

Intermediating between Business, University and Government

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Abstract

The economy is going through a development process which has created challenges to all key sectors: business, university and government. Businesses have to find new, ICT-embedded and networked ways to compete in global markets, universities are pressured to rapidly and efficiently produce relevant knowledge on current trends, and governments must find the policies that support the ongoing development process. This has created a need for dedicated intermediating actors, who facilitate interaction between the three key sectors of economy. The purpose of this research is to increase our understanding of intermediating activity between business, university and government. The case analysis demonstrates that operating in a new and ill-defined area and pursuing ambitious goals offers many challenges. To successfully catalyze change and intermediate between business, university and government, dedication, resources and time are needed in order to create a coherent service management system.

Keywords

intermediating, business-university-government

Introduction

The society at large is going through a process of development that can be described by revolution of information technology and rise and extension of the network economy (Castells & Himanen 2001, 47). This is a major transformation process from industrial society to knowledge society, of a kind to industrialization, and can be referred to as 'electronization' or 'knowledgization' (Tommila, Järvelin & Seppä 2004, 975). This development process has created challenges to all key sectors: business, university and government. Businesses have to find new, ICT-embedded and networked ways to compete in global markets, universities are pressured to rapidly and efficiently produce relevant knowledge on current trends, and governments must find the policies that support the ongoing development process. In the age of networking and enhancing methods of doing that, the way to meet these challenges is by cooperating.

The development process needs to be supported by an infrastructure producing relevant knowledge that supports the emergence of innovations. The localization, exploitation and commercialization of innovations have become appreciated as important cornerstones of economic success all over the world. Organizations that operate between universities and businesses as intermediators are of growing importance to the innovation system. These organizations have been predominantly created through public financing to act as links between the different parties and to facilitate the innovation process. (Valovirta & Niinikoski

2004, 2) The characteristics and dynamics of these interface operators vary greatly and there is no established body of knowledge. The mission of this research is to increase our understanding of intermediating activity between business, university and government by following a single case study strategy.

Research strategy

This research is rooted in practical experiences from intermediating activity between business, university and government. It is founded on observations on this trilateral interaction and on the challenges the intermediating organizations encounter. The research is also inspired by the author's professional interest to refine and develop the intermediating activity in the Business-University-Government context.

The case organization of this study is e-Business Research Center (eBRC) whose goal is to produce high level academic research on current e-business related phenomena by commencing, coordinating and managing research projects that combine the interests of researchers, businesses and research financiers. eBRC is aimed at turning e-business related research and development interest "from idea to knowledge". eBRC seeks to do this by matching the interests of the right stakeholders - domestic and international – into value-creating project partnerships. It operates in the interface of the three key sectors of economy and is a prime example of the new breed of intermediators.

This research is empirically-oriented in nature and will explore an emerging phenomenon. Thus the current development processes in the environment are discussed in detail. After this analysis, the Business-University-Government context is conceptualized and intermediating activity defined. Combined to a theoretical model, this will provide a guiding framework which is then applied to the case organization. The empirical part will yield a revised framework, and result in concluding proposition of the phenomenon at hand. This study is conducted as action research, more precisely retrospective action research. The empirical part is mainly built from the practical experience of the author in the case organization during 2001-2005. This information has been acquired through unintentional observation and it is supported with secondary material consisting of reports, memos, minutes of meetings, web materials and other written data. In addition, a survey exercise was conducted to gain outside information and experience, mainly from the future development of the case organization. The survey was conducted by email and involved key stakeholder groups of the case organization. It was sent to five representatives from each of the sectors of business (B), university (U) and government (G).

Analyzing the environment

Business in the knowledge society

During the last decades, the businesses and markets have clearly been the driving forces of development that steer the directions the societies head to. The development of the knowledge society creates challenges of globalization, information and knowledge management and growing competition to name a few, to businesses in all fields. As dynamic market operators,

the businesses have to find the right information at the right time in order to survive and succeed. Often their resources for research and development projects are quite limited and using consultancy might be too expensive. Businesses have to find new ways to conduct research to maintain their business competence.

