaction between the three spheres of the economic practice, science and education and the regulatory sphere of government and local authorities.\(^10\)

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\(^7\) Definition by A.K. Koźmiński, cited in the article by J. Kleer, *Czy Polska ma szansę na gospodarkę opartą na wiedzy?*, p. 43.

\(^8\) Definition by OECD, ibidem, p. 43.

\(^9\) M. Pluta-Olecznik, *Rozwój usług…*, op.cit, p. 50.

\(^10\) In the Polish literature the triple helix model is also known as “the strategic triangle” (cf. A. Kukliński, *Gospodarka oparta na wiedzy — społeczeństwo oparte na wiedzy — trajektoria regionalna*, “Nauka i Szkolnictwo Wyższe”, vol. 2, no. 22, 2003, pp. 55–61).
The knowledge economy is primarily driven by enterprises capable of innovation whose competitive advantage is based on knowledge.

Secondly, the knowledge economy is driven by science and education institutions, also playing the role of “human capital providers”, “treasuries of entrepreneurship” and “sources of innovation”.\textsuperscript{11} These institutions — irrespective of the form of ownership — are responsible for the creation and dissemination of knowledge. Their fundamental objective is to develop scientific knowledge. By integrating education with research activity scientific and academic institutions can open up opportunities for direct dissemination of new scientific knowledge. Direct dissemination of new scientific knowledge falls primarily within the domain of universities. Other institutions propagate scientific knowledge indirectly.

Thirdly, the knowledge economy is driven by the government and local authorities institutions, for whom the development of knowledge-based economy is a strategic priority. According to the Triple Helix model, the government and local authorities institutions are supposed to pursue economic policies that promote, stimulate and support strong co-operation between academic and research establishments and the business sector. The more effective interactions between the representatives of all three helix spheres, the more effective scientific knowledge transfer. A more effective commercialisation of new knowledge leaves businesses better equipped to build their competitive advantage.

A knowledge economy fosters the development of a knowledge society wherein advanced knowledge is the basis for essential social efforts whilst knowledge accumulation, dissemination and application is a subject given special care by societies and economies.

The growth of knowledge-intensive services

The nature of changes affecting the world service sector in the second decade of the twenty-first century is determined by diverse phenomena of global character that assume the form of megatrends. The most important trends connected with the development of the economy and services based on knowledge include:

- advancement of information and communications technologies changing traditional service processes,

• development of miscellaneous innovations concerning processes, production, organization and marketing (leading to e.g. shorter life cycles of many services),
• increasing significance of knowledge and information in the economy and the development of services supporting knowledge and information (education, R&D),
• quick-paced growth of services supporting business processes,
• internationalisation and globalisation of services,
• new business models using outsourcing and offshoring for service provision,
• increasing competition in the service market,
• networking as a form of collaboration.

When analysing the growth level of the service sector in the economy we need to consider two major indicators, the participation of the service sector in creating gross value added and the level of employment in the service sector in relation to the whole economy.

Over the last decade the service sector participation in creating gross value added has stabilized at the level close to 68%, which positions Poland in the group of mid-level developed countries, with the macrostructure of the Polish economy in need of modernisation compared to many European countries. In developed countries, the highest indicators of the service sector participation in gross value added go well beyond 70%, e.g. in Belgium, Great Britain and France.

The following sectors contributed the most to GVA (in 2010):
• trade and repairs (17.1%),
• transport and storage management (5.3%),
• real estate services (4.9%),
• professional, scientific and technical services (4.6%).

Another metric used to measure the growth of the service sector is the total number of people employed in the service sector. In the Polish economy, the employment level in the service sector has been stable for years and currently slightly exceeds 56% compared to the EU average of 71% as of 2010.

In terms of the employment levels in the service sector Poland ranks below the majority of the EU countries, surpassing only Bulgaria and Romania. Despite the outdated macrostructure of the Polish economy, it must be noted that the economic changes happening in Poland over the course of the twentieth and twenty-first centuries are characteristic of global system transformations since the service sector dominates both in the employment structure and in the GVA structure.

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The following are knowledge-intensive sectors designated as the key drivers of economic growth:

- science,
- research and development,
- education,
- business and professional services,
- information society services (computer, telecommunications and audiovisual services).

