

JYVÄSKYLÄ UNIVERSITY SCHOOL OF BUSINESS AND ECONOMICS

**AGENCY RELATIONSHIPS IN A  
GLOBAL VENTURE LAB**

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Master's Thesis  
Management and Leadership  
Spring 2014  
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JYVÄSKYLÄ UNIVERSITY SCHOOL OF BUSINESS AND ECONOMICS

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Title	
Agency relationship in Global Venture Lab	
Subject	Type of work:
Management and Leadership	Master's Thesis
Time (Month/Year)	Number of pages
07/2014	91
Abstract	
<p>This Master's thesis analyzes the Agency relationships in university environment by applying a Global Venture Lab model of organization. The Global Venture Lab described in this study is a growth venture incubator that has been developed in the private organizational model to supplement the general faculty governance and the development of the University in the field of commercialization of inventions. In the study, the agent theory dimensions of moral hazard and adverse selection are applied.</p> <p>The research is conducted by action research methods and it is partly written in real time and partly with a retrospective approach. The data of the research is gathered during the development project of Global Venture Lab in years 2008 to 2011. During the research work, the Runway to Growth program was developed and the lessons learned from combining different fields of expertise are applied.</p> <p>In the research it is established that there exists a need for applying the Agency theory in the university context in general, and that the private faculty structure may offer some improvements for Agency theory related problems. During the research process a detailed description of Global Venture Lab was built, as well as an application of funnel model for students' engagement to real life business development projects.</p>	
Keywords agency theory, incubators, commercialization, retention, knowledge investment, investment process, the university's development, privatization	
Location	Jyväskylä University School of Business and Economics

JYVÄSKYLÄN YLIOPISTON KAUPPAKORKEAKOULU

Tekijä	
Mikko Oksanen	
Työn nimi	
Agentti suhteet kasvuyrityslaboratoriossa	
Oppiaine	Työn laji
Johtaminen	Pro Gradu -tutkielma
Aika	Sivumäärä
07/2014	91
Tiivistelmä - Abstract	
<p>Tässä Pro Gradu -tutkielmassa analysoidaan agenttisuhteita yliopistollisessa ympäristössä soveltaen kehitettyä kasvuyrityslaboratorio-organisaatiomallia. Tutkimuksessa kuvattu kasvuyrityslaboratorio on yksityinen organisaatiomalli, joka on kehitetty täydentämään yleistä tiedekuntahallintomallia ja kehittämään yliopiston keksintöjen kaupallistamisprosessia. Tutkimuksessa sovelletaan agenttiteoriaa erityisesti kahden, moraalikadon ja haitallisen valikoitumisen ulottuvuuden kautta.</p> <p>Tutkimus toteutettiin toimintatutkimuksen menetelmällä ja se on osittain kirjoitettu reaaliajassa ja osittain retrospektiivistä lähestymistapaa hyödyntäen. Tutkimusaineisto kerättiin kasvuyrityslaboratorion kehittämishankkeen toimintavuosina 2008–2011. Kehittämishankkeessa kehitettiin Runway to Growth-ohjelma yhdistämään useiden alojen asiantuntijuutta kehittämään keksintöjen ja nuorten yritysten kaupallistamisprosessia.</p> <p>Tutkimuksessa havaittiin, että agenttiteorian soveltamiselle yliopistollisessa organisaatiossa on tarvetta ja että yksityinen tiedekuntaratkaisu voi tarjota joitakin parannuksia agenttiteoriaa liittyviin haasteisiin yliopistoissa. Tutkimusprosessissa myös tehtiin yksityiskohtainen kuvaus kasvuyrityslaboratorion rakenteesta ja sen soveltamisesta suppilomallin avulla opiskelijoiden sitouttamiseen oikeiden liiketoimintojen kehittämishankkeisiin.</p>	
Asiasanat agenttiteoria, hautomo, kaupallistaminen, sitouttaminen, osaamisen investoiminen, investointiprosessi, yliopiston kehittäminen, yksityistäminen	
Säilytyspaikka	Jyväskylän yliopiston kauppakorkeakoulu

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## 1 INTRODUCTION

On 20<sup>th</sup> February 2009 the Finnish Government gave a proposal for new university and other related law reforms to the Finnish parliament. (HE 2009.) The reform aims to *“develop the higher education and research system in holistic approach to address the international challenges and competition, strengthening the competitiveness of the Finnish nation, expanding the welfare and emphasizing culture, creativity and civilization.”* The Ministry of Education had continually examined the state of the university system’s governance (Jääskinen & Rantanen 2007) and made also international comparisons (Kohtamäki 2007); in addition, the Ministry of Employment and the Economy has made a report on developing universities’ abilities (KTM 2008).

The background of the Finnish university reforms is the nation-wide concern about the fading global competence of Finland, especially in the high technology branch (KTM 2008, 2). Furthermore, the economy of Finland was hit in 2008 and Finnish exports collapsed in 2008 by 22.6 billion euros, or 21.3 per cent. Finally, the current account deficit of 1.1 per cent was recorded in 2011 and the gross national production in 2012 was still below the level of 2008 (Tilastokeskus 2012). The Finnish Ministry of Employment and the Economy published the national innovation strategy report on 12.6.2008, only two months prior to the beginning of the international financial crisis. Over five hundred people have participated in the process of creating the report, many of them in leading positions in the Finnish society. The paper confirmed that Finland’s former national stronghold industries and the population structure are changing to a direction that will start hindering the means of economic growth. The report indicates that the era of copy-cat economy is finally ending and that the possible growth will come from our own inventions and innovations. The new growth means the need to find different tools and dynamism in all branches of the society (KTM 2008, 2.) to sustain the high living standards as well as human and environmental wellbeing. According to the report, the key factor is innovation-based productivity growth (KTM, 2008, 4).

In the university world, however, the expanding expectations are raising also alarming opinions. The third mission, as the social task of the university is widely known, is nevertheless not very easy to define in a detailed way, since there was certain reluctance to an in-depth analysis of it. In Paula Kivinen's research work, the third mission is defined as only a perspective or interaction between university and society on local, national and global levels. In her report Kivinen (2006, 45-46) notes that the emphasis of the third mission was seen as a threat to first and second missions, if the university is involved in pursuing the goals, as it is not the best actor or environment for executing things. The most important challenge was seen in the knowledge the university produces, which is to be expressed in a way that those outside of the university can receive it. Moreover, Kivinen (2006, 46) notes that there was a concern on how to process the knowledge so that the values it includes are seen as worth of adopting.

Also a global need for emphasizing entrepreneurship as a tool for creating economic growth is recognised in the report of the World Economic Forum (2009). In Global Venture Lab Network Inaugural Summit report, Sidhu, Tenderich and Broderick from the Center for Entrepreneurship and Technology in University of California, Berkeley, wrote that to answer the global recognised challenge of the 21<sup>st</sup> century, entrepreneurship and business creation, especially commercialization, are in the focus of quite many universities (Sidhu, Tenderich & Broderick 2010, 1). Sidhu and co-authors had recognised a common platform of entrepreneurship programs to share a) entrepreneurship education with focus on technology and experimental learning, b) a supporting mechanism of student and faculty ventures directly or via research programs and c) concentrating to create ecosystems from local to global approach. They also recognise an increased need of multidisciplinary education and well-balanced, in-depth and broad enough education to introduce new methods to the academia from industry (2010, 1-2). Furthermore, in the summary of National Innovation Strategy discussion meeting held 27.9.2007, it was noted that current strategic weaknesses include a lack of business growth attitude of business creation; discouraging general attitude towards prospering; a risk aversion culture; lack of growth oriented serial entrepreneurs or lack of a culture and government structures that allow entrepreneurs to start again after a business failure, and lack of seed funding concentrated venture capitalists and business angels. To change all this, the summary suggested, among other things, that Finland should concentrate on creating high quality universities, where technology and business are combined and which are able to lure high profile international skills, including professors and students. The summary also suggested that activities regarding market orientation and focus on demand should be strengthened in universities.

This research report introduces a university based growth creation concept to answer these previously mentioned challenges. It was branded as Global Venture Lab (later only GVL), the core of which is the business venture

creation process, where education and research are combined to create business ventures alongside research and education. The concept originated from the work and discussions of Marko Seppä (2000; 2009), Iklaq Sidhu (2009; 2010) and Dhruves Biswas (Bhowmick & Biswas 2009; Kumar Bhowmick & Biswas 2011), but the concept introduced here is based on the Finnish development in a research group lead by Seppä. The concept aims to introduce the growth-aimed business creation attitude to university environment, promoting risk taking and co-operation between entrepreneurs, scholars and other professionals. During the research, the GVL underwent constant development and four development stages were recognized, which are explained in detail. The GVL aimed to be a new organizational unit engaging different actors from different fields together to create new business vehicles. The creation of business vehicles was executed through a special process of engaging high-level research and education. The GVL expects to solve or find ways to avoid problems occurring from different actors by working together with varying knowledge and interests similar to agency theory described problems. (Seppä & Suoranta 2009.)

## **1.1 Mission and objectives of the research**

Joseph Schumpeter (1942) established the concept of creative destruction in the business life in order to describe the births and deaths of business ventures. His main idea was that the failure of a business is a method how the society reproduces itself and develops further and further. The organizational development of the Finnish university system is rather different. The organization has been very stable but lately there has been discussion on current challenges and on the methods to address them (Kivinen 2006, 6-7). However, the latest big change took place in 2010, when the university organizations were reformed to self-sustaining public offices or foundations to achieve more dynamic answers to the demand of the time. Also private funding methods for research were expanded further. (OPM 2009.)

However, the organisational reform, and especially external funding, brings out new problems in the roles of different actors. In the university environment, among tenure researchers and degree students there will also be financiers, project researchers, mature students and entrepreneurs engaging in different externally funded projects. Expanding the funding base brings new actors to the university environment, and new actors make the organisation more complicated, especially since their organisational status is still developing. Most importantly, one individual may have many different roles in the organisation, such as businesses as co-operation producers, partners and financiers, universities as co-operation partners and resource providers, and

researchers as co-operation partners, workforce and an intellectual asset, which may affect the interests of different actors. The complexity may lead to unexpected collisions of interest and may create old-fashioned principal – agent relationships problems. Sidhu (2009, 2) and co-authors recognise the problem of measuring and controlling of the results – what is the best method to achieve academic and economic impact for stakeholders, how to record the direct or indirect results and how to manage the chaotic nature and varying timelines of business creation? In the new university organisation, different actors may change their roles in different situations. Some actors may end up in a situation where they are researchers that are supervisors and owners of a process they aren't working on full-time, but are subordinates of a person who is working in the same process. The GVL answers these challenges of different stakeholders by a shareholding method to align different interest of different actors. In the development of GVL there were different structures for using the shareholding method, but they all had a similar point of view that individuals important for a project would have their personal stake of shares of the current issue (whatever business venture, research project or study that would be). In this research, the term venture is used to describe innovation that is located in a legal entity to enable the sharing of ownership and dynamic development of ownership to maximize the value of venture (innovation).

In the KTM (2008, 10-11) report, the problems of the current innovation system in Finland are named among these, i.e. lack of venture capital and business angel structures and lack of broad interdisciplinary co-operation in the innovation system. In the strategy, among the ten most important operational dimensions to activate and develop are promoting growth venturing, developing the educational surroundings to an innovative direction, and reforming the research and university to a competence development environment internationally (KTM 2008, 13-15). The objectives of the report state that the Finnish education system should be strengthened and the co-operation with universities, society and business should be deepened. Overall, internationalism, interaction skills, entrepreneurship, creativity and innovation should be strengthened on all levels of the education system. The legal framework and infrastructure should be revised to support and encourage better innovation activities. The GVL, as mentioned, brings together investors, inventors, entrepreneurs as scholars, students and entrepreneurs to create new business ventures through research and education. In general, the GVL aims to answer the concerns and objectives of the KTM (2008) report. In this study I am describing and analysing the GVL development in detail.

My personal research interest has come via many different paths. The most important matter is appreciating the applicable know-how. I grew up in the Finnish countryside, where applicable know-how is the only valuable; however, for me, all information is valuable in such. From my perspective, possessing knowledge per se entitles to nothing, but how to apply the knowledge to know-how. I consider that science and university have a moral debt to the society (to mankind) to continuously improve the ordinary person's

life and living standards, in exchange for their public financing and other resources. Also the methodology was selected to support the personal vision (more in the chapter Methodology and Data) to bring front the problem solving objectives in a research process.

Also the background helps to understand my interest towards public discussion, fired up by news that highly skilled persons are less likely to become entrepreneurs - news that was later recognised also by the officials in the Ministry of Education and Ministry of Employment and the Economy in their work to develop the higher education (see TEM 2012 and OPM 2009a). In the TEM report (2009a, 20-21) there are some solutions, such as high education in fields where entrepreneurship is hard to adapt, but still they state that something is missing.

As Kivistö (2005, 2-3) stated, there have been scarce examples of application of the Agency theory in the university organisation, but it is nevertheless applicable. The theoretical framework is adopted and built upon Agency Theory framework, condensed by Kathleen M. Eisenhardt in her 1989 paper (1989, 64.), where she expressed that the Agency Theory emphasises the incentives and self-interest in the organizational philosophy. She also (Eisenhardt 1989, 64-65) noted that the agency theory brought up the cost of information and implications of risk. Eisenhardt (1989, 71) expressed conditions to apply the Agency theory:

- a) Substantial goal conflict between principals and agents, such as agent opportunism is likely
- b) Sufficient outcome uncertainty to trigger the risk implications of the theory
- c) Un-programmed or team-oriented jobs in which evaluation of behaviors is difficult.

In the university organization all expressed conditions exist. For example, the principal, such as government for university, has at least some difficulties determining the capabilities of the agent, the principal has an information gap compared to the agent and may not detect possible opportunistic behaviour, since the university is a very independent working environment. (Kivisto 2005, 2). Initially, the shortest quotation for inspiration is captured from the paper by Michael C. Jensen and William H. Meckling (1976, 12), where they stated:

*Indeed, it is likely that the most important conflict arises from the fact that as the manager's ownership claim falls, his incentive to devote significant effort to creative activities such as searching out new profitable ventures falls. He may avoid such ventures simply because it requires too much trouble or effort on his part to manage or to learn about new technologies.*

This view of human interaction contained in the agency theory may not appease everybody and is re-interpreted in the GVL. GVL strengthens the engagement and commitment of individuals from different organisations towards common interest. The GVL is based on an individual's empowerment,

engagement and commitment through real and valuable methods to capitalize the activities through shareholding. The GVL vision is that the right combination of committed and empowered passionate individuals will create the extra input that distinguishes, for example, the business ventures with global potential from ordinary local business ventures or ground breaking science inventions (Seppä, Suoranta, Aspegrén, Hakanen, Häkkinen, Kivinen, Lajunen, Oksanen & Porter 2009, 91-93). As stated before, the research object is a model that answers not only the science quest but also the requirement (KTM 2008) to create high growth ventures from research and education. Due to the development process, the research object is in constant shaping during the research and there is no actual model in action.