The Finnish National Technology Agency, Tekes, highlights the issues that are important in this networked economy in its technology strategy. The following figure 1 represents the key areas of this strategy.



Figure 1. Key areas of industrial renewal and welfare promotion

Figure 1 provides one perspective on the topics and fields of research that are important in today's economy. The aspects that Tekes includes under the concept of business competence represent the key issues that explain the existence of intermediating organizations whose focus is linked to the key areas presented in the strategy of Tekes: building value creating networks and cluster cooperation, creating ways to commercialize new ideas especially in the university environment and continue the analysis of the digital economy.

Universities and their new challenges

Universities are old and powerful institutions and their traditions are just as strong. The universities have, however, been somewhat isolated from the outside world serving the purposes of science and academia. Along with the development of the knowledge society, the importance of universities as knowledge producers has grown to a new level and the potential of academic research has been noticed. In Finland, this discussion has gone further under the scope of the so called third mission of the universities, the classic missions being education

and research. The third mission of universities is rather ambiguous a concept as it can be defined in different ways according to the perspective. Nieminen sees the third mission as an approach emphasizing the societal relevance of education and research. Another approach is related to social impact, which usually is tied to time, place and the analyzed context. All in all, he considers the third mission as an important factor that has an affect on the legitimacy that universities hold. A notable perspective is also the fact that the third mission is strongly related to the commercialization of new knowledge and research.

The university is traditionally a rather rigid institution and thus new measures are needed if results are truly wanted. Universities have founded, in cooperation with other private and public actors, many different intermediating organizations that focus on supporting the information transfer, commercialization and creating of innovative research based business. In Tampere, Finland, these organizations include for example Technology Centre Hermia and Professia Oy

Government initiatives and programs

The possibilities for a fruitful cooperation seem obvious because businesses are looking for valid and reliable information and knowledge and the universities are under pressure to interact with the society. There are, however, many obstacles stemming from historical, cultural and many other differences that prevent the business-university-cooperation from working smoothly. At this stage the government sector has, therefore, increased activities to facilitate cooperation both on regional, national and international level.

Many actions have been taken to increase cooperating and especially the initiatives of the European Union are unique in their efforts to bring sectors of business, university and government together. Since the Lisbon initiative in 2000 and starting of the eEurope-program in 2001, EU has had an ambitious objective to bring Europe to the era referred to as "Knowledge Society" as number one in the world. eEurope is a political initiative to ensure that EU fully benefits for generations to come from the changes knowledge society is bringing. The action plan for eEurope defines the methods to achieve the ambitious goals the mission consists of:

- Bringing every citizen, home and school, every business and administration, into the digital age and online.
- Creating a digitally literate Europe, supported by an entrepreneurial culture ready to finance and develop new ideas.
- Ensuring the whole process is socially inclusive, builds consumer trust and strengthens social cohesion.

On a national level the Finnish government started its Information Society program in 2003 to boost competitiveness and productivity, to promote social and regional equality and to improve citizens' well-being and quality of life through effective utilization of information and communications technologies. Regionally a significant initiative was taken when parallel to the eEurope-program, an independent knowledge society program called eTampere was started in 2001. This five-year program aimed to enhance the humanly sustainable information society development by creating new knowledge, new business, and new public online services thus making Tampere a global leader in the research, development and application of issues related to the knowledge society .

Theoretical examination

Business-university-government

Conceptually, the Business-University-Government context can be traced back to how the case organization eBRC depicts its environment. In short the Business-University-Government context relates to the increasing need for ever closer interaction and partnering across the borders of the society. This emergent phenomenon is related to the transition from industrial society to knowledge society. To analyze the drive behind the cooperation in more detail Elmuti, Abele and Nicolosi (2005) have gathered together reasons why businesses create strategic alliances with academic institutions:

1. Rising global competitiveness

Rapid change in the nature of competition has created increasing demands on companies to develop new technologies.

