

The Selected Aspects of a S2B Internal Partnership

Lucia Možuchová¹, Matej Pechota¹

¹ The Faculty of Operation and Economics of Transport and Communications, University of Žilina, 010 26 Žilina, Slovakia

Abstract In the knowledge-driven economy there is a growing need for deeper and more productive interaction between universities and industry. Science-to-business (S2B) marketing is characterized by that two different spheres meet - the academic and the business. In S2B marketing, partnership refers to the activities whose aim is to create accordance between internal and external stakeholders. Internal partnership is focused on creating an atmosphere of partnership within the organization. The aim of the paper is to propose possible changes in the implementation of the S2B internal partnership in terms of University of Žilina. In order to achieve the stated aim, an analysis of the application of the S2B internal partnership at selected universities was performed.

Keywords S2B marketing, partnership, university, research activity, technology transfer office, commercialization

JEL I23, M31, O30

1. Introduction

Science-to-business marketing (S2B marketing) deals with a new concept of entrepreneurial thinking and action at universities and scientific-research institutions. S2B marketing uses modern management and marketing concepts, models and tools and needs a whole new way of thinking in today's scientific and research organizations. [1] It is a set of marketing tools linked to knowledge creation and innovation activity that takes place in a university environment. [2]

S2B marketing is based on the basic marketing principles that can be found in business-to-business (B2B) marketing or business-to-consumer (B2C) marketing. [3]

The S2B marketing mix (known as the 6P) is made up of six marketing tools: product, price, distribution, marketing communication, potential and partnership. [2]

1.1. S2B partnership

S2B marketing is characterized by that two different spheres meet, the academic and the business, which are different in many respects, e.g. market orientation; research motivation; use of profit, public contribution. In order to create proper synergy between the participants, special attention has to be paid to the cooperation between them, i.e. partnership. In S2B marketing, partnership refers to the activities whose aim is to create accordance between external and internal stakeholders. [2]

Authors Poyago-Theotoky, Beath and Siegel argue that if there is a positive correlation between investment and time management within the S2B relationship, R&D outputs will get much earlier. Simply put, S2B partnerships are one of the aspects for faster technology diffusion. These findings have important political implications because they confirm the

logic of Bayh-Dole legacy lawmakers in the United States. [4]

According to the authors Prónay and Buzás, the S2B partnership represents activities aimed at creating synergy between external and internal actors and internal actors of universities and research institutions with each other, ensuring the effective knowledge and technology transfer to the business environment. [5]

S2B marketing internal partnership is focused on creating an atmosphere of partnership within the organization. It includes the cooperation of researchers and S2B marketing managers, and related to this the provision of two-way (industry – researcher; researcher – industry) flow of information. Two methods are being developed to create an appropriate partner environment, the effective combination of which contributes to the successful knowledge and technology transfer:

- the first method is that researchers are supported by a technology transfer center and other support sites. As a result, relationships within the entire research community are developing;
- the second method is the establishment of a science park or research center where joint R&D activity is under way and supported. On this basis, partnership can also be created between research areas that are remote from each other. In addition, research centers and science parks have greater capability and a better negotiating position towards external partners in commercialization. [5]

2. Aim and methodology

The aim of the paper is to propose possible changes in the implementation of the S2B internal partnership in terms of University of Žilina.

In order to achieve the stated aim, an analysis of the application of the S2B internal partnership at selected universities was performed. The analysed universities are:

- Münster university of applied sciences, Germany;
- Coventry university, United Kingdom;
- Saint Petersburg State University of Information Technologies, Mechanics and Optics, Russia;
- University of Žilina, Slovakia.

The result of the analysis is the comparison of selected aspects of S2B internal partnership within analysed universities. This result is an important basis for meeting the aim of the paper.

3. Results

This part of the paper focuses on the analysis of the application of selected aspects of internal partnership of S2B marketing in terms of selected universities.

3.1. Münster University of Applied Sciences

Management of innovation and knowledge and technology transfer of the Münster University of Applied Sciences (MUAS) is based on three basic principles and communicated through the terms "thinking", "managing" and "acting". Three approaches of the MUAS innovation management concept, also known as the „Triangle for Innovation“, are three different MUAS organizational units working interdisciplinary. [6] Table 1. shows the three different levels within innovation production of the MUAS – strategic, analytical-scientific and operational level.

Table 1. “Triangle” for Innovation at MUAS

Approach	Organizational unit	Roles
Strategic (managing)	Top management MUAS	Strategic planning and decisions making.
Analytical-scientific (thinking)	S2B marketing research centre (S2BMRC)	Market research and creation of support tools for MUAS management and technology transfer office.
Operational (acting)	Transfer agency of MUAS	Technology and knowledge transfer.

