

University of Western Hungary
Faculty of Economics

**The examination of marketing innovation tools of knowledge-intensive
business services in the sector of micro and small enterprises**

Doctorial (PhD) thesis

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Supervisor's supportive signature

1. Introduction

The business service sector and the companies offering knowledge-intensive business services – KIBS – have changed and developed a lot in the last 10-15 years. Both the role they play in the service sector and the tools and methods applied by them have significantly changed. The restructuring of the service industry and the increasing share of services has become a major stimulus of growth where KIBS play a major role. This change has resulted in the rising number of people employed in the service sector and the share of the sector in the gross domestic product.

Relevance of the topic

The growing importance of knowledge intensive business services is a major issue in all the economic sectors but this trend is the most important in the business sector since these companies are offering professional assistance to other companies.

To increase their economic share and importance further, it is important to understand the innovation model, especially the marketing innovation model that is characteristic to the service sector. The researchers in Hungary share the view of the international scholars, saying that organizational and marketing innovations represent an under researched area of innovation, in spite of the fact that such innovations could significantly increase the performance and competitiveness of the businesses in the sector and the whole national economy. Innovation strategies in Hungary have so far focused on the processing industry and the innovations based on R&D while they pay little attention to the special needs of the service sector businesses.

To sum up, the domestic relevance of the topic is underpinned by the followings:

- increase in the economic weight of KIBS businesses;
- increasing competitiveness of companies of the sector and the whole national economy;
- service and marketing innovation is an under researched area of innovation;
- micro and small enterprises are using an increasing number of operative marketing tools to preserve their competitiveness, however, these tools are rarely assessed.

The objective and scope of research

The most important objective of the study is to demonstrate the key role of marketing tools and marketing innovation in KIBS as micro and small enterprises. The number of KIBS is growing at the fastest pace in this category of companies leading to higher intensity of cooperation as well. The marketing tools that are in use need to be reconsidered and the former set of tools need to be expanded and renewed under the conditions full of challenges. This study is focused on the examination of the combinations of marketing tools that are implemented at the level of micro and small businesses of knowledge intensive services; and the use of new tools regarding their groupings. Reactions of the other businesses and changes of customer behaviour is also examined.

The fundamental questions of the thesis are as follows:

- What are the KIBS and their special features and what factors foster their growth?
- What kind of model can be used to examine, measure and analyse their innovation activities, with a special regard on marketing innovation?
- What are the latest marketing tools that have been used in the last 3 years and which element of the marketing mix helps us best to determine their marketing activities?
- How do the marketing tools used by KIBS live up to the market expectations and how do the other businesses perceive their marketing activities? What kind of customer behaviour is typical for such businesses?
- Which factors and aspects influence the marketing innovation activities of KIBS? Which of these has the most influence?

The following hypotheses have been laid down and examined:

- H1 The majority of micro and small enterprises in Hungary, including the firms offering knowledge intensive business services, avoid taking extensive risks.
- H2 Micro and small enterprises show a positive attitude toward the services of KIBS.
- H3 The 7P model in service marketing is apt to describe the ,marketing innovation activities of KIBS.

- H4 The marketing activities of micro and small enterprises in the KIBS sector are dominated by operative marketing tools.
- H5 KIBS can be divided into several categories regarding organizational groups on the basis of their marketing innovation activities.
- H6 The latest communicational tools play a special role when it comes to competitive advantages.
- H7 There is strong positive correlation between marketing innovation activities and market revenues.

2. The basis, methodology and justification of research

3 major areas were focused on in the process of secondary research:

- introduction of the conceptual framework and examination of the establishment, development, special features of knowledge intensive business services and the role they play in the domestic economy;
- innovation, especially marketing innovation, the possibilities of modelling and the exploration of measure-related problems;
- changes of the marketing mix and the applicability of the 7P model.

Both qualitative and quantitative methods were used to accept or refuse the hypotheses within the framework of primary research.

Primary research consists of 3 research phases. The table below depicts the characteristics of the phases and the assigned hypotheses.