2. Increasing need for innovation in products and processes

The new technologies do not create themselves and neither are they all developed from the existing ones. Both intra- and interorganizational methods are used to create them, but as Kaufmann and Tödtling state, the non-business systems stimulate innovations more effectively.

3. Lower R&D expenditure

According to a study done by George, Zahra & Wood, companies with university linkages have lower research and development expenses per employee. In addition, these businesses might develop the relationships even further to supplement their internal research resources. (George, Zahra & Wood 2002, 604-605)

4. Technological transfer opportunities

An especially important factor in the business-university partnership is the technology transfer issue. Technology transfer programs attempt to integrate university-driven research into applied initiatives. (Elmuti, Abele & Nicolosi 2005, 118)

The development from dyadic relationships into triadic ones also stems from the general need to increase interaction between business and science. It is a reasonable target for policy makers to find ways in which these sectors would interact. (Kaufmann & Tödtling 2000, 803) Now as knowledge is becoming an increasingly important part of innovation, the role of the university as knowledge-producing and disseminating institution is becoming more and more important. (Etzkowitz, Webster, Gebhardt, Regina & Terra 2000, 315)

Etzkowitz and Leydesdorff have created a model called "Triple Helix" through which these changes can be interpreted (Etzkowitz & Leydesdorff 1999, 111). A triple helix of university-industry-government relations transcends previous models of institutional relationships in which either the polity or economy predominated and with the knowledge sector playing a subsidiary role. The triple helix model is an attempt to account for a new configuration of institutional forces emerging within innovation systems. (Etzkowitz, Webster, Gebhardt, Regina & Terra 2000, 314) The triple helix-model is somewhat narrow when analyzing the term "industry" that it uses to describe the business sector. The case organization eBRC uses the acronym B.U.G. (Business-University-Government) to describe the environment it operates in. According to eBRC's view business is the predominant force within B.U.G. Business sector is the most dynamic and vibrant one where changes occur constantly. This sector is the motivator, the change agent that generates new knowledge and new phenomena.

The current changes in the economy, including globalization, technological development and increasing competition have, however, forced businesses to find new ways of analyzing and examining their environment to produce competitive advantage. This has brought up or at least highlighted the importance of universities as knowledge-producing entities and thus created connections between the sectors of business and university. The B.U. interaction has later extended into a B.U.G interaction as the government has increasingly taken part in the process. Government has with; for instance, its financial support helped generate border-crossing research and development programs both in national and international level. In addition, it has created standards and guidelines to steer the development and make it more efficient. This evolution is illustrated in figure 1.

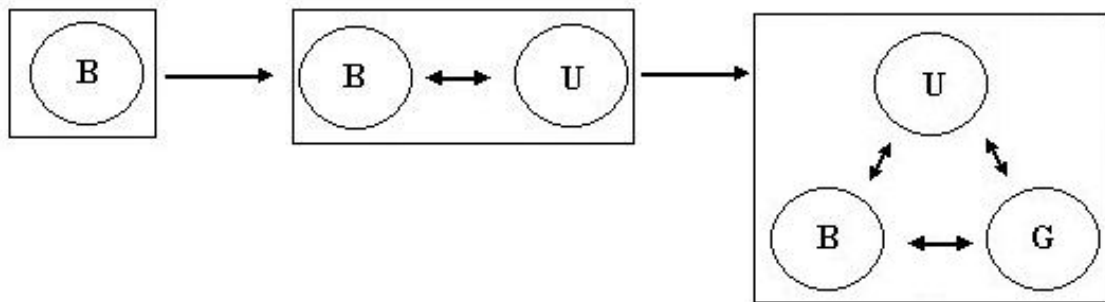


Figure 1. eBRC's B.U.G. context

Intermediating

To start with the definition, Merriam & Webster defines "intermediating" as "being or occurring at the middle place, stage, or degree or between extremes" (Merriam & Webster's web dictionary <www.britannica.com>). The use of the concept in this research is based on grammatical rules. The activity as a whole is "intermediating", whereas the term "intermediator" is used to describe the actor engaging in this activity and to clarify its role and position in relation to other actors. "Intermediary" and "intermediary organization" are terms used when specifically describing the different organizational forms through which the activity is conducted.