S2BMRC explores and develops new knowledge, models and tools in the field of science marketing and has extensive experience in providing advice and projects to all actors within the research and innovation ecosystem.

S2BMRC's analysis is based mainly on strategic studies such as market potential studies, market diagnostics, awareness surveys, and customer and partner satisfaction surveys. [1]

To evaluate research and technology to identify those with the greatest commercial potential, S2BMRC applies the support tool *TechAdvanceTM*. The *TechAdvanceTM* concept is made up of the following elements:

- *assessing* – assessment of research projects;
- *structuring* – portfolio management & prioritisation;
- *risk management* – identification of unforeseen project issues;
- *developing* – a guide to develop the “ideal” commercialisation project. [7]

TechAdvanceTM is available in the three versions mentioned in the following Table 2.

Table 2. Version of *TechAdvanceTM*

<i>TechAdvanceTM</i> version	Price
<i>TechAdvanceTM</i> Online	A one year license to use the online version of <i>TechAdvanceTM</i> is accessible for an investment of 325 €. Every extra account within the same organisation costs 80 €/year.
<i>TechAdvanceTM</i> Handbook	Alternatively the <i>TechAdvanceTM</i> handbook is available for use and can be purchased for an investment of 203 €.
<i>TechAdvanceTM</i> Package (1 year online license + handbook)	If you are interested in the online version of <i>TechAdvanceTM</i> as well as the <i>TechAdvanceTM</i> Handbook a discount is offered of 80 € as they are both accessible for a total investment of 447 €.

All of the MUAS's knowledge and technology transfer processes are conducted through **Transfer agency at MUAS**, which was established as a spin-off and belongs to the structure of MUAS. Due to the two MUAS campuses, the Transfer Agency offices are located in Münster and Steinfurt.

The specialist team of the Transfer Agency can respond more quickly and more to the needs and requirements of scientists and partners in the business environment. [1]

Based on the strategic alliance of MUAS with the district of Steinfurt, **The Business and Innovation Park GRIPS** was established, located in the premises of the Steinfurt campus. It offers canal and lab space for joint research and development projects, the existence of innovative businesses, and the emergence of new technology-oriented spin-offs and start-ups. [8]

The MUAS environment is governed by the slogan "Success needs strong partners", which is why MUAS has created so-called **Society of Sponsors of MUAS**, which supports the university and helps manage its wide range of science, research, and teaching tasks. This society is operated by the MUAS Transfer Agency. It is made up of businesses, academics, students, graduates or individuals (sponsors) who have a certain connection with MUAS and want to support individual activities to achieve its goals. They undertake and strengthen solidarity with MUAS and strengthen their operations in the region where MUAS is based. Interconnection and support between sponsors is as important as MUAS financial support. Sponsors concentrate their commitment on five key areas:

- practical teaching based on scientific foundations;
- applied research;
- promoting the application of scientific findings on working life in terms of the transfer of knowledge and technology;
- improving the state of equipment in teaching, research and development facilities;

- promoting international links to higher education institutions and companies.

The annual membership fee in this society is 150 € for businesses, 50 € for private individuals and academics. In case of interest, MUAS graduates have two years of free membership from the day of the state examinations. [9]

3.2. Coventry University

Within the scope of commercialization of intellectual property, University of Coventry (CU) has its structures established by the **Intellectual Property Commercialization Office**. This workplace is responsible for the publication, registration, management and commercialization of intellectual property.

The **Technology Park of Coventry University** (TPCU) offers a number of modern office spaces within the entire complex of adjacent business centers. The TPCU is located in the CU campus environment. The TPCU aims to support the emergence and development of innovation-based businesses, high growth potential and knowledge. TPCU includes conference and meeting rooms, research facilities, and business incubators. [10]

Many business activities are carried out and supported through the CU subsidiary, which is **Coventry University Enterprises Limited** (CUE).

CUE supports the business objectives of CU's customers and partners and seeks to maximize the commercial potential of capabilities, expertise and resources of CU. It has a comprehensive range of services to support small and medium-sized businesses to improve and expand their business.