The differences of ambiances of principal-agent theory, the action research theory and the research object, the concept, are significant. The ambiance of the research object is about positively bringing together creating and solving big problems of mankind, empowering and engaging different kinds of individuals to pursue for greater good (Seppä & Suoranta 2009, 10-13). The Action research ambiance stems from the roots of capitalist and market economy critical world view, and according some authors, even Marxist origins, where the aim is to produce an alternative to the western style of materialism and unjustified use of power (Heikkinen, Kontinen & Häkkinen 2008, 41). The action research and the research object have many common values and themes, such as empowerment of an individual actor in an organization, engagement of all participants, and search for alternative solutions to society's problems. (Seppä & Suoranta 2009, 10-13; Coghlan & Brannick, 11-13.) The biggest difference in the research object and the methodology is the usage of ownership as a tool to create empowered and committed individuals (Seppä, 2008). The concept's goal to create business ventures aimed to high growth relies on positive commitment and engagement, which the developed structure would serve best. The research also might help to recognise the community-damaging behaviour of the participants of GVL, described in Agency theory, and to prevent the aimed commitment and engagement creating community existence. The co-operation is based on confidence, and losing faith in the sincerity of other actors' actions endangers the project.

## 1.2 Research question

The study's main goal is to review principal-agent relationships in the Global Venture Lab concept through selected dimensions. The study is done by personally participating in the creation of an organisation through action research methodology.

The research questions are:

1. What, if any, are the possible colliding interests of different actors in the GVL concept?

2. What incentives does the GVL concept create to improve scientific output, better study results and new business venture creation for different actors?

### 1.3 Structure of the study

The intended progress of the research is illustrated here in Figure 1. The research is introduced in chapter, 1 where the backgrounds of research and other related things, such as the mission and the research question, are presented.

In chapter 2 I present the research environment, the GVL. The description of the research environment includes the backgrounds for the research group and also a description of the development project of GVL. The theoretical background is presented in chapter 3: the agency theory and the selected dimensions, which I aim later to reflect on the GVL concept. The agency theory illustrated here concentrates on selected issues, the selection terms for which I present at the beginning of chapter.

Chapter 4 presents the methodology, analysis methods and research data and further discusses the evaluation of quality and rigour of research. It presents the qualitative research methods in the field of business administration, and action research method in particular, which is applied into this research. The chapter also includes the detailed description of the research process and a reflection to theory as well as aggregation of data.

The description of the evolution of GVL is described in chapter 5. The chapter also includes the analysis of different features and their development during research. The main details of venture creation process are also presented here.

The results are found in chapter 6, and discussion and conclusion continue in chapter 7, where some varying implications, reflections to practice and to other related research, and some criticism are presented.

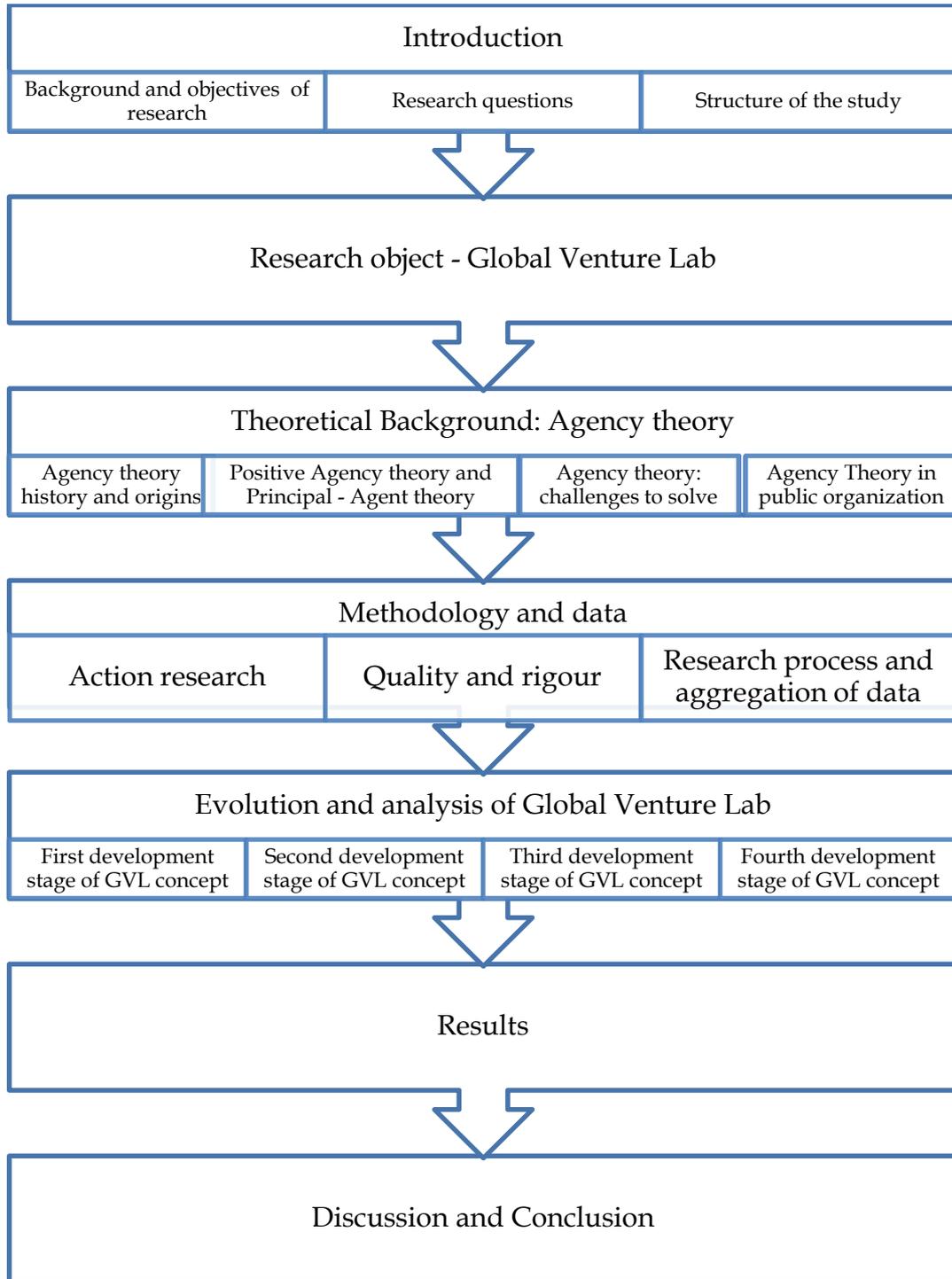


Figure 1 Structure of the research report.

## 2 RESEARCH ENVIRONMENT - GLOBAL VENTURE LAB

The research environment was within a Finnish university organisation; a loosely organised research group in the School of Business and Economics in University of Jyväskylä. The close physical surroundings also included other faculties located in the Mattilanniemi campus in Jyväskylä, such as the Faculty of IT and Agora Center. The researchers' personal environment and personal connections included business people, entrepreneurs and also other innovation researchers and managers working at the university or in projects around it. The research group named itself as Global Venture Lab (later GVL) to become a sister organisation to their like-minded colleagues in Berkeley, USA and Kharagpur, India, which had their Global Venture Labs also. The GVL consisted of the following projects, their staff and resources:

1. Education providing two minor programs for non-business students in University of Jyväskylä
  - a. Technology Business
  - b. Human Business

Their aim was to teach business creation skills to university students outside the school of business and economics.
2. Research was conducted through projects:
  - a. Runway to Growth -project
 

The project's aim was to create a venture portfolio, knowledge fund plan and widen the knowledge investment theory base
  - b. Strategy logic -project
 

The aim of the project was to create and refresh the strategy logic of high growth ventures.
  - c. Venture Lab Finland
 

The aim of the project was to study the needs and possibilities of creating a local venture creation platform in an university environment.

As mentioned, the research process was carried out in the university environment as part a scientific community. The researcher workplace was

formed of several different funding programs. The programs' interconnections are illustrated in Figure 2. Even though the research group called themselves Global Venture Lab and the activity was done under GVL brand, the GVL was in fact a virtual organisation. However, some important common factors were shared with the virtual GVL organisation and programs funded: research themes, education fields, developing fields and co-operation partners, to name the most important few.

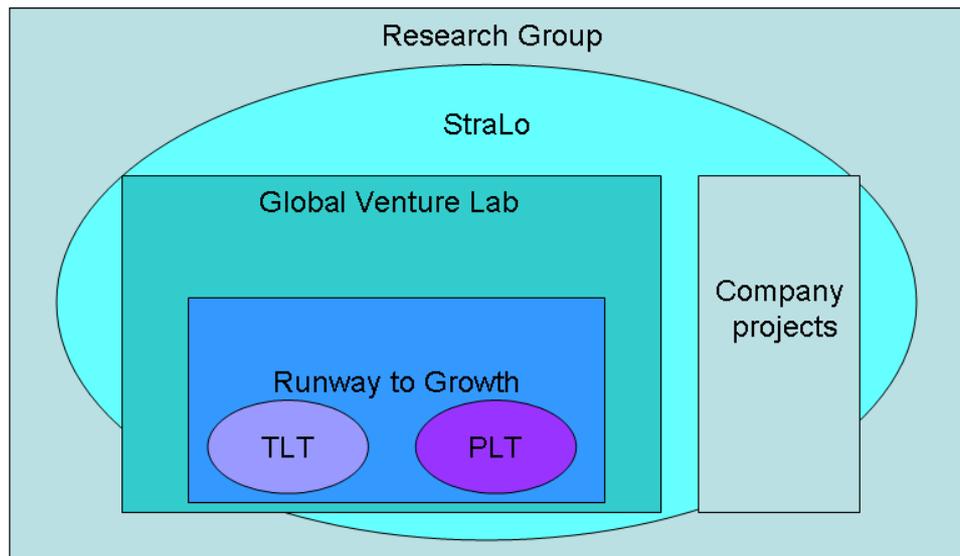


Figure 2 Theme level action research context of Global Venture Lab illustrated in December 2008 by Marko Seppä

The research group had two educational programs, Technology Business (TLT) and Service Business (PLT). The educational programs were minor subjects of business for students majoring in other fields than business. They were traditional fixed-term programs under the management of School of Business and Economics in University of Jyväskylä. The programs had their own professor and other colleagues and they were funded by University of Jyväskylä. *Runway to Growth (R2G)* and *Strategy Logic in Growth Venturing: Ownership Level and Business Level Paths to Success for a Growth Venture (StraLo)*, were externally funded development and research programs, which had their own employees. Their funding was divided between The Finnish Funding Agency for Technology and Innovation (TEKES), European Regional Development Fund and Finnish businesses and business association and other business partners. R2G and StraLo had their own project plan, goals, employees and funding. *Venture Lab Finland (Global Venture Lab)* was funded by University Alliance as a key project. It had its own project plan and goals but no employees. This project should not be mixed with the GVL development project, although the name is similar. All projects were administered by the School of Business and Economics in University of Jyväskylä, and the project

directors participated in the Research Group. Company projects illustrate small taskforce kind of projects, separately conducted in co-operation with companies without a formal binding contract but with a research interest. Different programs' and projects' goals had fitted together so that together they formed a large arrowhead (Seppä 2010) project aiming to create a virtual unit that could generate extra dividend also to other projects as well as benefit from other projects. The research group was formed during 2008, and was considered lasting till end of 2010, when key projects were ending.

All activities of the research group aimed to support each other in their daily practice and their strategic co-operation. In the research group, daily practice meant that in general, research themes and minor studies supported each other and were related together; for example, the external partners were also partners in research and development projects and also partners in educational student projects. The aim was to minimize the administrative and supportive work (for example searching for suitable partners) and to create as large as possible working power in selected themes and projects. For example, external partners provided excellent basic studies (for minor students) and the research and development staff resources could be directed to more significant issues. The aim of concentrating brainpower was the ambitious objective to take the research results to a high level and also to produce excellent benefits for the external partners. The extra benefits for the external partners were seen as a sweetener to commit the partners to co-operation, and the commitment of external partners was seen as essential for being able to take research and education to the higher level.

The group forming was launched in 2007 by the appointment of Marko Seppä as a professor of Technology Business and Mari Suoranta to adjunct professor of Technology Business. Their connections and strive brought up the externally funded project named as StraLo and R2G in 2008 and later in 2009 the Global Venture Lab projects. They also served as official directors of projects in the administration of University of Jyväskylä. The initial goal of creating the research group was to form a unit, which could combine research, education and business creation in one process (Seppä & Suoranta 2008, 10). Expressed traditionally, different projects and their employees would support each other together with educational goals of minor programs. Interestingly enough, the hardest part to fulfil was the demands of external financiers, such as business partners. Difficulties were identified in finding competent employees working in the public organization, ready to take a high workload and responsibility with low relative compensation levels. In short, academics that had proven practical skills to grow global business were hard to identify and employ to the public sector (Seppä, 12.11.2009).

The research object of this study is the development project of Global Venture Lab (later only GVL), a unit for public-private co-operation for research, education and new business venture creation. The research report contains also an in-depth description of the GVL organisation and the concept of business venture creation process in research and education and its

comparison to a traditional university unit (Kivinen 2006, 37-40). GVL aims to address the important challenges of mankind but in economically viable ways. The important factor is the concept of venture, which refers to the idea that all inventions have to be created into an ownership structure, where the ownership is clearly shared and all participants are given the rightful share of the capitalized value of the created value of business. The structured venture aim is to secure the interests of committed inventors, entrepreneurs, business developers and environment providers (university in this context), and to provide a joint interest to maximize the capitalized value of business in a legally structured vehicle. The creation process refers to a situation where, based on selected invention or knowledge, business logic and related matters are invented in a coherently structured process (Seppä, 2008; Seppä, 2012, 7). The process later generated the concept of Art of Business Creation (Seppä, 2010a), where business creation is seen as a new area of knowledge and a new form of domain of knowing. Christian Aspegren (Seppä, 2010a) states that the aim of Art of Business Creation is uniqueness, whereas Science of Business Administration aims at generalization and repeatability. Interestingly enough, the point of view is supported by Alf Rehn (2011), who also challenged that business creation is always disruptive at nature and cannot be measured with traditional methods. Harris (2011) points out that there is a timeline difference in the need of business administrators and business creators. As an example in technology business, business creators are needed clearly in the early process of the business cycle, where new products or services are introduced to markets, and business administrators' skills are generally aimed to situation where the business is established and needs only steady administration.

The research process was carried out by action research method, which meant that the GVL is under constant development and the researcher was an active developer of concept. Because of the method and constant development of the GVL, the objectives in the beginning differ compared to the results of the development project. In the beginning of the project, a Global Venture Lab vision was defined of a research unit, which transforms to

*an independent unit which acts simultaneously on three basic functions –  
research, education and business creation.*  
(Conclusion of development meeting at Konnevesi 21.8.2008)

The written expression was stated at Konnevesi science retreat 21.8.2008, when the research process was in its early stage. Each word has a particular practical meaning and philosophic connection, and was considered the most important result of retreat. This main idea remained throughout the development process until the end of 2010, after which the final description was published in 2011.

The original vision described the Global Venture Lab as a community of independent individuals. However, during the process the community's resources were provided by the university organization, with financing from private and public projects. In the combination of research, education and business creation, the practical action was co-operation of researchers,

undergraduate students and business practitioners to create high level science and new business ventures. (Seppä & Suoranta 2009, 10-13.)