Intermediating is activity that can be conducted in many different contexts, e.g., social relationships, peace negotiations, stock exchange, and housing. In business environment, the concept of intermediating is addressed most extensively in the IMP (Industrial Marketing and Purchasing) group which studies buyer-seller relationships in industrial networks. They have created a frequently cited model for studying interactions between these parties and state that relationships in industrial networks are usually long-standing and complex. (IMP-group <<http://www.impgroup.org/history.php>>) This dyadic model has then been further developed into a triadic one, which takes into account the role of an intermediary (see Havila 1996, 25).

Given the changes in all the three key sectors and their interaction, new forms of catalyzing are needed to face the new challenges. Intermediating is an old concept but when analyzed in the Business-University-Government context, it provides new perspectives on how cooperation can be achieved with the help of focus-oriented dynamic actors. Brennan and Turnbull state in their list of obstacles for business-university partnership, "the need for a dedicated linkage manager exists, but neither party wants to resource such a position

preferring to add it to the portfolio of an existing employee.” (Brennan & Turnbull 2001, 599) Valentin also suggested the use of intermediaries to strengthen and develop collaborative programs (Valentin 2000, 171). It is evident that this kind of an actor is needed to bring the strong sectors together and coordinate the interaction but unfortunately the initiative-taking has been rather poor. As the role of government is changing, such multi-national institutions as the European Union, the World Bank and the U.N. are moving to embrace concepts of knowledge based economic development that bring the knowledge, productive and regulatory spheres of society into new configurations (Etzkowitz & Leydesdorff 1995, <http://www.easst.net/review/march1995/leydesdorff>). These movements have been facilitating the creation of organizations such as the case organization in this study.

Case analysis

Framework

A service management system can be defined as a concrete and comprehensive way to implement business. This extensive approach led to choosing service management system as the tool to examine the intermediary activity in the Business-University-Government context herein. The model covers a wide range of business aspects instead of focusing only on marketing, management or other alternatives. However, Normann’s ideas are supplemented by several different theoretical points from other disciplines. Especially the theories on professional services are utilized as the case organization produces services that are strongly knowledge-intensive.

The service management system model is based on the Business Idea approach created by Normann in 1976. Normann’s original Business Idea is as a system of three different components: 1) the external environment, its needs and what it is valuing 2) the offering of the company and 3) internal factors such as organization structure, resources, knowledge and capabilities, equipment, systems, leadership and values and the fit thereof constituting for those. This fit, according to Normann, is a coherence referred to as “system of dominance” that is required between the components. (Normann 1983, 39-58) Later on Normann developed a specific evaluation model for services called “Services management system”. After several years of studying service organizations he discovered that only a few of them have structured systems to manage their service production. According to Normann it is essential to identify the key elements of success and to reflect them in the management and culture of the organization. (Normann 1984, 46) This model is based on his business idea and another services system model by Eiglier and Langeard. (Normann 1984, 48) In his service management model Normann combines the three main components of the business idea with the elements of “image” and “culture and philosophy”. The market segment is the starting point from which the system is made up of the service concept, the delivery system and the image. The components are then integrated by the culture to a consistent system. (Karlöf 1995, 325) The service management system is illustrated in the following figure 6.

The Business-University-Government context and the concept of intermediating can be merged into a framework for the analysis of the case organization. The Business-University-Government context is the outermost ring that describes the field of phenomena to be analyzed. Major development processes are underway in all of the sectors and when put

together new possibilities are born for innovative actors. These actors can be called intermediators, actors that bring the three sectors together to create value-adding and knowledge-producing programs, projects and other ways of interacting. In this research, the development process of one kind of an intermeditor is examined with the help of the service management system. This five-part model is broadened with additional viewpoints from other scholars. The framework is presented in figure 2.