As far as the two first sectors are concerned, an important indicator, from the point of view of the growth of the knowledge economy, is the R&D expenditure expressed as the GDP percentage. In Poland, this indicator has been very low for years and in 2010 stood at 0.74% (rising by a mere 0.1 per cent compared to 2000). These figures place Poland in the twentieth position in the EU (the average for the EU being 2.00%), while the leaders in the R&D expenditure are Finland (3.87%), Sweden (3.42%) and Denmark (3.06).13

Since knowledge-intensive services require highly-qualified workforce, of vital importance for their growth and innovation are educational policies relating to university graduates and professional training programmes. It is clear that education, including university-level education, is one of the areas crucial for effective support of the service sector. Although the present paper does not aim to analyse in detail the growth of higher education services, it is important to note that this market has grown on an unprecedented scale since the 1990s when the marketisation of higher education took place resulting in almost 400 higher education institutions and the student numbers peaking at close to two million.

Currently, the dropping birth rates have evidently slowed down the growth of the higher education sector. At the same time graduates are expected to have academic knowledge and specific practical skills and qualifications needed on the labour market. At the same time more attention is being given to offering programmes of study of modern fields of knowledge fostering the innovative economy.

In some areas, services are more innovative than industry. Providers of intangible knowledge intensive services contribute to fostering innovation across all sectors of the economy. This is true mainly for companies offering telecommunications, financial and business services.

13 Ibidem.
Innovative processes differ depending on the type of services offered, with innovation leaders being providers of business services where innovation focuses on internal R&D and training, and companies offering financial services. According to I. Rudawska business services are innovative in a way similar to that of high-technology production enterprises, while the expansion of business services enhances R&D across the entire service sector. Providers of business services apply for business method patents, which mean new ways of carrying out business activity, mainly due to implementing new technologies. In the US, business innovators are IT and Internet providers as well as consulting and financial companies.

Offshoring is an innovative form of collaboration in the international trade in services. Briefly speaking, offshoring is defined as the relocation of a service to a foreign destination as a special form of international co-operation developed in the late 1990s, when international corporations started to set up specialized external enterprises abroad. Business practice gave rise to two types of offshoring. Captive offshoring refers to internal restructuring operations when a corporation opens new branches and subsidiaries abroad. Offshore outsourcing involves commissioning some service processes to foreign contractors. The following types of services are commonly offshored:
- customer service in the area of offering advice, debit card handling, booking, product claims, after-sales services (call centers working 7 days per week x 24 hours per day x 365 days per year),
- back office services
- professional services (legal, accountancy, financial, market research),
- information services (computer services, website management services, application services),
- R&D services (applied research, implementation and design work).

It was in the area of these business services that modern forms of international service co-operation evolved in the 1990s. What's more, the internationalization of services has prompted innovation in the service sector. A case in point is the emergence and functioning of Shared Services Centres.

According to a report on modern business services in Poland, offshoring of business services is a manifestation of the globalisation of economic processes,

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a source of competitive advantage on international markets for companies engaged in these forms of co-operation and a source of innovation and development for enterprises.\textsuperscript{16}

\textbf{Towards the marketing of knowledge-intensive services}

Marketing literature often brings up the problem of adapting marketing principles to service provision, arguing that the characteristics of a service are different to the characteristics of a product. The specific character of services is captured by the following features: intangibility, heterogeneity, perishability, inseparability of service production and consumption, and lack of ownership. These features determine (usually restrict) marketing activities, particularly in the area of product strategy, distribution and sales, and, to a lesser extent, in the area of pricing strategy and promotion.

Hence, there are numerous publications devoted exclusively to services marketing that consider service provision as a separate activity of market entities and suggest specially adapted marketing strategies and tactics.

Still another approach to services marketing takes into account industry-specific diversity of services and proposes that marketing tools should be adapted to specific types of services. According to L. Żabiński there have been some successful attempts to adapt product marketing models (e.g. the values hierarchy model or the brand model/branded product model) to services, including in particular: banking and tourist services. Marketing strategies and tactics have been also adapted to other types of services for example educational services, medical services, cultural services or R&D services.\textsuperscript{17}

The role of contemporary marketing is increasingly perceived in terms of customer relationship management, wherein special emphasis is placed upon delivering value to the customer and benefits to an organization as well as ensuring increased value for shareholders. As early as 2005 the AMA declared that marketing is a function of an organization representing a set of processes designed to create, communicate and deliver value to customers as well as to manage customer relationships in a way that benefits the organization and its stockholders.

\textsuperscript{16} Sektor nowoczesnych usług biznesowych w Polsce, Associacion of Business Service Leaders in Poland, Warszawa 2011, p. 7.