Detailed information of primary research

	Research type	Research period	Sampling method	Sample and its size	Survey site (planned)	Hypotheses
R1	qualitative–in-depth interviews	April 2012–April 2013	accidental	KIBS entrepreneurs 7	Budapest Dunaújváros	H1
R2	quantitative – standard questionnaire	March – June 2013	accidental snowball	Others than KIBS entrepreneurs 210	National	H1 H2
R3	quantitative – standard questionnaire	March – July 2013	accidental snowball	KIBS entrepreneurs 202	National	H1 H3 – H7

source: edited by the author

Aims and part aims attributed to the research phases:

Research Phase R1:

- Information on the current situation of the knowledge intensive business sector.
- Exploration of the special characteristics of the micro and small entrepreneurial level, especially their innovation activities.

Research Phase R2:

- Assessment of the attitudes other enterprises toward KIBS businesses on the demand side.
- Analysis of the composition of the knowledge intensive business services demanded.
- Aspects considered at buying the services.

Research Phase R3:

- Mapping the marketing innovation activities of KIBS businesses.
- Exploration and description of the groups with various marketing innovation activities.
- Examination of the factors influencing the marketing innovation activities of KIBS.

During the in-depth interviews – Research phases R1 – the following questions are examined:

- How do they see the positions and role of KIBS on the market and the economy?
- How do they see today's entrepreneurs?
- What factors determine the future direction of the operation of the sector?

Interviewees were selected to be the managers of businesses with one of the following 3 scopes of activities:

- offering IT services;
- offering law, accountancy or tax-related services;
- offering consultancy services related to leadership.

The most important factor that was considered for selecting the interviewees was the level of knowledge they had about their market, the situation and the customers of the sector and the special characteristics of the customers.

Interviews were recorded between April and September 2013. 4 interviews took place in Budapest and another 3 were performed in Dunaújváros.

For the *basic questionnaires* both the demand and the supply of the market was intended to be surveyed, thus two questionnaires were produced.

The entrepreneur questionnaire – Research Phase R2 – was supposed to survey the demands, attitudes and characteristics by reinforcing and checking the information in the

other questionnaire. For this reason, it was a simple and short questionnaire which could be filled in by companies of any scope of business activities.

The knowledge intensive business services questionnaire – Research Phase R3 – represents the major part of research where the latest marketing tools used in the last 3 years were explored. The companies concerned were firms that offered knowledge intensive business services under the category rev. 2. of NACE.

Both questionnaires were edited by using the Google Drive Form. The survey took place between March and July 2013. In a geographical sense, primarily businesses in the counties of Pest and Fejér were included in the survey. Questionnaires with faults and deficiencies were not processed. Thus, 210 pieces of entrepreneur questionnaires and 202 pieces of knowledge intensive business services questionnaires were coded and processed.

The research sampling is not representative, but the results are still informative and they can be used to identify the major trends and to draw some conclusions.

Answers for the questionnaire were collected in many ways so that the highest number of reply could be reached. The response rate to the questionnaires edited by google drive and forwarded on-line was quite low, and for this reason, other methods were applied too. Snowball sampling was used by asking friends and relatives to forward the questions to entrepreneurs with the right scope of activities among their friends. But this way, the representativeness of the sampling could not be achieved.

The data received were recorded in an Excel spreadsheet and processed by Excel and SPSS 18.0. Both analyses with one and multi-parameters were performed. As for the assessment, the means and percentages were calculated for questions referring to scales.

Descriptive analysis (minimum, maximum, mean, deviation and distribution) were also performed. For the significance test, $p=5\%$ was used. As for the multiparameter tests, factor analysis, cluster analysis, khi probe and Pearson correlation were calculated.

3. Research findings

By assessing their conditions on a scale of 6, the two lowest values were attributed to risk taking (3.8) and vision of the future (4.1). This information contributes to the findings of the in-depth interviews which showed that the majority of the companies did not have a vision of the future and perspectives. They do not dare to risk major risks. To avoid possible risks, they are very cautious and thus, they do not perceive the opportunities of innovation, although they said they were open to new things (Hypothesis H1 accepted).

For the test of hypothesis H2, statements related to KIBS and the aspects of choosing the service provider had to be considered. Findings show that the entrepreneurs recognize the need of taking professional services. They admit that such services contribute to the more effective operation, the growth and increasing competitiveness of the organizations. They do not agree with the statement that such services are useless to the companies and they are only required by laws and regulations.

They have a positive view of the activities of KIBS and their usefulness for the operation of their own business. They are extremely price sensitive by choosing the right service provider due to their scarce opportunities and low turnover. The value 5.2 was attributed to the price of the service on a scale of 6 (Hypothesis H2 accepted).