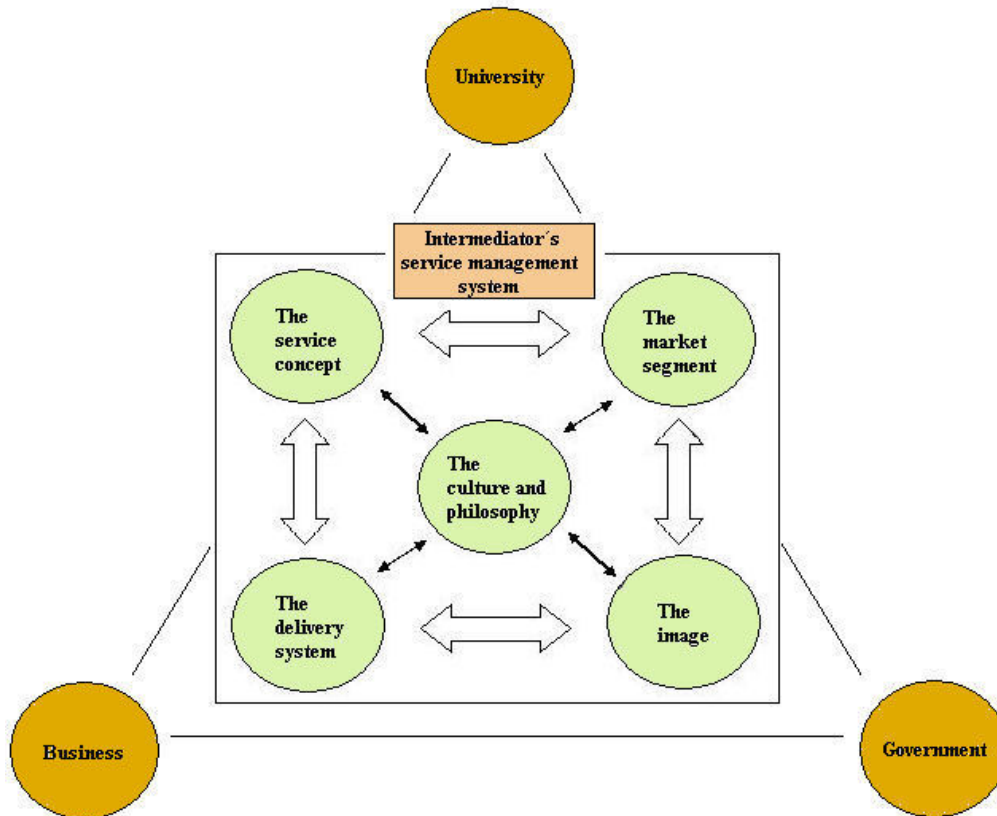


Figure 2. Guiding framework

Results

eBRC's service management system has developed during the five-year period from a rather unpolished and idealistic plan to a more defined and accurate strategy. The process of developing eBRC's service management system was analysed in a chronological order starting from the beginning phases of the organization following through the different changes in its path and finally making a forecast on what will happen in the future. All components of the service management system have been developed during the process due to unintentional as well as planned changes. It was clear to eBRC from the beginning that the system required refinements and eBRC was active in analyzing its environment to succeed in making the right strategic choices. For instance eBRC's initial substance area, e-business, was altered along with many technological development processes and eBRC followed these changes and defined more precise focus areas of research in 2003.

The first year of eBRC can be regarded as the start-up phase which marked the beginning of eBRC's service production and the implementation of the initial plans. eBRC started making contacts with its stakeholder groups and took rather bold steps in making its operation better

known especially in the academia. eBRC started with very open “arms” and took into its portfolio basically every project that had some aspects of e-business relevance. This was done to gain a project base to help in acquiring more projects as well as credibility. eBRC’s organizational structure lived quite rapidly as well while eBRC was searching for its right form. All in all, the first phase can be characterized as a testing and trying period for eBRC.