The original GVL vision is to bring together principal level actors to create entities, described as ventures, to execute new business models. The word principal refers here to actors that act in their own name as juridical persons, not in behalf of employers. The approach bases on the paradigm that a juridical entity cannot exist without a living person acting behalf of it. Also, the tasks of university (including research, education and business creation) are executed by involved individual people. The GVL concept expects that research has higher quality standards due to its need to yield financial annuity, in contrast to traditional research, where results are for personal interest, such as reputation and glory and such. (Seppä & Suoranta 2009, 14-19.) In the GVL, there is a paradigm of the importance of independence of the participating individuals in the process of creating high growth ventures. Only people who commit themselves from their free will are competent to invest their capacity into the venture in such a manner that the efforts truly empower the new venture creation. This may not be the case for agents - the agents are lacking power and freedom, especially if they are public sector civil servants. The most important values of the concept were engagement and empowerment of individual actors. (Seppä & Suoranta 2009, 8-13.)

The GVL was constantly developing. During the research process, several recognised developmental stages appeared in the organizational model. The stages are viewed as a static picture of the design of the organisation. However, the stages aren't complete organisational disclosures. The advancements usually took over the attention to a point where complete design couldn't be documented. During the development project, the GVL had no formal, generally accepted organisational form. Initially the development project was launched in 2007, but the start was modest with only 2 employees. However, with their personal ambitions and connections Marko Seppä and Mari Suoranta were able to bring resources to develop the unit further in the form of external funded projects and to create a developing group for the GVL concept.

In the GVL, the empowerment and engagement refer to Hamel and Breen's (2007, 59) writings of obedience, diligence, intellect, initiative, creativity and passion and their truthful implementation to organisation. As they describe the last three, initiative, creativity and passion are needed in creating the future comparative advantage of business models and environments. The nature of these human features is that they are not commendable but to be nurtured (Hamel & Breen 2007, 61-63). In the GVL, the empowerment, engagement and commitment of different stakeholders are based on structured ownership model and clear earning model for the required extra inputs.

As previously described, these activities are aimed to support all three traditional tasks of the university by bringing together people, resources and eventually also new thinking. The university system's general task to create knowledge for the good of mankind (Kivinen 2006, 7) was adopted as the ultimate goal of the all these. The organisational model for the GVL concept

was based on implementing theories of *co-entrepreneurship* (Harrison, Jungman & Seppä 2006) and *venture capital strategy logic* (Seppä 2000) to traditional university environment in order to reinforce the university system's ability to respond indirectly the challenges mentioned in the proposal for the university law reform (HE 2007) and Innovation Strategy (KTM 2008). The hypothesis of the GVL was that with help of structured ownership model, empowered and committed researchers, students and business people could serve more efficiently all three tasks of the university (Seppä, 2008). The GVL is not designed to replace the traditional model of faculty and its research and educational ideal, but to supplement the model in certain circumstances.

From the beginning, the important factor affecting the GVL was the concept of *co-entrepreneurship*. The concept is presented in Harrison, Jungman and Seppä (2006), and it refers to entrepreneurial actors, which invest their business skills to reform and grow a business venture to investable level for venture capital. Their actions are previously undefined but clearly all actions aimed to developing a business venture to a more valuable one. For example, a practical approach for a co-entrepreneur is to share knowledge and their labour with a business but be compensated by the option of capital gains paid by venture capitalist (or other investor), if the venture is invested in. Special signs of co-entrepreneurial activity are risk taking, seeking of new business models and pro-activeness. (Harrison, Jungman & Seppä 2006, 86.) On the path of venture to capital, the co-entrepreneurs are to fill the capital and knowledge cap illustrated in Rasila (2004), illustrated in Figure 3. Furthermore, to stress the nature of somebody working for some project in GVL development project, it was seen and described as knowledge capital investment, also known as "sweat equity".<sup>1</sup> The knowledge investment means accumulating human and social capital and transferring tacit knowledge and it is seen as an important growth factor for a company (Okkonen, Melin, Seppä & Toyoda 2003, 413-415).

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<sup>1</sup> The term "sweat equity" refers to the phenomenon where investor invests work instead of capital.

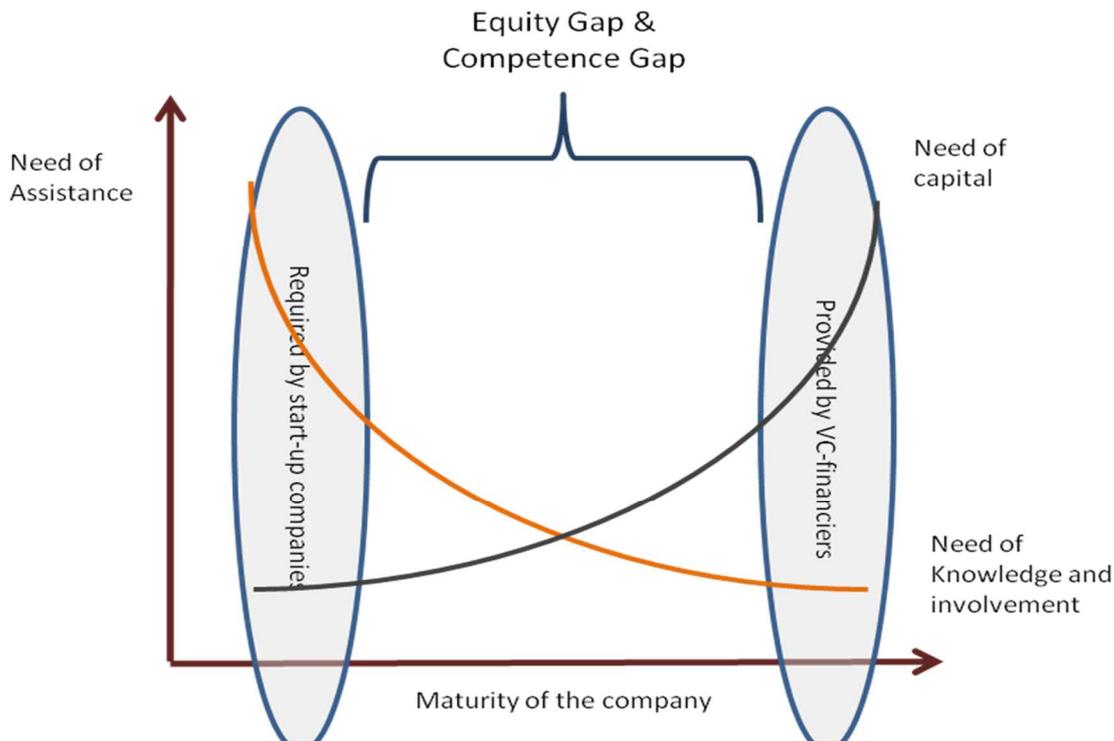


Figure 3. Equity and Competence Gap by Rasila 2004.

The interesting but vital actor in this concept was venture capital. The term “venture capital” here refers to the conceptual idea of investment business that seeks growth-oriented small businesses to invest in, to scale up their business and to cash-in their investment with highest possible multiplier. Because their earning logic is based on the sale of their invested companies, venture capital always pursues to maximize company value and thus their capital is fixed for a certain term (institutional investors), and their ownership is also fixed-term. In exchange of investment of money, and in some cases expertise, the venture capitalist is given an ownership share of the business. The venture capital may refer to an institutional professional investor or an individual professional or amateur investor. (Seppä 2000, 16-18, 116-120.) The concept of deal-flow is also closely related to venture capital investment process. In order to secure their investment, many venture capital actors take account of random factors with statistical methods via portfolio investment strategy. Strategy is based on that idea that even if from ten equally sized investments one yields losses, other 8 meagrely, but one might (or is aimed to) yield 30 times the investment in a certain period, the overall earnings are twice the original amount of capital. Healthy deal-flow enables the investor to invest with higher risk appetite. Deal-flow also includes the businesses, which are not invested in but still screened through. Harrison, Jungman & Seppä (2006, 86) mention that for traditional capital, intensive investor relationship of investment is probably 1 to 50

screened business ventures, but for knowledge intensive investor relationship is probably 1 investment to 10-15 businesses screened.

The early illustration of the GVL process with actors and objectives is shown in Figure 4.

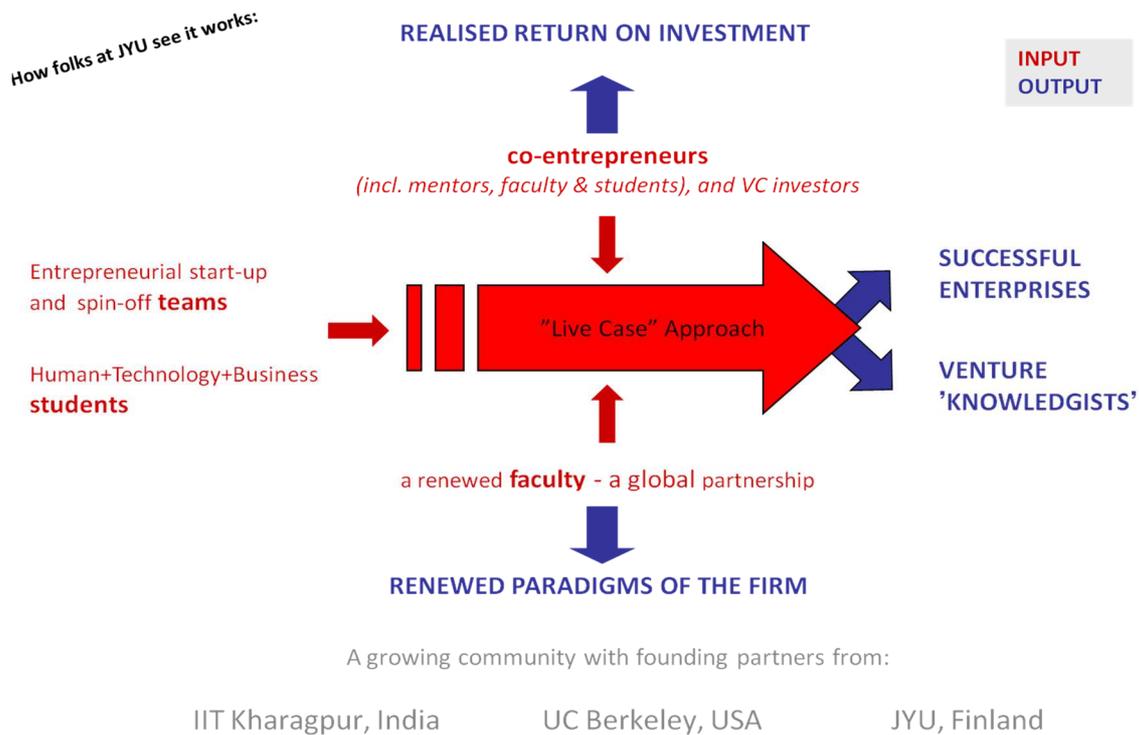


Figure 4 Illustration of the GVL process, actors and objectives (Seppä 2008. September. Model presented in REE Dublin)

In the early process picture, the stakeholders are entrepreneurs, co-entrepreneurs, venture capital investors, researchers and scholars from the faculty and students from different fields. The GVL process refers to the series of actions, where a business idea or invention is developed. The GVL creates a team from stakeholders around an invention, and the team develops the idea to become a venture; where an especial objective is the creation of *high growth business ventures*. The stakeholders' roles aren't a rigid straitjacket but dynamic averages to be used. The development was guided by a strategic view that the concept should support the GVL process in most efficient way.

The process of *high growth business venture* creation, used in the concept, is defined by Seppä and Porter (2009). It included a definition of not only the business level 1) what to sell, 2) how to produce/sell and 3) to whom to sell but also the venture level 4) who owns, 5) why owns and 6) how owns. The main aim of bringing in the level of ownership in a very nascent phase of the business venture creation was to create a clear and equitable extra yield-sharing model, if any yield was to emerge even later. The business level definitions are intuitively

very common; the business needs to define the products or services it is selling, the internal operation of production and sales, and it must be able to define its customers and sell to them. The venture level definitions are also important for any new business venture. The new entrepreneur or entrepreneur team must have the necessary skills to take the venture to an established business corporation. The concept suggests that the inventor may not be the ideal entrepreneur alone, and in some cases may need a more sophisticated entrepreneur team, for example. The fifth question was related to passion and responsibility that the ownership of a business venture requires. The business venture was assumed to aim for growth of its business and limitless expansion of the customer base and business area. The aim was seen as challenging for only one type of owner type, for example the alone heroic owner. No doubt that those heroes existed, but generally hardships may make even the bravest persons to relax and give up the business aims. To secure the owners' passion for healthy business development and expansion, a requirement for dynamic development of the ownership base in the expected business life-time was discovered. The ownership was seen to require a purpose, and therefore dynamic ownership was a key factor in the GVL concept and furthermore to secure a dynamic ownership model with suitable arrangements. The GVL process (ie. creating high growth business ventures) is demanding and requires extra individual commitment. In exchange for commitment and extra work *invested* in the project, the aim is that the process yields dividend to each participant. The terms investment of labour and commitment are used to stress that payback is a dividend of co-creation paid if succeeded. (Seppä 2008; Seppä & Porter 2009).

In the GVL process, different stakeholders invest their commitment and extra work in a business venture. In practice, students are given business education through live case education method, and their speciality was designed to be the business creation from research inventions. The main dividend of the process for students is either practical or theoretical, but always the highest possible know-how of business creation to be available in their later working career. Entrepreneurs and inventors are persons who need extra resources, know-how or knowledge to take their project forward. Entrepreneurs are ideally different to inventors. Their benefit from the co-operation is the access to know-how, to the committed partners and a direct access to the venture to capital investment path. Co-entrepreneurs are individuals who have practical knowledge and skills of business creation; they are for example previous entrepreneurs or civil servants not working full-time. As traditional investors, co-entrepreneurs invest their know-how, connections and work in various levels in the ventures. Faculty scholars and researchers are either inventors or researchers of business processes, and their investment is related to their expertise of various subjects, which may be needed in the development of the ventures. The idea is that all investing in a venture development process are entitled to an ownership share and the benefit of the extra engagement, and

commitment yields capital gains when the venture reaches an investment level. However, the process of business creation itself is not in scope of this research.

In Figure 4, the concept “renewed paradigm of the firm” refers to a vision, where the community-based approach will produce a new model of business venture creation together with various committed actors. During the development process, the scientific vision was not the scope of this research but was more or less seen as a result which emerges when the GVL process works. Also the possibility that the GVL process would be global, where venture development would be done simultaneously and where it would have the best available resources, was seen as an important factor. During the research process, the global approach of GVL was not executed in such a manner that it could be analyzed. However, the business creation process was the object of scientific research of GVL related researchers. The concept was designed to make it easier for researchers to enter the business venture creation process and, most importantly, to empower them to contribute to the business venture creation. However, the concept of the research paradigm is not in the scope of this research.

The cornerstone of the GVL is the shared ownership model, where each member of a team has an ownership share of the project they are involved in and working for. As the GVL aims to produce a portfolio of companies, it has also a share of ownership itself. The aim is that each project (i.e. venture) is carried forward to professional investors (or to be terminated) in 1-2 years following the private equity investor earning model (Seppä 2000, 119-120). The GVL earning model had a very minimal description and the viability of the earnings model or the ownership structure were considered as a fixed variable in this research.