\textsuperscript{17} See M. Pluta-Olearnik, Strategie marketingowe przedsiębiorstw usługowych w procesie internacjonalizacji, PWE, Warszawa 2013, pp. 69–73.
In general, marketers agree that present-day marketing strategies should be built around increasing value for the customer and the organization. This approach is also favoured by researchers of services marketing, who — in developing the concept of relationship management — stressed the importance of the customer for the service provider and consequently remodeled marketing instruments and activities so as to focus on customer relationship rather than on a one-off transaction.

Modern concepts of services marketing address the challenge of delivering value for the customer while the source of this value is in the benefits provided to the customer. The author proposes that a classification of services in relation to benefits delivered by modern enterprises should be based on:

- advanced technologies,
- human factor (workforce),
- information and knowledge.

The final value for the customer is made up of specific configurations of these three components depending on a given service, its character and the way in which it is provided.

Based on the classifications of services available in the marketing literature, Table 1 presents information- and knowledge-based services offered to customers on the B2B market.

Services based on knowledge are also referred to as knowledge-rich services (K. Rogoziński) or knowledge-intensive services (J. Fazlagić). Businesses that heavily rely on knowledge offer innovative solutions to customers. At the heart of the service delivered is specialist knowledge — what customer value management would define as core value for the customer. Knowledge can refer to:

- a field of science taught at university (knowledge of law or medicine)
- niche knowledge, not included in university degree programmes.

Knowledge-intensive businesses either rely on the existing specialist knowledge or create this knowledge by themselves and — through marketing processes — deliver this knowledge to clients. Work performed by such an organization has intellectual character while highly-qualified personnel dominates the workforce structure. Knowledge intensive business services include:

- information services,
- research services,

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Table 1. Types of services by selected criteria

<table>
<thead>
<tr>
<th>Target market</th>
<th>Classification criteria</th>
<th>Types of services</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business clients</td>
<td>Technology intensity</td>
<td>Services exploiting high technologies</td>
<td>Computer equipment advisory, programming services, financial services,</td>
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<tr>
<td></td>
<td></td>
<td>Services exploiting mid-level technologies</td>
<td>telecommunications services</td>
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<tr>
<td></td>
<td></td>
<td>Services exploiting low-level technologies</td>
<td>Transport and repair services</td>
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<td></td>
<td></td>
<td></td>
<td>Legal, insurance and consulting services</td>
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<tr>
<td>Workforce intensity</td>
<td>Services based on</td>
<td>Professional business services: consulting, legal,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>highly-qualified</td>
<td>financial, financial and computer services</td>
<td>cleaning, security, gardening</td>
</tr>
<tr>
<td></td>
<td>Services based on</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>unqualified workforce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information and</td>
<td>Intelligent services</td>
<td>Information processing, research, medical services,</td>
<td></td>
</tr>
<tr>
<td>knowledge intensity</td>
<td>highly reliant on</td>
<td>accountancy security, call centers, real estate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>information and</td>
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<td></td>
<td>knowledge</td>
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Source: Authors' own research.

- legal services,
- financial services,
- marketing services,
- training services,
- consultancy services.

Modern marketing is related to customer value management regarded as a four-stage process of:
- defining customer value,
- creating value,
- communicating value and
- delivering value.  

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This approach helps systematize complex marketing activities undertaken by providers of knowledge-intensive services.

In Poland, the recent decade has seen an intense growth of diverse marketing activities undertaken by knowledge-based service providers such as universities, research centres, technology and innovation transfer centres, and business service providers but what is conspicuously missing is an approach to customer value oriented marketing as a process. The author believes that in the current climate the process approach to customer value oriented marketing management seems to be the most suitable for the types of organizations discussed, both for B2C and B2B service providers.

Let's look more closely at the four successive stages of customer value oriented marketing management in organizations operating on the B2B market offering knowledge-based services.

1. **Defining customer value** is about determining the core value for particular customers. In the case of organizations such as universities customer value is knowledge, skills and qualifications offered to students and essential for their intellectual and professional development. In the area of science and research (universities, research institutes), customer value is related to knowledge development (fundamental research) and social and economic development (applied research). Research centres, innovation and technology transfer centres as well as business organizations and their R&D departments contribute to development and implementation of knowledge by offering services such as identifying problem areas in client organizations, customer-made technical, technological, process, organizational and marketing solutions to improve work efficiency of client organizations and raise their competitive advantage.