The growth phase covered the following two years of eBRC when the rough edges of the service management system were defined and the service production reached its full speed. eBRC’s project portfolio became more varied including projects, which received financing from different sources. eBRC continued its active networking and its networks strengthened also internally as along with the founding of the research boards and the attachment of business board to eBRC’s operation. The weight point division helped eBRC to allocate its resource more accurately and also define its substance areas.

The last two years were considered as the transformation phase which was characterized by the thought that the project would come to its end in 2005. The strategizing for eBRC started in an early phase and several different occasions were arranged to plan and forecast the future of the organization. eBRC used all its networks to gain a broad enough view of the needs and possibilities that were emerging in the stakeholder groups. There are many good qualities in eBRC’s service management system that make it unique but the challenge is to choose the right focus areas in every component and transform eBRC into a new era.

Before the empirical analysis a framework was build to act as a tool for the empirical analysis. Case eBRC has shown that modifications are needed to examine this kind of intermediary activity in the Business-University-Government context. To start with the context issue, eBRC cannot be placed right in the middle of the Business-University-Government context as its ties to different parties are somewhat different. Also the service management system and the ways it stresses the different components quite equally could be somewhat altered in eBRC’s case.

In general, eBRC is a mission organization with an ambitious objective to act as pioneer and create something new in the field of research. This emphasizes the culture and philosophy component as the key of the service management system and it would also be appropriate to change the name to mission component. However, Normann started his model from the market segment and also in this case the Business-University-Government context can be considered as the starting point. In eBRC’s case the market segment is basically the Business-University-Government context, but as a university bound organization it should be placed to the university corner. The following figure 3 describes eBRC’s service management system in the Business-University-Government context.

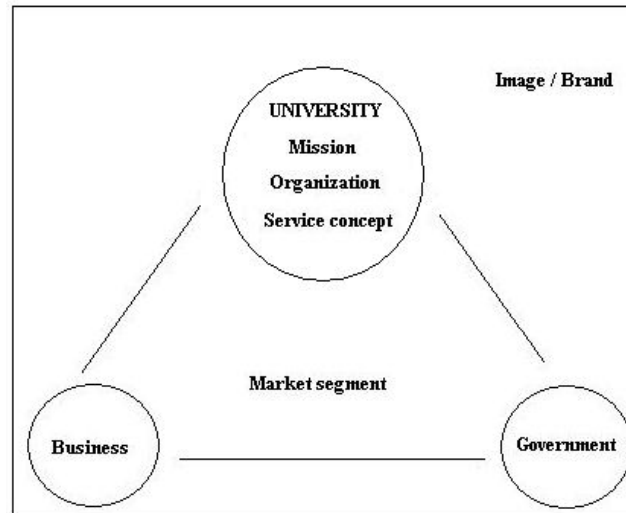


Figure 3. eBRC's service management system in the Business-University-Government context

This description explains the relations between the different components as did Normann's model, but in addition it describes the creation of the service management system in more detail. The market segment is the starting point, from which the mission is derived from. The organization and service concept components would be shaped after that and finally to combine all the components, the image or brand component would surround the whole activity and thus be created through it.

If eBRC is to continue its operation as an intermediary of academic research, the university would basically serve as an organizational basis. The other two sectors, business and government, would then be the market segment. It remains to be seen whether eBRC's intermediating activities will continue as university-based or if they will move to other sectors. There are examples of local intermediating organizations that are business based (Life Works Consulting Oy, <<http://www.lifeworksconsulting.net/>>), university based (the current eBRC) and government based (Technology Centre Hermia, <<http://www3.hermia.fi/>>). If eBRC is to shift its focus to a more research-oriented approach with a clear substance area, it might fall into any sector. Then its intermediating activity would also change.