The GLV was also executed in two other locations, in University of California Berkeley Center for Entrepreneurship and Technology (Later CET) (UC Berkeley 2013), where the GLV is defined as “*set of set of programs that strive to develop an entrepreneurial ecosystem that supports venture creation and innovation at Berkeley, in collaboration with CET's global partners*”. The set of programs in Berkeley includes *Skydeck*, a space for new ventures; *Global Venture Lab Network*, an international alliance of academic institutions; *Berkeley Mobile International Collaborative (BMIC)*, mobile application + university mobile challenge at Barcelona; *Venture Lab*, a technology start-up accelerator and *Tsinghua-Berkeley Global Technology Entrepreneurship (GTE) Center*, Sister Center at Tsinghua University, Beijing, China. The CET also runs the yearly *Venture Lab Competition* as part of their GVL activity. The core activity in CET’s Global Venture Lab is geared around Global Venture Lab Competition and *Skydeck*. The Global Venture Lab Competition provides a workspace, financial support and access to an extensive network of experienced entrepreneurs and venture capitalists for current students or alumni graduated less than five years ago. *Skydeck* provides courses on innovation, productization and commercialization to inspire students, project courses to provide multidisciplinary skills, and programs that launch real companies. The program relies on the rich ecosystem of CET and its GVL Network, but refers also the region’s world-known

visionaries, investors and executives as creators of the collaborator environment that fosters entrepreneurship (CET, 2013).

The Global Venture Lab at IIT Kharagpur was established by Dhrubes Biswas in 2009. Its work is concentrated more on student work in early stage feasibility and commercializing research results. In the launch, activities included courses of commercialization and project work of feasibility studies and market research (Biswas, 2009).

### 3 THEORETICAL BACKGROUND: AGENCY THEORY

In general, Agency Theory determines the organizational setting where there is *a principal*, who has a task to do, which he will delegate by contract to *an Agent*. The Agency Theory addresses two major problems: a) a principal cannot verify the actions of an agent that they align with those of the principal, and b) a principal has a different approach to risk. The prior problem can be divided into two sub-problems: 1) conflict of desires and goals, and 2) difficulties and costs for a principal to monitor the agent. The focus is in the contractual setting between a principal and an agent. Obviously there is an assumption that contracts are followed by both parties with limited exactitude. (Ross 1973.; Eisenhardt 1989.; Fama & Jensen 1983.) In the heart of the theory are also the control and monitoring settings that followed the problem setting (Gomez-Mejia & Wiseman 2007, 83).

#### 3.1 Agency theory history and origins

Agency theory origins are in the 1960s and 1970s, when economists started to study risk sharing in a situation where cooperative parties have diverse attitudes towards risk and different information about the task at hand (Ross, 134). Agency theory expanded the literature to include also situations when the parties have diverse objects and separation of labor. (Eisenhardt, 1989) In their ground-breaking work Jensen and Meckling (1976, 5) established the idea of representing this relationship as a contract. Later, the concept was broadened by Fama and Jensen (1983, 301) as Nexus of Contracts as a conception to describe the firm or organization.

Further advancement in the 1980s included also a mathematical and empirical aspect. According to Moe (1984, 757-758), the shared analytical foundations of Agency perspective include a focus on the individual as the unit

of analysis; the optimization, and equilibrium; and the preference for mathematical modeling. However, Jensen (1983, 335) noted that the mathematics related literature originally was intended for another purpose and the original theories are nonmathematical in depth and empirical in nature. This research is conducted in scope of original empirical nature.

In this study, the focus is on examining the research object and its four stages of development through the selected four problems of Agency Theory. The study gives the most enthusiastic attention on themes of Agency Theory defined by Jensen and Meckling (1976, 1) as follows: “the separation of ownership and control, the description of a corporate objective purpose and the theory of organizations.”

The idea is illustrated below in Figure 5 (Eisenhardt 1989, 59). The fundamental basis of the theory is that there is a principal, who has a task to do, which the principal engages an Agent to do by contract. This contract is settled in market economy by willing free humans. The basic assumptions of Agency theory are that all humans are self-interested utility maximisers. All humans have differentiated desires and have a different taste of handling uncertainty (or risk). Humans have their own preferences, which tend to differ from pure economic preferences, but which in turn may be interpreted by economic values (for example the price mechanism of certain rare metals). It suggests that there is always at least a partial conflict between the agent’s and the principal’s goals, their risk aversion and their information about the task at hand.



Figure 5 Agency Theory Overview (Eisenhardt 1989, 59)

The above picture gives a fair and clear picture of the theory at hand. The main problems are addressed in more detail in next chapter.

### 3.2 Positive Agency theory and Principal-Agent theory

Agency Theory has been developed in two main approaches, which differ quite significantly in their basis. The positive agency theory is determined to the situation where the principal and agent are probable to have conflict of interests. The Principal-Agent Research concentrates on the general theory, which could be applied in numerous situations. (Eisenhardt 1989, 60; Jensen 1983, 334-335.)

The positive agency theory focuses on governance mechanisms that would solve the agency problems. However, their focus is almost exclusively on the relationship between a large corporation and stock-owners. For example, two most known hypotheses are that outcome-based contracts are effective in curbing agent opportunism and that information systems curb agent opportunism. (Jensen & Meckling 1976, 7-8.; Jensen 1983, 334-335.)

The principal-agent research is abstract and aims to focus on a general and broader set of problems and especially the efficiency of different approaches. The principal-agent theorists tend to use mathematical deductive reasoning methods. (Eisenhardt 1989, 60; Jensen 1983, 334.)

The core of Agency theory, the Principal-Agent relationship is defined “as a contract under which one or more principal(s) engage the agent to perform some service on their behalf which involves delegating some decision making authority” (Jensen & Meckling 1976, 5). Today’s research concentrates mainly on the problem that arises when the principal cannot perfectly and cost-efficiently monitor the agent’s everyday action. With universal fear of opportunistic behaviour, this forms an information gap between the principal and the agent in a situation for which both needs tools to address. (Gomez-Mejia & Wiseman 2007, 82-83; Holmström 1979, 4.)

The canonical setting of Principal-Agent theory relies on the concept of the human to be a utility maximizer (*Homo Oeconomicus*). Its preferences are that both parties are risk neutral, the agent has a knowledge advantage, the principal cannot observe the agent’s actions but only performance via the results of agents activity, the agent’s own good is different from the principal’s, the principal can make only one offer to an agent, which the agent can only accept or reject. The agent decides the amount of effort to put forth. The canonical model and its imperfections are quite clearly expressed by Sappington in his paper *Incentives in Principal-Agent relationship* (Sappington 1991, 48-49). Sappington claims that the canonical model relies on the assumption that the principal and the agent have an exactly similar view of the price of the task at hand, which is obviously not the case in reality. Also the pre-contractual beliefs, for example about the amount of the work needed to fulfill

the task, will affect the negotiation and pricing in reality. Risk-aversion is also subject to scrutiny, since the ability to bear losses, financial and psychological, differs actor by actor. The risk-bearing ability is in question for example when the existence of an agent is endangered due to the contract. In the end, all contracts cannot be monitored or enforced costlessly, which is the assumption of the canonical model. However, Sappington also notes that by relaxing the assumptions of the canonical model, for example with a risk-sharing policy between principal and agent, their interests will diverge and the agent's performance stimulus is diminished.

### **3.3 Agency Theory: challenges to solve**

The problems refer to different established problems the agency theory addresses. The concept of a principal and an agent has been found to have at least problems of a) risk aversion, b) incentives, c) information asymmetry d) adverse selection, e) transaction cost and f) moral hazard. These all are interconnected and can occur in parallel with each other. Also the concept of the risks and incentives trade-off is a popular theme in Agency theory settings. (Prendergast 2002, 1071-1102; Raith 2003, 1425-1436; Sappington 1991, 45-66.)

Interestingly enough, the applications of Agency Theory are mainly in the business environment, however the usefulness of the concept also applies at management level of universities, mutual companies, cooperatives, governmental authorities and bureaus, unions and common transactions at markets (Kivistö 2005, 2). In short, when there is a contract of any kind, agency theory is applicable. (Ross 1973, 134; Jensen & Meckling 1976, 6-8.)

Recently the Agency Theory has been also a tool of political sciences to examine public government related problems. Spence (1997) has brought up the issue that elected politicians have with governing the public agencies, which apply the politics. Spence points out that there is an overestimation of the extent to which political power occurs. In the USA the early research in the 1970s concentrated on the relationship of congressional government and its agencies (Niskanen 1971; Peltzman 1976). Spence's conclusion is that politicians have a serious problem with delegation of the public authority to an agent (Spence 1997, 215). Also Gomez-Mejia and Wiseman (2007, 84) have brought this up in their work.

In his work, Spiller (1990) explained problems in delegation of authority to emerge because the regulators' actions are fundamentally invisible and the principal has limited possibilities to follow if actions serve the original intentions. Also Dharwadkar, George and Brandes found in their paper (2000) the effect of agency problems, especially in the situation where public sector privatizes the activities. The problems found are related to the exploitation of

weak public authorities with low efficiency (Dharwadkar & Brandes 2000, 664) and unobservable actions of agent (Spiller 1990, 92-98).

Agency Theory aims to minimize *the agency costs* (Wright, Mukherji & Kroll 2001, 414) and thus maximizes the principal's payoff (Jensen & Meckling 1976; Kim & Mahoney 2005, 231). The agency costs arise from 1) the monitoring expenditures by the principal, 2) the bonding expenditures by the agent, and 3) the residual loss. The monitoring and bonding costs are in a normal situation positive and occur in situations when the agent and principal are utility maximizers, and as assumed their interests differ, the principal must expend resources to monitor and bond the agent not to take action that would harm the principal's interests. Further, the residual loss refers to a situation where no-contract could trade-off all difference of interest between the principal and agent and that remaining is called her residual loss. (Jensen & Meckling 1976, 5.)

Agency costs have a tendency to increase when there is a cooperation of transaction of two or more parties (Jensen & Meckling 1976, 6) even though there is no principal-agent relationship.

Eisenhardt points out that the agent's uncertainty and risk aversion have a direct impact on agency cost (1989, 62). The more uncertain the environment is positively related to agent's risk aversion, the more costly it becomes for the principal to pass risk to agent. Interestingly enough, the Agency Theory has similarities with transaction cost theory, especially in the area of market view. (Eisenhardt 1989, 64; Kim & Mahoney 2005, 231.)

Individuals generally tend to have a different appetite for risks. *Risk aversion* might follow from an understandable and recognizable source, such as asymmetric information related to the difficulty of the task (Sappington 1991, 48) but also from pure theoretical assumptions (Wright, Mukherji & Kroll 2001, 414) like agents generally aren't able to diversify their employment although the principals can diversify their shareholdings across multiple firms.

An interesting dimension regarding the concept of risk aversion is that it generally concentrates in situations where principal is an owner who employs the agent to perform task (Jensen & Meckling 1976, 7). Several studies indicate that risk aversion is very much depending of the general setting of the Principal-Agent relationship. (Wright, Mukherji & Kroll 2001, 420-421.) In the situation where agent is averse to risk, he will require excess payment to bear the risk. However, this leads to a situation where the compensation of the agent is on a level where the incremental reward for additional performance will be less than the value to principal of that additional performance. Therefore agent no more benefits from his outstanding performance and his incentive to supply his outstanding performance is severely diminished. Similar issue arise in the situation where the act is an insurance against bad outcomes: the reward to avoid bad outcomes is hindered. (Sappington 1991, 49.)

Prendergast has a different view on the setting. For a risk-averse agent, the situation where principal transfers the risks to agent tends to increase the compensation to agent (Prendergast 2002, 1071.). Thus insecurity and *incentives*

are positively associated. An important note is that when the principal knows what the agent should be doing, the simplest and most cost effective method is simply monitoring the agent's input. However, in the situation when the principal does not know what the agent should be doing, the principal tends to offer out-put based compensation. This is the case for example in high-tech industries, compared to more mature industries (Prendergast 2002, 1100).

Grund and Sliwka examined the relationship between risk and incentive. They found risk aversion in literature extremely hard to define (2006, 2). Their conclusion was that individual risk aversion had a negative effect on the probability to receive performance pay, which tends to support the theory (2006, 10).

Risk aversion is also associated with entrepreneurial attitudes. In the literature there is an established view that risk aversion is negatively correlated with entrepreneurship. (Bostjan 2003, 2) However, there has been also discussion whether risk aversion has a relationship to the original wealth level of principal, for example family business owners, who tend to be more risk averse than others (Gomez-Mejia & Wiseman 2007, 81-82).

*Moral hazard* and *adverse selection* seem at first to be totally different issues. Here they are commonly presented due to their common nominator, the human and his unobservable behaviour. (Eisenhardt 1989, 61.)

In the agency theory, the concept aims to help in situations where a principal gives a substantial amount of resources to an agent to perform something the principal desires. There the agent has an opportunity for shirking and at least perquisite consumption, which tends to be undesirable for the principle. (Jensen & Mecling 1976, 5-6; Ang, Cole & Lin 2000, 81; Gomez-Mejia & Wiseman 2007, 82.) The issue is also recognized in the political environment (Spiller 1990, 66.; Spence 1997, 200).

Moral hazard occurs especially in the situation where both parties, the principal and the agent, are utility maximizers (Jensen & Meckling 1976, 5) and the behavior is unobservable. Eisenhardt expresses an example where a scientist works on a personal research project on company time, but the research is so complex the management cannot detect what the scientist is actually doing. The agent there simply is not putting the agreed effort forth. Similarly, an adverse selection can be described as a scientist, who claims to have certain skills in a situation of employment contracting, which of course the principal cannot verify. (Eisenhardt 1989, 61)

The principal has two main options in case of unobservable behavior: a) follow the agent's activity via management systems, or b) contracting by outcomes with the agent. (Eisenhardt 1989, 61.)

As discussed in the previous chapter, information is a tradable commodity, acquiring information has a cost and information can be purchased (Eisenhardt 1989, 64), and since the agent's actions may be monitored perfectly with infinite cost, the principal's problem emerges: how much monitoring is needed to assure the wanted action with minimum relative cost. In the Agency Theory case, where a principal delegates a task to an agent, there is a possibility

that either may know more about the task and can judge better the efforts and resources needed to fulfill the task (Gomez-Mejia & Wiseman 2007, 83) and produce a asymmetric information and moral hazard problem.

Eisenhardt raised *the information asymmetry* as one of most important aspects of Agency theory (1989, 58). The answer to the information asymmetry has been interpreted to be a control and controlling mechanism trade-off to incentives (Fama & Jensen 1983, 304-305).

### 3.4 Agency Theory in public organization

Agency Theory is very generic by its nature (Kivistö 2005, 2) and it has been applied to a number of environments from Venture Capitalism (Sapienza & Gupta 1994), Insurance policy (Spence & Zeckhauser 1971), market mechanism (Akerlof 1970), political science (Moe 1984; Spiller 1990) and public administration (Laffin 1997; Ferris & Graddy 1998), later in public organizations (Schmidlein 1999) and even higher education (Kells 1992; Braun 1993; Massy 1996). Applications of Agency Theory in the field of higher education are scarce, but Jussi Kivistö (2005) made significant work applying the Agency Theory with higher education management.