In addition, CUE operates the *TheFutureWorks* workplace, which represents the CU personnel agency. The agency was originally established to acquire and manage the staff for various departments and faculties at CU. Currently, the Agency also works with outside businesses to provide quality, intelligent and flexible recruitment solutions for temporary and permanent employment in all sectors of industry. The agency focuses on companies in Coventry, Warwickshire and the West Midlands. [10]

Within CU there is established the centre so-called **Enterprise Hub**, a resource for CU's employees, students and graduates, who are interested in starting a business and setting up a business or developing a social enterprise. This Hub is a contact point for meeting CU professionals and entrepreneurs from different areas and creating a network of similarly minded and oriented entrepreneurs. [10]

3.3. Saint Petersburg State University of Information Technologies, Mechanics and Optics

The **ITMO Technopark** has been set up to develop the potentially successful activities of researchers and partners at the Saint Petersburg State University of Information Technologies, Mechanics and Optics (ITMO University). This Technopark is not in close proximity to the main campus. It is characterized by synergetic processes of interaction between educational institutions, research institutions and enterprises involved in the commercialization of the results of scientific work and development.

There are significant incubators in the Technopark premises where acceleration programs for start-up companies are provided. [11]

In the ITMO Technopark environment, an innovation department **Department of Innovation** has been established, which aims to help researchers work with industry and government, as well as to set up their own start-up companies.

Department of Innovation supports the creation and implementation of new projects in different research areas and includes specific support departments, which are:

- Project office at ITMO University;
- Department of Intellectual Property and scientific and technical information;
- Department of R&D marketing and commercialization;
- Centre for the promotion of youth innovation and technological entrepreneurship. [12] [13]

ITMO University has established its own venture fund "**ITMO Venture Partners**". This increases the commercialization potential of scientific research and contributes to the development of spin-offs in the high-tech sector. Activities within Venture Fund also contribute to the learning process of students and graduate students, forming competencies in project management and innovation management, as well as the formation of so-called "soft skills" among engineering students since they will actively participate in the processes of projects development.

Fund invests in companies based on the research results of ITMO University having gone through acceleration and incubation programs, at the seed stage of development in the three priority areas: Health care, Preservation of the human environment and Progressive production and M2M technology. [14]

3.4. University of Žilina

An important support department of UNIZA in the field of R&D activities is the **Department for Science and Research**. It supports research activities of researchers, organizes professional and scientific events, provides technology transfer services, etc. The main task of this department is to coordinate scientific research activities and to ensure the gradual growth of UNIZA pedagogical and research staff. [15]

In 2015, two significant research workplaces were opened in the UNIZA campus, such as the University Park and the Research Center. These research facilities currently form the basis of the interconnection infrastructure of UNIZA's scientific environment and the business environment. In both workplaces, conditions are created for incubators of new companies and broad support for the development of the region. [16]

University science park of University of Žilina (USP UNIZA) is a unique research center at the international level, which includes 15 top-class laboratories. USP UNIZA, through its work, provides opportunities for cooperation for students, researchers and researchers, as well as for entrepreneurs and businesses. The goal of USP UNIZA is to create a functional system for the transfer of research and development results into practice with long-term sustainability and

improvement of quality of life based on technological innovation.

Within USP UNIZA a **Technology Transfer Center** has been established, which has its services divided into five areas: intellectual property protection, technology transfer, technology incubator, research activity and education. [17]

Research centre of University of Žilina (RC UNIZA) is a unique R&D workplace in which 23 research and support laboratories are built. Its mission is to act as a regional center of applied research, integrating critical research activities and achieving a synergy effect in utilizing and enhancing UNIZA's research potential. The role of RC UNIZA is not only the realization of excellent research in industrial practice, but especially the realization of research with a direct impact on the ordinary life of a person. [18]

4. Conclusions

UNIZA's long-term goal is not feasible without quality science, research and innovation activities in cooperation with leading research centres at home and abroad. The UNIZA's competitiveness in these areas necessarily presupposes cutting-edge instrument and space infrastructure. UNIZA is characterized by a unique research infrastructure and research background made up of several scientific and research centres.

Based on the results of the analysis, we propose to establish a similar workplace as S2BMRC in the UNIZA environment. Within this workplace, activities related to market research and creation of support tools for UNIZA top management and technology transfer centre would be conducted there.

For evaluating the commercialization potential of UNIZA research projects, we propose to purchase the support tool TechAdvanceTM in the "TechAdvanceTM Package" version. This package is available for 447 EUR. The online version would be for Centre for technology transfer's employees. The handbook would be available to all UNIZA's employees who would like to use this handbook within their R&D activities.

It would also be appropriate to launch a Society of Sponsors in terms of UNIZA, as MUAS has it so. This Society would be operated by Centre for technology transfer and its members would be Žilina region's businesses, academics and students of UNIZA and individuals. Society's members would be committed to support UNIZA's R&D and education activities, thereby increasing the competitiveness of Žilina region. Finance from paid membership fees would be used for UNIZA's R&D activities.