On the basis of hypothesis H3, the 7P model is suitable to describe the innovation activities.

This hypothesis was examined by factor analysis to see whether a model of fewer Ps, the 4P for instance, could be used to deliver the same amount of information of the 7 groups of marketing tools. Correlation between the parameters is a pre-requisite of factor analysis, without this condition, the parameters could not be grouped into factors. However, there is little correlation between the parameters of the 7P, which shows that the innovation activities could not be described by fewer groups of marketing tools (Hypothesis H3 accepted).

Businesses try a number of new marketing tools in their marketing operations. The 7P model was used in the research to examine this issue.

As for the product/service mix, most attention is paid to the basic services, its quality and offers by the KIBS. Every second respondent reported to have improved the quality of the basic service and a similar number of businesses have expanded the scope of their basic services.

Consumers are very price sensitive in the organization market as well, especially micro and small enterprises, which is very much perceived by KIBS. Their innovation activities is well differentiated, including special pricing in the price policy.

Sales channels show the lowest level of innovation activities among the elements of the marketing mix. The reason for this might be that this element is the one that is the most difficult to change in the marketing mix.

Regarding innovation it is the area of communication where businesses are the most active. This is not a surprise since they have the most tools in this area of dynamic changes and that is where most of “barefoot innovations”¹ could be performed. Designing a website was one of the most popular tools of communication. It reflects on what is now a commonplace: “The company that is not present on the internet does not exist”.

One of the major characteristics of knowledge intensive services is professionalism, the creation and sharing of knowledge. 67% of the respondents marked training as an important tool of innovation. Unfortunately, 40% were dissatisfied with these training courses. Very few (25%) of KIBS were using the well-known methods of human management such as performance evaluation or development of competencies.

The refurbishment of and making comfortable the surrounding objects is very important for the operation of the businesses. It may increase the satisfaction of the employees and it may produce pleasant and comfortable conditions for the clients while they are waiting to take the service. Most of this refurbishment is done through the purchase of new interior objects and furniture.

The firms did most of the innovation activities in the tool group of processes to improve the effectiveness of their operation. They primarily wanted to achieve this by the use of a supportive information technology (34%) and the introduction of registration (27%). To achieve a higher level of customer satisfaction, an increasing emphasis is placed on the simplification and acceleration of the complaint management process. 29% of the responding companies had innovation activities on this field.

¹This term was originally used by Katalin Szabó. It is not a real innovation, it is rather motivated by necessity or a „down-to-earth mind”.

The use and of the marketing mix components can be considered as the operative and executive marketing activities of the companies. Findings show that the KIBS are attempting to influence and to adapt to the changing market conditions by various marketing tools. (Hypothesis H4 accepted)

As a result of the cluster analysis, 4 clusters that were reflecting the innovation activities of the companies were classified.

1. Passive firms: 87 businesses – there is no or very little innovation
2. Enthusiastic firms: 64 businesses – trying several marketing tools
3. Conscious firms: 16 businesses – continuously high level of innovation
4. Firms in the middle: 35 businesses – innovation affects 1-2 areas

The 4 clusters also seen as segments are very different from each other regarding their marketing innovation activities and the composition of such activities. (Hypothesis H5 accepted)

Innovation activities were the highest in the field of communication tools. This set of tools was the most popular one even for the passive firms. Quantity and quality of online presence will play an even more important role in the future (Hypothesis H6 accepted)

The power of innovation can be traced in the turnover and revenues of the companies as well. On the basis of the sample, the statistical significance can be established at a significance level of 0.99%. Assuming a linear correlation between the two parameters, the Pearson correlation coefficient: $r = 0.33$. Since $0.2 \leq r \leq 0.7$, a moderately weak, positive correlation can be established between innovation activities and revenues of the firms. (Hypothesis H7 rejected)

4. New and novel scientific results

Risk is naturally inherent in the existence and operation of businesses. Expenditure always precedes the revenues (if there are any revenues as a result of the operation) to find the best combination of allocated resources. But it seems that risk-taking lags behind the other special characteristics of businesses such as openness, independence, persistence, market orientation and profit orientation. Due to the high level of risk avoidance, companies are too cautious and lose out on innovation opportunities.

T1 It has been proved that the majority of micro and small enterprises, including knowledge intensive business service providers, are risk-averse, which means a setback for their innovation activities.