In his work, Kivistö examines especially the relationship between the Government and University and notes that both performance based contracts and input based contracts are used and both have their benefits and their flaws (Kivistö 2005, 12-13). However, Kivistö mentions also that since the university has little or no control over their outcomes, the performance-based contracts are unsatisfactory for the university. The employees of university may advance their career with their research work and bring prestige to university but university finances their salaries with undergraduate teaching, which leads to a situation where individual scholars have little or no interests to teaching and their behavior may be affected by it. Moreover, if university is financed by an input based contract, the government may pay for incorrect reasons (Kivistö 2005, 11). If the University has a performance-based contract, the situation may be unfair too. Accumulation of human capital, such as learning, acquiring skills is difficult to identify and measure, and furthermore very much depending on students' own efforts. (Kivistö, 2005, 8-9.) Kivistö (2005, 13) concludes that the Agency Theory is applicable for analyzing the university-government relationship; it helps to understand current policies applied by the government towards the universities and their financing decisions.

Interesting for this research is Kivistö's note that the university has limited control over their resources and therefore university has limited motivation for outcome bases contract. That question is left outside in the scope of this research, application of Agency Theory inside the university organization and the GVL concept. For purposes of simplicity, I have selected two main problems through which to analyze the development of the research object: Moral Hazard

and Adverse Selection. I believe there two aspects will advance the concept most, since they are simple and easily adaptable to different situations. Since transaction costs are impossible to measure during the development of concept, they may not be in the scope of the research. Incentives and asymmetric information are not left aside, but they are a crucial part of concept and their analysis would take the research to development work of the concept, which is not the scope of this research. For example, the concept's idea of engagement and commitment is related to incentives but also employment jurisdiction and contractual jurisdiction, which are not in the scope of this research. Risk aversion is an issue, which the concept aims to bypass by structures. Risk aversion is a part of concept development and may lead to analysis out of the scope of the research.

## 4 METHODOLOGY AND DATA

“Methodology and data define the answers, even when questions are unknown”, could be a one-sentence conclusion of a statement of Hirsjärvi, Remes & Sajavaara (1997, 125). This study is conducted by *action research* method, which is seen as qualitative research method (Hirsjärvi, Remes & Sajavaara 1997, 162). However, the action research paradigm requires its own quality criteria and it should not be judged by the criteria of positivist science but rather within its own terms. Here are presented some of common, typical features of qualitative research methodology and more detailed special features of action research (Coghlan & Brannick 2005, 11-13) as general methodology guidelines to guarantee the truthfulness of research. It includes the most important decisions before gathering the data, which are science philosophy level decisions: problem setting, science philosophic decisions, methodology and theoretical understanding. (Hirsjärvi, Remes & Sajavaara 1997, 123-126).

In the research project, the most significant feature was the participatory approach of the studied development process. The participatory approach refers to a situation where most of the data and material is generated in co-operation between the researcher and the research object and also generated by researcher.

*Problem setting* refers to a basic question of what is a problem and how do we define a problem. Also to be able to define the problem clearly and precisely and in understandable language are important. However, the two main approaches of research, qualitative and quantitative, have a different approach to a problem setting: in qualitative research the research problem is less precisely defined than in quantitative research. Also the design of questions depends on the purpose of research originally. (Hirsjärvi, Remes & Sajavaara 1997, 125-129.) In the research process, the original idea remained rather invariable but the details, such as research question or expressed problems, varied.

*Science philosophic decisions*, such as ontological level – how to understand questions –, or epistemological level – how to get knowledge – creates the basis of scientific relationships to a scientific community and other research. Even research which is empirical and applied style has hidden paradigms behind a

setting. Sometimes most important are teleological questions: why research is made in first place. (Hirsjärvi, Remes & Sajavaara 1997, 129-131.)

*Methodology* is an acknowledged way to collect information, which will answer the problem setting and founded questions. Methodology is a subset of research strategy. The methodology is more than a data collection method, it also takes a stand on how to process the research data and approach the problem setting. The three traditional research strategies are: experimental research, survey research and case study. Experimental research measures a variable change to another, a survey collects information from humans with structured questionnaires, and a case study seeks in-depth analysis of selected, often few cases. Each of these strategies offers very different answers and requires very different tools. The methodology should be chosen through careful analysis, especially considering the mission of the research. The mission of the research may be exploratory, explanatory, descriptive or predictive. (Hirsjärvi, Remes & Sajavaara 1997, 132-135)

*Theoretical understanding* refers to the relationship between the study and more general, but also special research of similar or other related field. Theoretical context is divided in two complementary approaches, quantitative and qualitative research (Hirsjärvi, Remes & Sajavaara 1997, 135-136). *Quantitative research* approach is based on experience-based deductive thinking and theory building. Theoretical knowledge is seen as universal truth, which, if properly expressed, can stand the test of time, guiding the search of new knowledge together with structuring the existing knowledge. There are also expressed goals for theoretical understanding: *simplicity, clarity, generality, and veracity*. Theory is useful when it is simple and easy to use, unambiguous and precise, expressed logically in general terms and, most important, truthfully. (Hirsjärvi, Remes & Sajavaara 1997, 140-148).

*The qualitative research* approach has a long tradition in the field of business and administration science and organizational studies. (Koskinen, Alasuutari & Peltonen 2005, 78.) *Qualitative research* approach is a holistic view, where the research object is an inseparable part of its surroundings. Typical features for qualitative research are: a) the nature of research is holistic acquisition of information and the data is collected from natural and real situations, b) there is a strong emphasis to human as a tool to collect data, c) inductive analysis is used, d) qualitative methods are used to collect data, e) the research data is appropriately selected, not by random selection, f) the research plan is formed during the research process and g) the data is considered as unique. (Hirsjärvi, Remes & Sajavaara 1997, 164.) The researcher is seen as a human, value-laden person. Therefore qualitative knowledge is always entangled with a human actor, which currently possesses the knowledge. (Hirsjärvi, Remes & Sajavaara 1997, 159-161). Qualitative research focus is in a quality of matters and has special features: the data is often acquired through human interaction, in the actual situation. The data is often analysed through inductive analysis. Emphasis is on techniques to collect the data, which gives space for perspective and a voice for the research object. Also individual persons in research object

are often hand-picked, and they are unique and interpreted accordingly. In the progress of research, the plans are modified and flexible. (Hirsjärvi, Remes & Sajavaara 1997, 160-164). The case study approach has also long traditions in the field of business and administration and organizational sciences. It was based on the legal “common law” approach, which used cases as a precedent to solve new situations. (Koskinen, Alasuutari & Peltonen 2005, 155-156.) Yin (1984, 89-98) lists three principles for quality research: a) usage of several different sources, b) creation of a database of collected data and c) usage of description methods, which provides a possibility for an external observer to follow the deductive reasoning chain. (Koskinen, Alasuutari & Peltonen 2005, 158-159.)

The amount of *research data* in qualitative research is undefined, but there is a relative measure, such as saturation, to define what is enough. Saturation states that a new sample won't add new information to research data but repeats the found patterns and knowledge. (Hirsjärvi, Remes & Sajavaara 1997, 160-164; Koskinen, Alasuutari & Peltonen 2005, 264.). Data collection methods are *questionnaires, interviews, observation* and *documentations*. Questionnaires are forms with structured questions with varying structure. They are good for collecting large amounts of information, but also their results may depend on how honestly and sincerely the interviewee answers the questions. Questionnaires may be open or multiple-choice question based forms. Open questions may result in incomparable information but multiple-choice may have inapplicable answers. (Hirsjärvi, Remes & Sajavaara 1997, 193-204). Documentations refer to research data which is a document created by research objects. Those are seen as a narrative and are part of narrative research approach. (Hirsjärvi, Remes & Sajavaara 1997, 216). Koskinen, Alasuutari and Peltonen (2006, 193) see them as concrete tools with which humans understand issues, themselves and connections.

Interviews are flexible, suitable in situations where the topic may turn out to different than the field researcher anticipated or where the answers need more in-depth questions and extra explanations. (Hirsjärvi, Remes & Sajavaara 1997, 204-212). Observation aims to reveal how research objects act in normal situations, in contrast to how they say they act. (Hirsjärvi, Remes & Sajavaara 1997, 212). Observation is the basic methodology of qualitative methodology. (Koskinen, Alasuutari & Peltonen 2005, 79.) Observation aims to produce genuine and immediate information from the research object and suits very well situations where the research object is reluctant to reveal their behavior to the researcher. It also adapts to changing situations, but some situations may be under-documented, which may endanger the reliability of observation. (Hirsjärvi, Remes & Sajavaara 1997, 212-215). Observation may be conducted as *systematic observation* and *participatory observation*. Systematic observation refers to a precisely controlled environment, where different classification schemes are used. Participatory observation refers to situations, where the researcher is a part of the research object, most commonly a part of group of people and participates in their activity.

## 4.1 Action Research

*Action research* is about research and action (Coghlan & Brannick 2005, 3). It combines together action and research to deliver practical as well as scientific results. According to Coghlan and Brannick, the theory of action research is largely based on Kurt Lewin's and John Dewey's work, but is furthermore developed by many, among others Argyris in 1982 and 1985, who with Putnam and McLain-Smith summarized Lewin's concept of action research (1985, 8-9). Typical features of action research are the focus of experiments on real problems in social systems. It is intended to contribute simultaneously to basic knowledge in social science and to social action in everyday life: Solve a problem and contribute to science. Action research is about research in action and doesn't postulate a distinction between theory and action. The action refers to series of events in chronological order. Hence the challenge for action researchers is to engage in both making the action happen and standing back from the action and reflecting on it as it takes place, in order to contribute theory to the body of knowledge (Coghlan & Brannick 2005, 11-13).

Tacit knowledge, hidden within the activity, is the target of action research (Heikkinen, Rovio & Syrjälä 2008, 34). Action research focuses on a particular problem and seeks to provide assistance to the client system always by taking action; researchers are not merely observing something happening; they are actively working at making it happen. (Coghlan & Brannick 2005, 11-13). Action research consists of iterative cycles of identifying a problem, planning, acting and evaluating (Heikkinen, Rovio & Syrjälä 2008, 35; Coghlan & Brannick 2005, 28). An important feature is a change, which typically consist re-education, a term that refers to renewing individuals paradigms and pattern of action that are at present well customary in persons and groups. A transform anticipated by change agents is characteristically at the stage of norms and values articulated in action. Action research is valid to the understanding, planning and implementation of transform in groups, organisations and communities. As action research is essentially about change, knowledge of and skill in the dynamics of organisational change are obligatory. Effective re-education depends on contribution by clients in diagnosis, fact finding and free choice to employ in new kinds of action. A challenging feature of action research is that changes the status quo from a participative perspective. (Coghlan & Brannick 2005, 10) High standards for developing theory and empirically testing propositions organized by the theory are not to be sacrificed, nor the relation to practice to be lost. Table 2 contains a summarized comparison of general research and action research from different angles.

Table 1 Comparison of traditional science and action research by Heikkinen (2008, 22.)

	<b>Research in general</b>	<b>Action research</b>
<b>Purpose</b>	Scrutinize reality	Change reality by scrutinizing it and scrutinize reality by changing it
<b>Objective</b>	Theory	Practical relevance, participants' empowerment and increase of practical information
<b>Role of researcher</b>	Exterior specialist	Participant, which makes required interventions to subject.
<b>Conclusions</b>	Through data collection and analysis of methodological reasoning	By gradual development and analysis process hermeneutic
<b>Determination or research tasks</b>	Problems and hypothesis	Development and knowledge formation task
<b>Development of expertise</b>	Researcher's expertise and competence develops, the scientific community distributes the knowledge to audience.	Pursues to develop the knowledge of participant, practical competence and expertise
<b>Researcher's perspective</b>	Objectivity, passive and third person	Subjectivity, active; I or Me as subject
<b>Mode of knowledge</b>	Pragmatic; based on propositions and rational reasoning	Narrative; based on proceeding through time with a logical plot, which uncovers causalities, agendas and objectives of people.
<b>Logic of action</b>	Focus on causality relationship	Focus on causality relationship and actions of people from perspective of their objectives.

Action research is also very socially oppressive, which requires a high ethical sentiment in order to reveal the hidden agendas and other objectives of the research subject. Gummesson (2000, 16), stated that the action research is the most demanding research method. He remarked that in the process of creating science action research always objectives to contribute practical solutions. In

action research, ethics involves in the relationships of action researcher and the members of research object. Ideals and norms that includes personal relationships affect the method how individual researcher research in practice. (Coghlan & Brannick 2005, 11-13.) Action research requires a breadth of pre-understanding of corporate or organisational environment, the conditions of business or service delivery, the structure and dynamics of operating systems and the theoretical underpinnings of such systems. Pre-understanding refers to the knowledge the action researcher brings to the research project. Such a need for pre-understanding signals that an action research approach is inappropriate for researchers who, for example, think that all they have to do to develop grounded theory is just to go out in to the field. (Coghlan & Brannick 2005, 11-13). Heikkinen, Rovio and Syrjälä (2008, 34) emphasise the skill of reflection thinking. Personal contact and trust is an access tool to the research object, but there is a need to address the ethical point of view that the researcher couldn't be part of the organization. (Koskinen Alasuutari & Peltonen 2005, 86-88.) Also applying observation requires strong methodological skills to avoid emotional attachments to the research object and also to control ethical questions, which arise from situations where true development is documented without research objects to acknowledge it. (Hirsjärvi, Remes & Sajavaara 1997, 212-213).

Action research is always a very heterogenic social process. The research subjects are themselves researchers or in other kind of partnership with the researcher, the researcher is aiming for and pursuing the change, and the last feature is that data and evidence are systemically collected from the experience of the research participants (Coghlan & Brannick 2001, 8; Heikkinen, Rovio & Syrjälä, 2008, 102). According to Coghlan and Brannick, the greatest difference to the other forms of research and discourse is pursuit of the change by doing research, not only understanding and explaining it (2001, 9). Coghlan and Brannick refer also to critical discourse about scientific foundations of action research (2001, 9).

Action research requires interaction: cooperation between the researchers and the client personnel, and frequent adjustment to new information and new events. In action research, the members of the research object are also co-researchers as the action researcher is working with them on their issue to solve or improve the research object or problem also aiming to create new knowledge and explore unknown zone of knowledge. As action research is a chain of unfolding and random events, the actors must co-operate and develop to meet the objectives of their operation. (Coghlan & Brannick 2005, 11-13; Heikkinen, Rovio & Syrjälä 2008, 102-103.)

Action research aims to develop a holistic understanding. Heikkinen, Rovio and Syrjälä claim this approach to also have wide political emancipation dimension (2008, 48-49) as methodological research object. Action research intended to be executed in during the normal operation in linear time, but in some cases the research method where some of analysis and writing is done later is accepted. The method of writing research later is retrospective and it relates to traditional case study. However then there should be method to use

case study to intervene to research object and change the present situation. Situation is known as case of learning history and used in the self-reflection and development of organisation. (Coghlan & Brannick 2005, 11-13).

Some of the action research types with references to their origins are presented below. The traditional action research was originally developed by Kurt Lewin in papers published in 1946 and 1948. The method involves a collaborative problem-solving relationship between the researcher and the client, aimed at both solving a problem and generating new knowledge. The work engages in collaborative cycles of planning, taking action, observation and reflection, illustrated in Figure 6. (Heikkinen, Rovio & Syrjälä 2008, 35.)