In terms of USP UNIZA it would be appropriate to establish a support workplace, such CU has Enterprise Hub. This workplace would be a unique contact point for UNIZA's employees, students and graduates interested in establish an own start-up. There would be provide a personal meetings with experts from UNIZA and with representatives of selected businesses, especially from the Žilina region.

For UNIZA, we propose to establish a workplace for its own venture fund, as well as ITMO University has ITMO

Venture Fund. Priority research areas funded by this UNIZA Venture Fund would be the four USP UNIZA's research areas: Intelligent Transportation Systems; Intelligent Manufacturing Systems; Advanced Materials and Technologies; Information and Communication Technologies. The members of this fund could be businesses focused on above mentioned research areas of USP UNIZA. Such a fund would be contribute to increasing the commercialization potential of research projects of UNIZA and development of spin-offs within selected research areas.

ACKNOWLEDGEMENTS

This paper was supported by the Slovak Research and Development Agency under the contract No. APVV-14-0512 "Universities and economic development of regions (UNIREG)" and by the Slovak Scientific Grant Agency under the contract No. 1/0087/18 "Enhancing competitiveness of the Žilina region by increasing influence of the University of Žilina in the region and in Žilina town".

REFERENCES

- [1] Schröder, C., Baaken, T., Korff, N. The Triangle for Innovation in Knowledge Transfer and Partnering at Munster University of Applied Sciences. In Knowledge Transfer. University of Kassel. 2012. ISBN 978-3-86219-413-1.
- [2] Leino, M., Laine, K. University Industry Interaction Best Practice Model for Partnership. Münster: Münster university of applied sciences. 2014. ISBN 978-3-938137-57-4.
- [3] Haour, G., Mievile, L. From Science to Business: How firms create value by partnering with universities. Basingstoke: Palgrave Macmillan, 2010. ISBN 0230236510
- [4] Poyago-Theotoky, J., Beath, J., Siegel, D., Universities and Fundamental Research: Reflections on the Growth of University-Industry Partnership, 2002. ISSN 0962-4031.
- [5] Prónay, S., Buzás, N. On the challenges of the science to business (S2B) marketing. In Regional economic resilience through innovation and enterprise. Istanbul: Lookus Scientific, 2013. ISBN – 978-9944-380-09-6.
- [6] Kliewe, T., Baaken, T., Kesting, T. Introducing a Science-to-Business Marketing Unit to University Knowledge and Technology Transfer Structures: Activities, Benefits, Success Factors. In: Szopa, Anna; Karwowski, Waldemar; Ordóñez de Pablos, Patricia (Eds.): Academic Entrepreneurship and Technological Innovation: A Business Management Perspective, Hershey, 2012. pp. 53-74.
- [7] TechAdvanceTM. [online] Available on the internet: <<http://www.techadvance-online.com/>>
- [8] GRIPS Grunder und Innovationspark Steinfurt. [online]. Available on the internet: <<http://www.grips-steinfurt.de/grips-steinfurt/>>
- [9] Success needs strong partners. [online] Available on the internet: <<https://en.fh-muenster.de/hochschule/alumni/gdf.php>>

- [10] Coventry University Enterprises Limited. [online] Available on the internet: <<http://www.coventry.ac.uk/business/our-services/coventry-university-group/coventry-university-enterprises-limited/>>
- [11] Technopark. [online] Available on the internet: <<http://technopark.ifmo.ru/en/about-technopark/#>>
- [12] Innovative entrepreneurial international. [online] Available on the internet: <http://www.ifmo.ru/images/pages_trans/40/itmo_innovative_booklet_last.pdf?>
- [13] Toivonen, N., Vasilev, V. Conceptual Framwork of Created University Innovation Structures. In Knowledge Transfer. University of Kassel. 2012. ISBN 978-3-86219-413-1.
- [14] Venture Fund. [online] . Available on the internet: <<http://innovation.ifmo.ru/en/page/34/>>
- [15] Oddelenie pre vedu a výskum. [online] Available on the internet: <<https://www.uniza.sk/index.php/vedci-a-partneri/vyskumne-zazemie/oddelenie-pre-vedu-a-vyskum>>
- [16] Annual report of UNIZA 2016. [online] Available on the internet: <https://www.uniza.sk/images/pdf/uradna-tabula/vyrocnasprava/UNIZA_-VS-o-cinnosti_-2016.pdf>
- [17] University science park of University of Žilina. [online]. Available on the internet: <<http://uvp.uniza.sk/>>
- [18] Research centre of University of Žilina. [online]. Available on the internet: <<http://vyskumnecentrum.sk/>>