2. **Creating customer value** involves making decisions and coordinating activities facilitating the actual processes of creating core and added value for the customer. Value creating processes take place both inside an organization and in its external environment in collaboration with business partners, suppliers etc., for example through building large cross-disciplinary research teams including specialists sourced from outside the organization for the purpose of delivering a given project. The above activities are based on specific and, according to the author, unique resources of knowledge-intensive organizations including:
   - human capital,
   - relational capital,
• organizational capital,
• intellectual capital.

At this stage, the role of the customer, individual and business alike, is becoming increasingly important in that the customer is encouraged to co-create the final offering (value). This practice is referred to as customer relationship management, client coaching or sharing knowledge with the customer. As a result, the end product/service is better tailored to meet the customer’s expectations.

It could be useful to know how a service offer directed to a specific business client should look like. An example might be a market technology offer that seeks to attract clients. Technology offers directed to entrepreneurs should include the following elements:
1) Offer title
2) Abstract
3) Technology description
4) Presentation of investment and operation costs vs. expected revenues
5) Presentation of benefits for end users/prospective buyers of the project outcomes
6) Target markets
7) Project status
8) IPR status
9) Rules and form of co-operation.

Professional preparation of a technology trade offer is not a simple task. Some helpful activities include market research, creating and updating databases with information about clients and suppliers of similar services, identifying potential buyers, gathering information about new solutions with the implementation potential, as well as collaboration with partners and clients on creating customer value proposition.

3. Communicating service value to the customer has always been central to marketing efforts in terms of both marketing strategy and tactics. Communicating service value serves to build the image of an organization and the products or services it offers as well as to develop long-term customer relationship.

The marketing techniques used help reach out to target audiences and stimulate interest in the offer by exploiting tools of individual, group and mass communication. Of

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importance might be also certain sales techniques e.g. those connected with the presentation of an offer or active trade fair participation. Promotion tools include practically all the tools used in promotion activities on the industrial and consumer goods markets that can be adapted to marketing services including knowledge-based services. There is however an essential difference in the way promotion messages are formulated and in the role of authors and researchers in diffusing the outcomes of their research work (e.g. researchers' participation in promotion events such as science festivals, innovation fairs, "open-door" days etc.).

The range of marketing communication tools available for use by knowledge-based service providers is being continually developed, particularly with regard to the Internet. Commonly used promotion activities include:

- direct channels: personal contacts (word of mouth), lectures, conferences, professional contacts, workshops, fairs, science networks, consultancy and counseling;
- internet channels: websites and portals of research projects, topic or industry-related websites and portals, e-publications;
- Traditional paper channels: publications in scientific journals, monographs, press releases, training and informational materials, information publicized in official government documents.

4. Delivering value to the customer in the form of knowledge-based services. The last stage in the marketing process driven by customer value is delivering the service to the customer in a form, at a time and place and for a payment previously agreed. This is the stage at which the sale of a service takes place, which in the context of scientific and research organizations might mean:

- effective delivery of the service (project, innovation) using the intellectual capital of partner organizations involved in the project,
- sale of a patent/ licence or know-how,
- sale of market research results in the form of a research report,
- licence granting (Polish law on higher education provides for two forms of technology sale or transfer from university to business: through centres for technology transfer operating as intercollegiate organizational units, foundations and partnerships or through special purpose companies — e.g. academic spin offs,
- professional customer support during the implementation of the project,
- collaboration with partners and suppliers during research commercialisation.
Final comments

The present work has attempted to analyse and evaluate a phenomenon which has to date eluded unequivocal definition either in theory or in practice — the provision of knowledge-based services and dedicated marketing approaches. Literature sources do not offer any holistic approach to the issue. Instead, they focus either on knowledge as an intangible asset of an organization and its significance for service providers across diverse industries or on the development of diverse marketing approaches and their usefulness for organizations offering the services under discussion. Given the complexity of the phenomenon, the author believes that successful solutions can be found through adopting a process-oriented approach to delivering value to the customer. In this approach, customers are business organizations that are offered value and benefits in the form of knowledge-based services by service providers such as universities, scientific units, transfer and development centres, technology parks, and clusters or network organizations. It is precisely these types of organizations that might profit from the process-oriented approach to customer value management, with unique knowledge and resources at their disposal providing the source of value and benefit for the customer.

Bibliography


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Marketing of knowledge based services