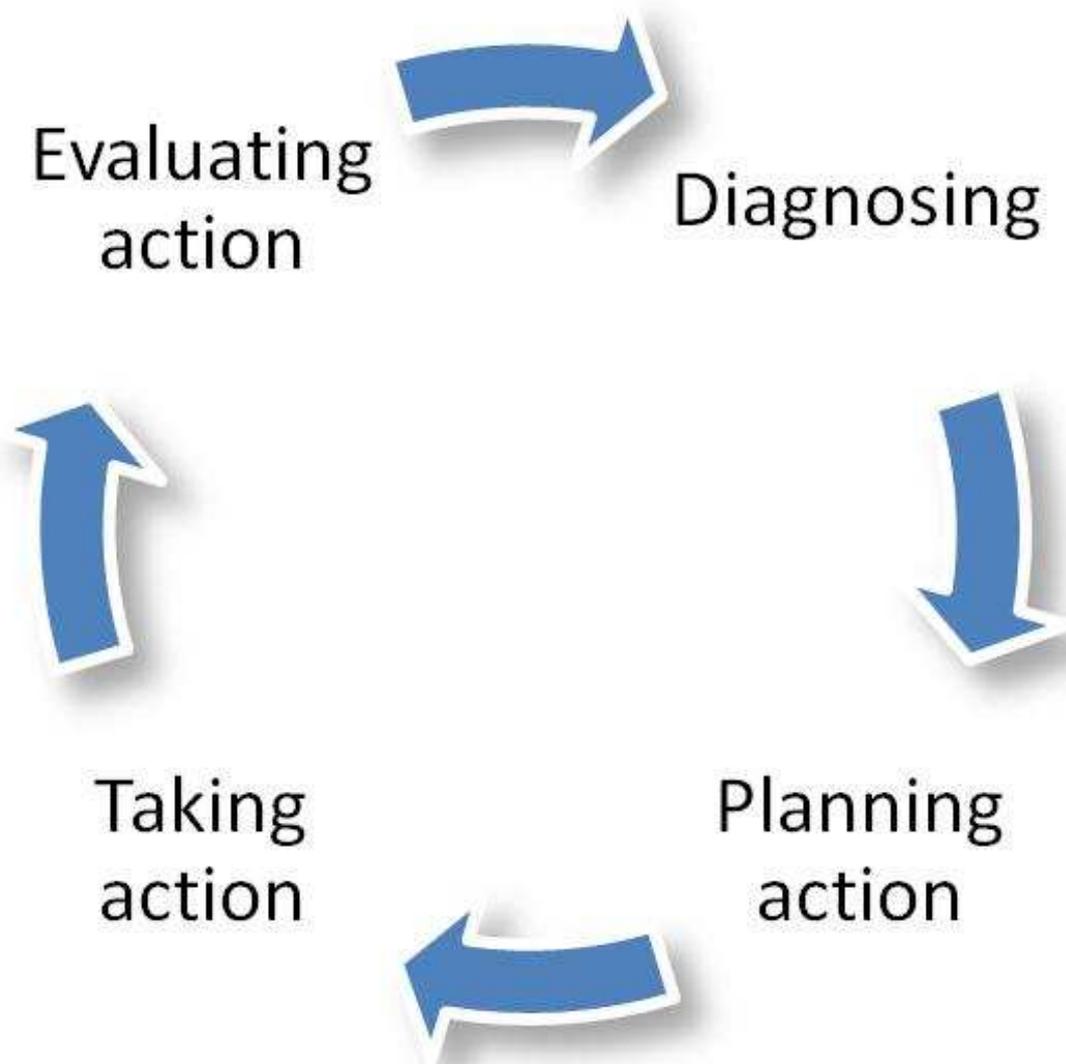


Figure 6 The Action research cycle (Coghlan & Brannick 2005, 28; Heikkinen, Rovio & Syrjälä 2008, 35, 79.)

Heikkinen, Kontinen and Häkkinen stress the fact that original critical action research has Marxist origins in Germany, in Frankfurt Institute of Social research (2008, 41). Coghlan and Brannick mention social psychology as the framework where Kurt Lewin first described the action research methodology (2005, 9-10). Different action research approaches are, among others, *traditional action research, participatory action research, action learning, action science, co-operative inquiry, clinical inquiry, reflective practice, and evaluative inquiry* (Coghlan & Brannick 2005, 14-19).

Participatory action research concentrates on the power, powerlessness and exclusion from decision-making, and it uses an empowerment method to engage people to construct and use their own knowledge. Participatory action research is commonly associated with the work of Foote-Whyte (Coghlan & Brannick 2005, 11; Heikkinen, Kontinen & Häkkinen 2008, 50-52). Action learning focuses on learning from problem solving without concentrating on scientific deliverables. It is sometimes referred with Revans' (1998) work. In the action science, the emphasis is on the cognitive process of individuals.

Action science generally refers to the work of Argyris (2005). The action science's basic concepts are formal knowledge and professional knowledge, which are the basis for espoused theory and theory-in-use concepts. The research concentrates to the gaps between the espoused theories and theory-in-use. (Heikkinen, Kontinen & Häkkinen 2008, 55-56.) In the co-operative inquiry, the process is generally collaborative, which means that people are significant co-researchers, who recognize what they do and how they experience during research. The significant issue is that the personal impact is noticed and results in a critical view of the research process (Coghlan & Brannick 2005, 17). The word clinical refers to professionals working with human systems and it means here a similar approach to organizational development. It was introduced by Schein (1987). The approach of clinical inquiry is an organization developmental one, where professionals have a four staged development program: a) they emphasize in-depth observation of learning and change of process, b) they emphasize the effects of intervention, c) they operate from models of what it is to function as a healthy system and focus on pathologies, puzzles and anomalies, which illustrate deviations from healthy functioning and d) they build a theory and empirical knowledge through developing concepts, which capture the real dynamics of systems (Coghlan & Brannick 2005, 18). Reflective practice refers to a method of how individuals engage their critical reflection on their own action and, according to Coghlan and Brannick (2005, 19), it is generally related to work of Schon. Evaluative inquiry stresses the utilization of the process of inquiry to aggregate organizational learning (Coghlan & Brannick 2005, 20).

This research process has combined Action research theory parts of different approaches together and applied them, aiming mostly at a practically applicable operational approach. Empowerment is one of the fundamental aspects of GVL, since it encourages the usage of own knowledge and giving power to the lowest possible level of the organization, and the development project had a similar aspect to its own work, which is reflected in this research

as well. Action learning method is also one of the fundamentals of GVL, aiming to solve real life problems without giving scientific outcomes too burdensome a role to weaken the creativity. However, this research report aims to deliver some research outcomes. The co-operation of the development team of GVL is reflected to this work, too, and personal factors are to be considered also as co-operative inquiry. Evaluative and clinical inquiry are formal methods that emphasise building a theory and aggregating knowledge, and they are not significantly followed when engaging in this research.

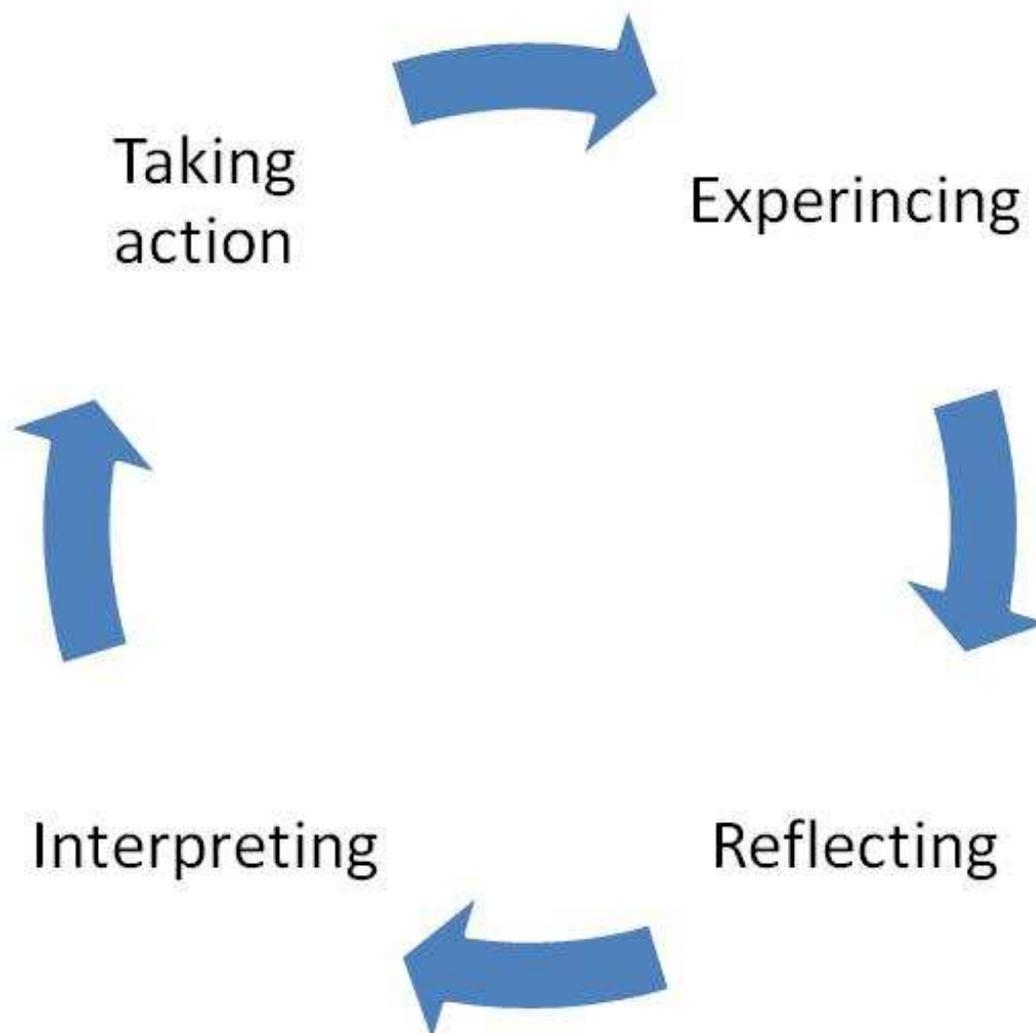


Figure 7 The experiential learning cycle (Coghlan & Brannick 2005, 28)

Action research cycle concludes four steps: 1) *diagnosing*, 2) *planning*, 3) *action* and 4) *evaluation*. The process is illustrated in Figure 7. Before these steps there are also pre-step context and purpose. The action research cycle refers to a development in real time and in real context. The context and purpose of the

process must be clearly stated before the next steps. Together the process creates a spiral, where each cycle takes the research forward.

External forces, such as economic, political and social, must be taken into account among the internal forces driving the change. Diagnosing refers to the process where the basis is defined; the issues are named and the theoretical foundations of actions are stated. Planning action means a process where collaborative actions are designed according to the guidelines set in earlier phases of the process. Taking actions refers to the execution of the planned action. Evaluating the action consists of analyzing the results by reflecting the expected results to what happened, and analyzing if the process was executed as designed. In the end, action research answers three questions (Coghlan & Brannick 2005, 10).

1. What happened? The relating of a good story.
2. How do you make sense of what happened? This involves rigorous reflection on that story.
3. So What? This most challenging question deals with the extrapolation of usable knowledge or theory from the reflection on the story.

Action research is usually executed by repeating actions, where succeeding steps are designed according to lessons learned from previous steps (Coghlan & Brannick 2005, 22). However, it must be noted that all these steps are taken in action on the level of individuals, teams, groups and finally on the level of organizations. (Coghlan & Brannick 2005, 26).

The action research's most significant original feature is the division of action to the reconstructive and constructive part and the division to thinking and social interaction. The planning action and taking action are constructive assessments and aimed to future change, Evaluation action and diagnosis are reconstructive and aimed to the past. The aim is that in the diagnosing phase, the research intends to advance to another level, aimed to a new improved objective. The social interaction consists of action and evaluation of action while thinking consists of diagnosing and planning action. (Heikkinen, Rovio & Syrjälä 2008, 79-80.)

Action research will emerge to become visible to an individual researcher by individual activities: experiencing, reflecting, interpreting and taking action. Those all together create the experiential learning cycle, which is illustrated in Figure 7. Experiencing relates to all human feelings and also, through the intellectual process, to thinking and understanding. Reflecting relates to all the reasons behind the experienced causalities. Interpreting involves answering the question raised by experiencing and reflection. Taking action naturally involves the implementation of the changes raised in the process of reflecting and interpreting. Each of these steps is to be executed in each phase of the action research cycle.

Coghlan and Brannick (2005, 25–26) present that in action research, if the researcher aims to achieve good solid scientific results, it is essential to apply *Meta learning*. Meta learning occurs usually in the level of *reflection*, and

Mezirow (1991) has identified three levels of reflection: content, process and premise. *Content* refers to facts: the series of actual incidents and other issues that have taken place during research and which have been diagnosed, planned, acted and evaluated. *Process* refers method of certain operation is executed. *Premises* means unacknowledged paradigm of researchers or research objects the research is conducted. The method is time consuming or it may have take only seconds, the result is unknown. The objective of repeating certain acknowledged operations is to develop solutions in the original problem, possible culture change and explore unknown areas of knowledge of research object. The process also stress the learning to learn and focus on the rigour and validity of research and their continuous evaluation.

Studying your own organization is a complex and demanding process. The successful implementation requires a professional approach from the researcher and a solid theoretical basis and study plan. The researcher's whole self is engaged in the research process in action, researching your own organization (Coghlan & Brannick 2005, 41). It is also recognized that the researcher's work in his primary responsibilities may differ from the research work or other way around. Coghlan and Brannick demonstrate the four dimensions of the requirements in Figure 8.