All in all, describing eBRC in the framework is rather difficult when analyzing future events. In addition to being the market segment, the Business-University-Government context has an influence on the organization and market concept components of the model because the agendas of the sectors vary greatly as explained before. The businesses are forced to take action and create new knowledge in order to succeed, the universities are under pressure to make changes in the traditional ways of conducting research and the government sector wants to support these development processes.

At this point a more general proposition would be appropriate in describing intermediating as an activity and an organization in the Business-University-Government. In the following figure 4 the intermediating activity is placed in the middle of the three sectors, which construct the market segment component. The market segment is again the starting point because as explained above, it has a significant influence on all of the components. The

mission component is placed in the middle, as it is an important factor when operating in the interface areas between business, university and government sectors. Again, the image/brand is build from the coherence of the system. This proposition thus describes the service management system of an intermediating organization that operates in the Business-University-Government context. For the case organization this proposition gives a starting point for strategizing and developing its activities further.

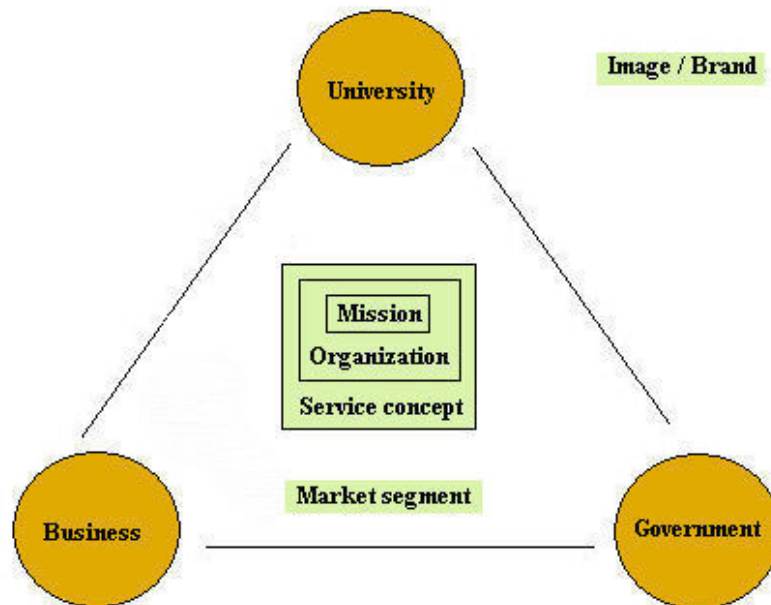


Figure 4. Concluding proposition

Conclusions

This research can be considered as descriptive and understanding but it also has provided through inductive analysis a theoretical framework that could be utilized in similar kind of researches. There are many actors that operate in the interfaces of the sectors of business, university and government. Their strategies and goals as well as operative models vary greatly and this framework could offer assistance in analyzing them. Especially the question of whether the activity is conducted in one of the sectors or as a hybrid between two or maybe all three sectors is an important starting point. The analysis could also be focused on one or more individual parts of the service management system.

The Business-University-Government context is also a rather undefined one and offers many ideas for research. The three sectors have separately many development processes underway which could be analyzed from the marketing perspective. In the business sector, the trends of the economy are constantly under research, but in the university sector more attention should be paid on communicating the results of both basic and applied research. This would enhance the cooperation of different actors in conducting the research as such. Relationships between the three sectors and network dynamics should also be studied more profoundly to gain the maximum benefits from them. The initiatives and programs from the government sector also provide interesting topics for research, mainly from the point of view of their success.

As for the case organization and the intermediating activity it conducts, more research should be done in the different stakeholder groups to gain a wider perspective on how the activity should be carried out and if it is actually sought for. The service concept is fresh and visionary and it has followed that many stakeholders might have not gotten accustomed to it yet. Basic market research would help eBRC as it plans its future.

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