In spite of the fact that businesses do not really tend to turn to professional providers for advice, they have a high opinion of the operation of KIBS. They acknowledge their services and deem them to be useful for the operation of their businesses.

T2 It has been proved that entrepreneurs have a positive attitude toward professional providers, referring to the special role they play in the effective operation and competitiveness of the companies. At the same time, they still opt for not demanding any of their services. Businesses in law, accountancy, tax consultancy are an exception. These firms play an increasing role in the operation of the other businesses.

Marketing innovation is one of the latest type of innovation. It was first defined in the Oslo handbook 2005 as a function to be measured. But ever since, it has not been decided which indicators should be used to measure marketing innovation. International literature gives little clue on that. Every innovation model has their own type of approach, all of them demand different indicators of measurement.

T3 The tools of marketing mix are suitable for measuring marketing innovation in the case of micro and small enterprises since they do not prepare a marketing strategy. The 7P model that is generally accepted for services and a consistent use of their tools does a good job when it comes to measuring marketing innovation.

Micro and small enterprises see the increasing importance of the use of marketing tools. Of course, in an ideal situation, entrepreneurs would be more conscious in using these tools, which would contribute to the development of their strategical thinking and approach.

T4 The marketing activities and the role of these activities are regarded as very important by KIBS. Strategical and operative tools are not separated and the use of operative tools is more dominant in their operation.

In the course of research, a cluster analysis was carried out for the tool set of 7P, and thus, the major parameters and characteristics of the segments with various marketing innovation activities were also explored.

T5 The part segments with a various level of innovation activities were explored and characterised on the basis of fundamental and descriptive parameters.

The highest level of innovation activities can be detected in the field of communication regarding the set of marketing mix elements. The major reasons for this are the following:

- this is the field where the most dynamic change takes place and companies need to adapt to these changes;
- this is the tool set with the highest number of tools for the businesses to choose from;

T6 The field of communication tools, especially the online tools, show the highest level of innovation activities of KIBS.

Entrepreneurs pass through various learning processes in their innovation efforts. New skills and abilities are demanded for the use of the latest marketing tools. As a result of the learning process regarding the use and adaptation of the given marketing tool, the entrepreneurs' approach develops toward market orientation. All this can positively influence the market revenues too.

T7 It has been proved that there is a moderately weak and positive correlation between marketing innovation activities and revenues.

5. Conclusions and proposals

The sector of knowledge intensive business services has been proved to be one of the most dynamically developing sectors. Expansion of the sector also results in the increase in competitiveness. The use and development of marketing strategically and operative tools is absolutely indispensable for the companies to stand up in the competition.

The actors in the KIBS sector operate in various branches which have their special characteristics and this makes it more difficult to examine them.

Being knowledge intensive businesses, they definitely have to learn, train themselves and develop their personal competencies continuously.

KIBS play a double role in the operation of other companies. On the one hand, it strongly relates to the regulations (e.g. operation of bookkeepers). On the other hand, it influences very much the role other businesses play in the market competition (e.g. IT consultancy). Although it is regarded as an important and useful service by the entrepreneurs – for reasons of their special expertise –, they do not demand such services. KIBS that operate in other fields than accountancy, taxing and law must consider how to address their potential clients and how to prove the importance of their services to them.

The measurement of the innovation activities of KIBS is quite problematic due to the following circumstances:

- problems related to the interpretation of turnover;
- restrictions to the use of the currently accessible indicators;
- deficient information;
- every innovation model has their own indicators;
- problems related to the access to data and the connection between databases.

The marketing activity of KIBS show relevant differences. It is important to explore these so-called part segments because it helps the other businesses to select the target market, to position the company, to establish their marketing strategy and as a part of that, to set their marketing mix.

The importance of marketing communication is not a new thing to businesses but they face new challenges from the part of online communication. The marketing activities of KIBS companies concentrate on this field. The Internet is becoming a primary arena for

gathering information, thus, the KIBS also need to be present in the virtual world by using various online communication tools and techniques.

6. List of publications by the author in the topic of the thesis

2014

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ISBN 978-80-8165052-9
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3. Kővágó Györgyi

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4. Kővágó Györgyi

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Konferencia helye, ideje: Budapest, Magyarország, 2014.11.25
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2013

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Befoglalómű link(ek): [OSZK](#), [Teljesdokumentum](#), [BME PA közlemény](#)
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