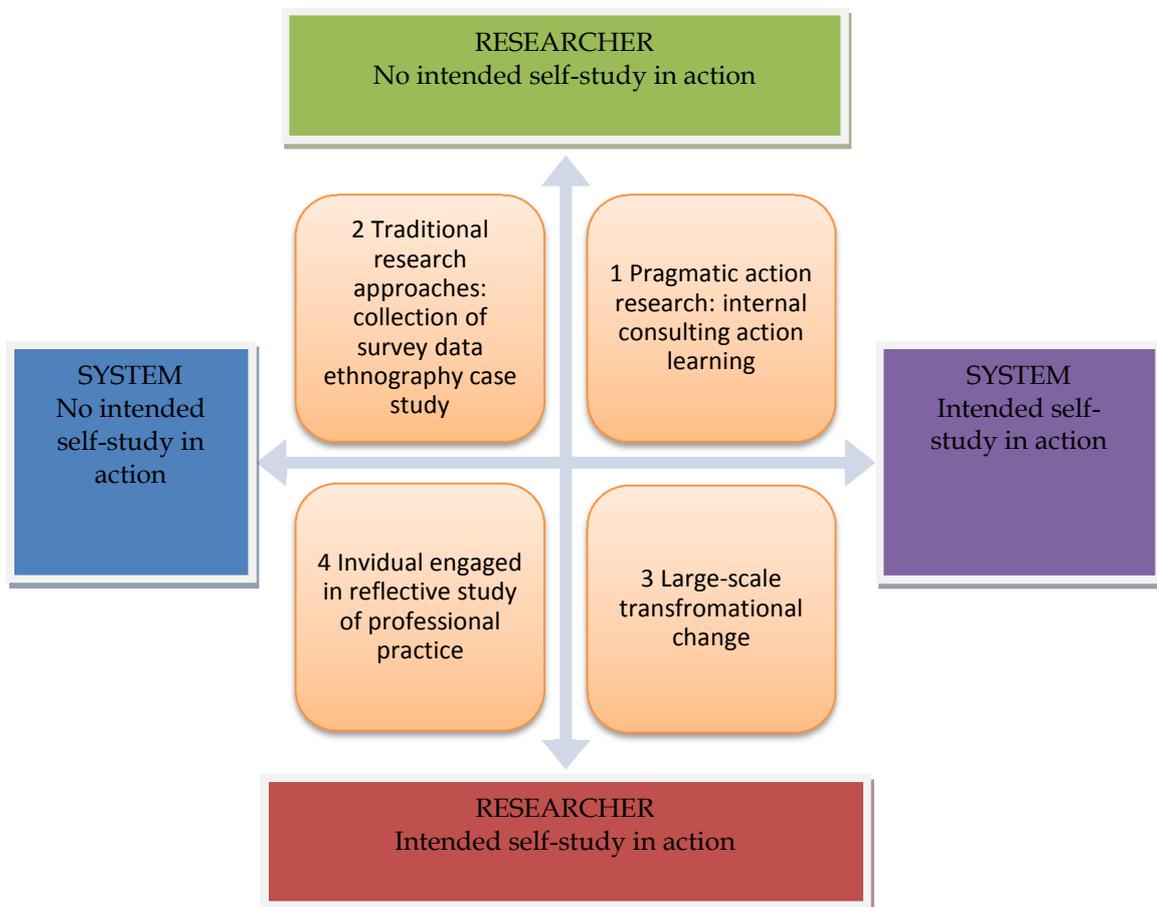


Figure 8 Focus of researcher and system (Coghlan &amp; Brannick 2005, 49)

The variables are related to whether the research has or doesn't have a goal to self-study the researcher or the system. The quadrant 1 represents a normal consultant role study, where the aim is to clearly create deliverables for the studied system. The quadrant 2 represents the traditional research approach, where either the system or the researcher is committed to the research process and emerging deliverables. The quadrant 3 represents the situation, where the researcher and the system are committed to the research process. This means that the system is committed to the change as developmental result of the action research. Quadrant 4 represents the application, where the system is not committed to action research process but the researcher is. For example, this situation emerges when a member of an organization self-studies the organization and their own role there and develops their own skills and abilities according to the research. As illustrated in figure 4, the existence of these two dimensions brings the complexity of action research well forth.

Here, the quadrant 2 establishes the situation, where either the researcher or the system has intentions of learning or any reflection based change in their own or research objects existence. This situation is possibly also seen as ethnographic research tradition. (Coghlan & Brannick, 2005. 54.) The quadrant 1 is a situation, which can be seen as a traditional consultancy approach, where the system is in constant change but the researcher is not committed and there are no intentions to self-study or personal development of the researcher. (Coghlan & Brannick 2005, 50-51.) Logically, the quadrant 4 expresses the situation where the organization is not involved but the researcher is committed and ready for self-studies. Interestingly enough, the researcher may end up in this situation by preselected way or it can emerge unforeseen. There are examples how change resistance might influence the emerging situation. (Coghlan & Brannick 2005, 52-53.) The final eligible situation is presented in quadrant 3, where the system and the researcher are empowered and ready for self-studies and the change (Coghlan & Brannick 2005, 56).

In comparison, Hirsjärvi, Remes and Sajavaara note that applying observation requires strong methodological skills to avoid emotional attachments to the research object and also control ethical questions, which arise from situations where true development is documented without research objects to acknowledge it (Hirsjärvi, Remes & Sajavaara 1997, 212-213).

In the research process, I felt committed to the research work at hand, but as Coghlan and Brannick noted, my primarily responsibilities differed slightly at the development process of GVL. Before the project, the aim was to keep myself and the development project in the quadrant 3, where also the organization and I was determined to change, but in the process turn-out that organisation level development was only an illustration of change and my own role partly diminished to varying between quadrant 1 or 4. This is significant

since in the Action research process, the implementation of the action research cycle fully to development and research process is a key for the researcher's personal development and development of the research object. The results of research are analyzed through the role of researcher and system, since their role affects the ability to use the research cycle method efficiently and the ability to affect the system between the cycles. Also results of research must be analyzed so that ethical or moral issues are considered.

## 4.2 Quality and rigour

Traditionally the scientific quality refers to the truthfulness of research, and it is measured with reliability, validity and generalization of the research and research process. Here are the most known measures of trustworthy science examined in more detail (Hirsjärvi, Remes & Sajavaara 1997, 231). *Rigour* in action research refers to the quality of data aggregation process: generation, gathering, exploring and evaluation (Coghlan & Brannick, 2005, 28).

*Reliability* refers to the self-consistency of the data. It is important to note that data can be reliable without being valid, but not the other way around (Koskinen, Alasuutari & Peltonen 2005, 255). In short, reliability refers to the ability of the research to produce systematic results that are repeatable (Hirsjärvi, Remes & Sajavaara 1997, 231; Heikkinen, Rovio & Syrjälä 2008, 147). Reliability includes four issues: a) congruence, which refers to how different indicators measure the same issue, b) accuracy of instrument, which refers to how accurate the measurement tools of the phenomenon are, c) objectivity of research instrument, which refers to how the observer is understood by others, and d) continuity, which means that the phenomenon observed is repeated enough to make sure the phenomenon isn't unique or an exception. (Koskinen, Alasuutari & Peltonen 2005, 255.) In action research, reliability suits badly, as the aim of action research is to change the research object, and the repeatability of research setting is logically impossible (Heikkinen, Rovio & Syrjälä 2008, 148). Koskinen, Alasuutari & Peltonen (2005, 256) also find reliability a questionable feature in qualitative research as a whole, and Hirsjärvi, Remes and Sajavaara (1997, 232) note the criticism of applying reliability in qualitative research, where research subjects should be unique.

*Validity* is understood as the measure of how definitely the certain claim, interpretation and result truly expresses the object they are supposed to reflect. Validity has internal and external dimensions, where internal validity refers to the internal logic and non-contradiction of the interpretation, and external validity means if the results are generalizable. (Koskinen, Alasuutari & Peltonen 2005, 254; Heikkinen, Rovio & Syrjälä 2008, 147.) The concept of validity is controversial, and it is somewhat unclear what validity in detail means. However, expressed differently, validity means that misinterpretations should be avoided, the results shouldn't be based on exceptions and there shouldn't be

any major problems with generalization. (Koskinen, Alasuutari & Peltonen 2005, 254; Heikkinen, Rovio & Syrjälä 2008, 148- 149.)

The most important validity criterion in qualitative research is repeatability. Koskinen, Alasuutari & Peltonen have presented a list of issues (2005, 258-259) which should be addressed; a) the research report should include a systematic report of how the research was made, including a report of observation and interview situation explanations, b) the research report should include a report of how aggregated data was evaluated and cross-checked, also with other methods, c) the research report should include an estimate of researchers' and different environmental organizations' effect on the research results. They also note (2005, 260-261) that qualitative research, where the research objects are humans, should be able to recognize them from the research report and allow them to have their say on the research, their citations and interpretation of their citations. However, this method requires that the research object understands the research as a scientific piece of knowledge and the limitations, definitions and theoretical background of the research.

Validity also includes the ability to generalize the results. Generalization of knowledge, which means the ability to create a theory that describes the practice, is intuitively useful. In qualitative research, the ambition of generalizable results leads to the question of the amount of research data. There is no clear regulation, but there is a relative measure, such as saturation, to define the right amount. In the research process, when a new research subject adds no new information to the data but repeats the found patterns and knowledge, a saturation point has been found. (Hirsjärvi, Remes & Sajavaara 1997, 160-164; Koskinen, Alasuutari & Peltonen 2005, 264.). Criticism towards small number of research subjects usually points to the broad-spectrum ability to generalize results that are based on few subjects, and may not include even enough subjects to exclude the standard variance of results (Koskinen, Alasuutari & Peltonen 2005, 265-266). Therefore Koskinen, Alasuutari & Peltonen (2005, 267-272) raise three equally important tools to validate the information aggregated in qualitative research: *reduction, comparison and combination of methods*. Reduction is a method to procedure the research data where information is developed to recognize and to maintain only the important aspects. Often these aspects are selected to be comparable and thus to make different subjects comparable and, as a result, recognize the important factors. Combination of methods may give new information from aggregated data that is collected with help of different methodology and evaluated with different methodological tools. (Koskinen, Alasuutari & Peltonen 2005, 265-266.)

Samples in qualitative research may be random generated samples or expediency based samples. Expediency based samples are commonly used and are selected based on their relative information value to the research problem. Selecting the right subjects for the research may have different strategies: 1) selecting informants from a subject group 2) let the subject name others to be interviewed and 3) focused sampling. Selecting informants offers benefits in a situation where the researcher has limited knowledge of the research group and

needs basic information. Then the next step is interviewing a number of those willing to discuss and selecting unique and special cases that offer relative valuable information to the research. Another approach is to first select cases randomly but make sure they are different enough, and let them name other possible interesting subjects for interview. In focused sampling method, the researcher selects subjects to be equally informative for the research, based on their external or internal qualifications and not their official status. Each of these methods has problems: Informants may be those emotionally affected and therefore willing to give a certain picture of the research subject, subjects may name their friends or similarly thinking colleagues or researchers' selections in focused sampling may not serve the research best. (Koskinen, Alasuutari & Peltonen 2005, 267-276.)

There has also been criticism to reliability and validity based thinking. (Koskinen, Alasuutari & Peltonen 2005, 256; Hirsjärvi, Remes & Sajavaara 1997, 232.; Heikkinen, Rovio & Syrjälä 2008, 147-148.; Coghlan & Brannick 2005, 28.) Table 3 presents Lincoln's and Guba's review of new naturalistic quality standard for qualitative research.

Table 2 Lincoln's and Guba's reformed view presented by Koskinen, Alasuutari & Peltonen (2005, 257).

<b>Conventional research</b>	<b>Naturalistic research</b>	
<b>Internal validity</b>	Trustworthiness	- Usage of several methods - Peer group assessment - Exceptions seeking
<b>External validity</b>	Transferability	- Rich depiction of research object to make it transferable to other environments
<b>Reliability</b>	Dependence	- Auditing; research documentation
<b>Objectivity</b>	Validity	- Auditing

Also Heikkinen and Syrjälä (2008, 149, 161) support the action research validity to be replaced with validation, which includes 5 principles: 1) historical continuity, 2) reflexivity, 3) dialectics, 4) workability and 5) evocativeness. They note that each criterion is interconnected to others and therefore are not able to be evaluated separately. Research is always based on previous work, the research object has origins and history, and there has always been prior development in the research setting, which create the narrative of the research process. Historical continuity is an important evaluation factor. (Heikkinen, Rovio & Syrjälä 2008, 151-152.)

The research process in action research requires the evaluation of the researcher's own thinking process and mindset. The researcher's ontological and epistemological presumptions should be acknowledged and also the researcher's relationship to the research object. The reflection process should be open and transparent. Dialectics is an approach, where social reality forms through a discursion process. In the process, thesis and antithesis produce a synthesis and every thesis develops a new synthesis, which includes the applicable parts of the previous thesis and antithesis. Dialectics emphasis the value of critic and antithesis and generates more authentic, truthful results. (Heikkinen, Rovio & Syrjälä 2008, 153-155.)

Workability produces utility referring to a theory that works in practice producing benefits. Utility is a key to evaluate the action research. However, utility requires defining beneficiaries and the form of the utility, which refers to a wide variety of values, not only political, technical or economical benefits. The concept has a pragmatic approach to research. Critical approach to utility implements un-traditional language and words to the research environment, aiming to establish new knowledge. Workability may also be a tool of empowerment and evaluation of the ethical consequences of the research. (Heikkinen, Rovio & Syrjälä, 2008, 156-158.)

Evocativeness refers to the ability of the research to affect its reader, its near surroundings, science community and society. It includes not only rationality and cognitive criterion, but also other more expanded criteria, such as aesthetics. (Heikkinen, Rovio & Syrjälä 2008, 159-160.)

Coghlan and Brannick (2005, 27) also state that the action research should be judged by its own criteria. They suggest the usage of original Reason and Bradbury's question pattern, published in 2001, to define the quality of research.

Table 5. Questions for quality in action research by Reason and Bradbury in Coghlan and Brannick (2005, 27-28)

1. How well does the action research reflect the cooperation between the action researcher and the members of the organisation?
2. Is the action project governed by constant and iterative reflection as part of the process of organizational change or improvement?
3. Action research is inclusive of practical, propositional, presentational and experiential knowing and so as a methodology is appropriate to furthering knowledge on different levels.
4. The significance of the project is an important quality in action research.
5. Does sustainable change come out of the project?

The rigour of action research refers to how data are generated, gathered, explored and evaluated, how proceedings are questioned and interpreted through numerous action research cycles. The Coghlan and Brannic also suggested own methods to evaluate the rigour of action research.

Table 6: Coghlan and Brannick (2005, 28) have also presented a question pattern for rigorous evaluation:

1. How you engaged in the steps of multiple and repetitious action research cycles (how diagnosing, planning, taking action and evaluating were done), and how these were recorded to reflect that they are a true representation of what was studied.
2. How you challenged and tested your own assumptions and interpretations of what was happening continuously through the project, by means of content, process and premise reflection, so that your familiarity with and closeness to the issues are exposed to critique.
3. How you accessed different views of what was happening, which probably produced both confirming and contradictory interpretations.
4. How your interpretations and diagnoses are grounded in scholarly theory, rigorously applied, and how project outcomes are challenged, supported or disconfirmed in terms of the theories underpinning those interpretations and diagnoses.

Analyzing this study based on the traditional standards of research process, the reliability, validity and generalization of the research and research process, I found that there are strengths and weaknesses. The strengths are in a reliable approach that had systematic, repeated and documented development stages, which were developed with a group of researchers and data gathered by different scholars simultaneously. Since the analysis of the study is quality based, the accuracy of measurement is depending on the researcher's judgement, which may weaken the reliability of results. However, since the development stages vary compared to each other, logically each is a unique research setting, which may weaken the reliability. The rigour of the research process is also a strength, since comparable data gathering measures and evaluation were used during the research altogether. Aggregation process varied, since some data from some stages were produced by another researcher in the research group, especially in the first and last stage. The research may be critiqued by lack of repeatability or number of data producers or evaluators.

The question of validity of the research is a significant weakness. As expressed earlier, the overall question of applying Agency theory in the public sector has some contradictions, let alone applying it to individual persons. However, in the research validity improves, since the research acknowledges the weakness and aims to address it by analyzing the data with careful consideration and avoiding interpretations but by opening possibilities to further research. Also the strength of this research is that the research is systemically reported and there is a concluded report of the research setting and advancement of the research. The research is reported in the manner where independent research objects, colleagues and other co-operators aren't

recognisable, and interaction with human has always unknown factors, therefore validity of the descriptions of certain situations are always possibly unrepeatable. The amount of research data may not have been near saturation, since in every stage new issues were found. Here those issues are mentioned as possible further proceedings. However, the results of research may be generalized with reservation in major issues, but details may vary.

Since traditional analysis is criticized to be challenging to implement to action research, it may be rewarding to analyze the research with standards developed for action research. Analysing the research with Lincoln and Guba's review of trustworthiness, transferability, dependence and validity, I found that the research approach has certain strengths. The research is conducted with peer group assessment close to the research group. Data is gathered with several methods, even through several researchers working on the same issues. The group was challenging itself - even close to breaking. Researchers advanced their careers and created optional paths of development of GVL, for example by independently launching private sector business development career or becoming a traditional researcher in a think-tank. The development of GVL is described in detail, which is required if the GVL concept is possibly needed to be transferred to other environments. The research is carefully documented and each development stage has a description, even though their focus may vary. The research report is audited by the research group, and development suggestions are used as tool to advance the research further. By Lincoln and Guba's criteria, the trustworthiness, transferability, dependence and validity are generally achieved with minor deficiencies.

In the standard expressed by Heikkinen and Syrjälä, the validation is interesting in analysing the research. The research is part of a historical continuity of implementation of Agency theory to new fields of life. The process of research through development stages and mainly through discussion strengthens the validation. The goal of the GVL development project is to create workable and evocative results, and those values are implemented to this research also. However, in the end of the game, the evocativeness depends of the audience, if there ever emerges one for this research.

The analysis of the research through the original question pattern by Reason and Bradbury is revealing. In the first level the questions are interesting. The research was conducted in close participation with a number of people, the research was guided by practical outcomes, the research included extensive plurality of knowing and extending the ways of knowing, for example by bringing together expertise from many areas. Most important is that the research is done alongside the development process of Runway to Growth program, which creates a new Finnish start-up development program named after the original project. All answers of the first question level are supporting the quality of the research. In the second question level, the research process is conducted with fellow researchers in the GVL. The great weakness of the validity of the research is that organisation transformation is non-existent and real improvement is deficient. The research includes an implementation of

practical and experiential knowing, where the aim is to advance knowledge to unknown areas and, as stated in the introduction, there is a significant need for the creation of new business venture producing processes in Finland and in Finnish universities. Only time will tell if the results are sustainable, but for now it is sure that the project created an externalized program of *Runway to Growth*, which may be considered as a sustainable result.

For rigorous evaluation Coghlan and Brannick had their own criteria. The action research cycle is implemented by a number of development stages, where diagnosing, planning, taking action and evaluating are done. The number of stages and the depth of analysis may be criticized though. The recordation of development stages is done through constant variables to be comparable each other. The researcher's own assumptions and interpretations are continuously challenged through the research, not only by the researcher but also by the research team, for example by interpreting the feedback of certain research cases in real life simulation. Contradictory interpretations are accessed through discussion with critics and other researchers. The interpretations and diagnoses are very careful and considered only as recommendations for further exploration of practise, not to mention scholarly theory. Project outcomes are challenged by their financiers and by public audience, but the scholarly importance of the research may be limited.

In general the quality and rigour of the research are proven reliable, the validity might be questioned, but in the action research analysis the ultimate question of the quality of the research by Coghlan and Brannick (30) comes from the solutions the research produces. The solution of the research is that Agency theory can be implemented in complex organisations, even though the work needed is extensive. The results or solutions may be hindered during a few years, but as research work the foundation may stay.

### **4.3 Research process and aggregation of data**

This study is also a research report from a *development project*, which started in 2008, when the researcher was appointed to a project manager at the University of Jyväskylä. The position was in an external funded development project (*Runway to Growth*), which aimed to support the research unit's overall performance but with its own development agenda and goals. The research concentrates on reviewing principal-agent relationships in inter-organisation setting through selected dimensions, Moral Hazard and Adverse Selection. As said earlier, research is conducted by Action research method. Researcher participates in the development project as a project employee but also as a researcher with his own research agenda. In this chapter, GVL is examined through four developmental stages, and those stages are reviewed through selected characteristics of the current status. The development stages are time periods during the research process, where certain topics were the most

concrete ones and may be interpreted. The developmental stages are then reviewed through the relationships of three different actors and their own characteristics. Later development stages are reviewed through selected agency theory problems.

The launch of the development project is presented in the report of Seppä and Suoranta (2008), where the ultimate goal is to create a concept of a science community unit that combines education, research and business creation. In 2010, at the end of the development project, an educational goal was established to form a major program of Master of Arts of Business creation (Seppä, 2010). The development project also found similar needs to establish new forms of knowledge and action patterns to better serve research and business creation. However, the organisational model, a concept, and the concrete goals were under constant development during the research project.

During the research process, the most important Agency Theory dimensions were seen to be *agency cost*, *risk aversion and incentives*, *moral hazard and adverse selection* and *asymmetric information*. The agency cost is an obvious choice for a business economic researcher, because intuitively the cost-benefit of the new model studied is important. Recognising the agency cost factors and possibly naming the changes in those factors in different settings is important. Risk aversion and incentives relate to the agency theory model that is often studied in the field of the insurance policy (Spence & Zeckhauser 1971) but also in traditional employment policy in the public sector (Kivistö 2005). Moral hazard and adverse selection are very sensitive issues, since the research object relates also to privatising and public-private partnerships and also very personal issues on the field. Asymmetric information is the most important dimension of Agency Theory and is recognised by Eisenhardt (1989) as a problem in demanding professions' contracting, such as professionals and leaders. However, as I have stated earlier, I will analyze the concept only through moral hazard and adverse selection. The analysis of concept through these dimensions relates to recognising if any possibilities of exposing moral hazard or adverse selection are potential, and if any are found, are they addressed in the development of the concept. Since very little formal structures are documented during the development process of the concept of GVL, detailed calculations are not in the scope of this research.

These two Agency Theory dimensions were analysed through four developmental stages of the development project, especially concentrating on the suggested problems GVL aims to solve through organisational structure. The development process of the GVL method and the GVL structure was relative to time and the attention of the research group. Intuitively or personal agendas may have influenced the topics of certain time, and during the research process the matter how topics were raised was noted several times and reported also here. Action research is relative to time when it is conducted and the research setting is vulnerable to the intellectual capability of researcher (Coghlan & Brannick 2005, 47-48). If the researcher misses the important moment of research, the moment may not be able to be repeated. The

developmental stages have differences to each other; eventually, in this research, it was possible to source each step in the development process originating and evaluating the differences.

The developmental stages were a traditional public civil servant organisation, fall 2008 stage, March 2009 stage and December 2010 stage. There is also a short review of the development after December 2010. The stages are described and recognized by five different dimensions: the source data, the objectives of the current organisation stage, the means of the current organisation stage, the scope of the current organisation stage and the direction of action of the current stage. Each of these multidimensional matrixes was analysed through three principal-agent relationships: actor-GVL, GVL-university and GVL-faculty. Actor refers to a human individual who has a traditional employee contractual relationship to GVL or other related organisation as an employee, a civil servant or other form. As actor I have used as an example my personal experiences, especially vices, and also possible fellow researchers' virtues. In the research, the actor may refer to me, or some other, outside original staff of GVL.

Data gathering for the research process was implemented by 1) personal observation, 2) interviews and discussions and 3) documents. The participation in the development project provided excellent access to observing the development process, the discussions and thinking behind the expressed publications. Also interviews are commentaries between discussions without a formal agenda. In the research process, four action research cycles were recognized, of which two were cycle 0 (normal stage) and cycle 1 work done before the researcher was participating in the process. The analysis of the data was conducted through traditional action research procedure expressed by Coghlan & Brannick (2005, 21-27). First data was collected through participation and observation, discussion based interviews and documentary created by the development group. The collected data was arranged to chronological order by their thematic context. Then data was rearranged inside the thematic context to organisational dimension it related to. Comparison between the contexts of each matrix cell was made between different cycles and also between different dimensions. Results were analysed and evaluated through action research meta learning points and general qualitative research paradigm.

The development process of the GVL science community had no formal agenda or project plan, but only a strategic vision and milestones to measure the advancement. The strategic guidance was the objective to create a structure of organisation for a community model that would deliver the indented dividend as efficiently as possible. The figure 9 illustrates the first vision to bring together faculty, business and studies. The terms faculty, business and studies referred to individual persons from different stakeholder groups, not organisations themselves. I recognised the common characteristics of different developmental organisation levels. This research project was also hampered by the fact that there was an acknowledged way to discourage and avoid openly

expressing the politically hard issues that would provoke resistance due to their incorrect political nature, such as some forms of privatization and possible negative measures of what implementing an investment model in a public organisation would create. Possible negative measures of the model of privatization and investment refers to, for example, a situation where individual interests are excessively pronounced and the public interest might vanish or the level might be harmfully reduced at least. This lead to a situation where creating very precise written description was generally avoided and general descriptions were favoured. However, the implementation of Agency theory may strengthen the variety of current public organisation management tools, since even the current organisation model may have need to strengthen the guidance of individual level of employees.

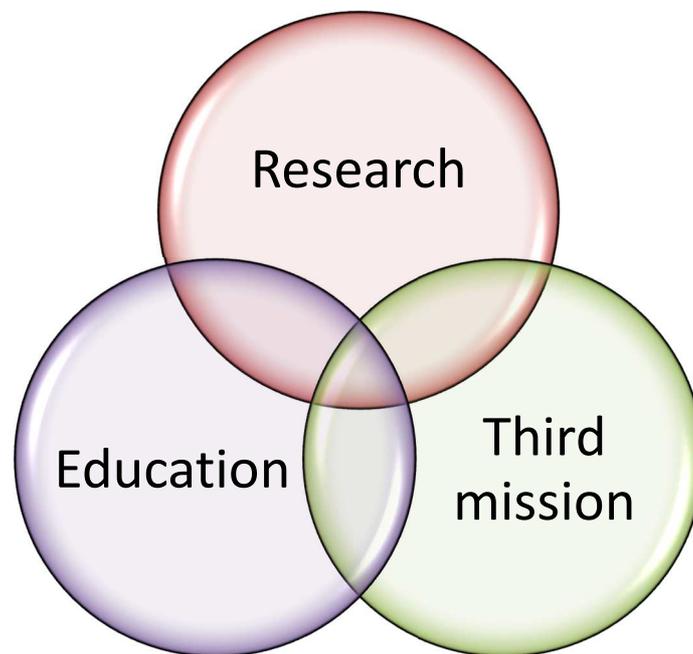


Figure 9 Illustration of combined mission of university by Oksanen 2008.

The characteristics of selected development stages were selected as source data, the objectives, the means, the scope and the direction of action. I raised these characteristics to focus since they came up in the development process as topics in discussion and they were noted to guide the discussion. The discussion in the development project produced a significant part of reliable research data. The characteristics - source data, the objectives, the means, the scope and the direction of action changes - are analysed between different development stages. The aim is to open the development process and explain the background of different development paths.

The source of the data differs between different development stages, but for research validity it is important to recognise that the data is comparable and

coherent. Most information for first, second and last development stages was gathered without my interference prior and after my working activity, but only analysed and reported by me. The objectives are significant signs of ideals and a strategic view, which produces characteristics for the organisation itself and changes in the objectives of the organisation disclose internal changes of the organisation. In the development process (meeting at Konnevesi 21.8.2008) it was recognised that the GVL structure must serve the strategy and objectives of GVL concept. In the research process, the objectives were defined on the level of the organisation but also the level of the individual employee and analysed between employees and organisation levels. However, the only real change of my working status was a transformation of a public civil servant contract to a private employee contract.

The means of development stage in an organisation refers to resources and other contractual and leadership tools to be available and to those in use. For organisation management, the management tools refer to, for example, contractual consideration between behaviour-based contract and results-based contract or simply behaviour monitoring tools or results valuation methods. For employees, access to resources and the capability to use resources was considered by the GVL concept to be an empowering and committing aspect of the GVL process. The GVL concept suggested that employees without resources and tools to pursue the objectives are severely handicapped and results may not be as efficient as possible. Even though the GVL concept had a strong supposition that contracting is one of the key issues bringing empowered and committed individuals into the organisation, and in general the GVL concept is not analysed, but some of the Agency theory selected dimensions may relate closely to this issue.

The scope refers to the scope of GVL activity. Different development stages had differences in their scope and that may have an effect on actors, faculty level or university level and their interests. The scope answers the question of what is the framework of GVL concept's organisation and what are the characteristics of it. The scope varied significantly during the research process. Therefore, the scope of the environment is an important characteristic to recognize different relationships and make significant differences between reviewed actor relationships. For example, the first GVL concept had an activity environment of one university and global connections were left for university or individual interest. However, at the third stage the environment scope was global with local activity.

The direction of action refers to the difference between the activities' aims. Even though the GVL concept is global, the share of local activity compared to global activity varied and shaped the organisation, and it may have had an effect on agency theory setting. The direction of action answers the question where are the primary actions aimed at. During the research process I noticed that there are recognisable differences in the characteristics of action of individual actors between internationally or domestically oriented organisation.

During the GVL development project, the fact emerged that all possible relationships may not be included into the research analysis. Therefore the research concentrates on three organisational relationships: university-GVL relationship, faculty-GVL relationship and individual actor-GVL -relationship. They are selected because they all are interconnected to each other with principal-agent relationship, many of them in both roles, however represented in administration by different persons. Actor refers to an anonymous person who is in contractual relationship to GVL, faculty or university. Actors may not always be employees but also with more sophisticated contractual framework. GVL refers to a GVL concept. The GVL concept and organisational structure were developing during the process. University is considered a university generally but considering the environment herein, it is University of Jyväskylä. University is seen as a conceptual formal institution. Faculty refers not only to, for example, the formal administration of School of Business and Economics in University of Jyväskylä, but broadly to the members of the science community as individuals. The organisational relationships in this context are complicated but for research purposes slightly reduced.

## **5 EVOLUTION AND ANALYSIS OF GLOBAL VENTURE LAB**

The different dimensions of organisational development stages during the research process were not easy to choose. The process was in constant change and different new ideas were raised together continuously. Also people committed to the process were in constant changes due to their organisational and family reasons. This led to a situation where some developmental stages have a quite different content compared to other stages. The first developmental stage is a formal civil servant organisation, which includes the 2008 civil servant public organisation and also the private science organisation formed during 2009 (OPM 2009). During the research project and the development project of GVL, the traditional organisation was in the background, and all research team members were part of it. The first developmental stage represented the normal situation, which was the starting point to every developmental stage.

### **5.1 First development stage of GVL concept - normal situation**

The standardized organisation of university is carefully studied by Kivistö (2005, 2007), and the university's mission has also been reviewed by Kivinen (2006). In this study I refer to those research works to create a comparative concept of normal university management. The actor-faculty and actor university relationship are based on the personal participation in the GVL research group. The group, in any case, was part of formal university organisation during the research work. Kivinen (2006, 7) lists the formally expressed goals of university in her report and also makes a suggestion of performance measurement table for university. The table includes measurements of movement of people, information transformation, cash flow of university, direct impact of physical environment, the ability to address the problems and expectations emerging from the surroundings, which all were determined easy to follow in numerical measures (Kivinen, 34-44). Kivinen

remarks that there was a certain reluctance in general to define the third mission precisely (Kivinen, 45). University and faculty have a formal performance agreement, where most important rights and liabilities as well as financial compensation are agreed (for example University of Jyväskylä, 2007). Financial compensation is mainly behaviour based, but there is also a performance based part. Behaviour-based compensation is calculated from research activities, education activities, third mission activities and other development projects. The performance-based compensation is in University of Jyväskylä, for example, 2.6 per cent of total compensation (University of Jyväskylä 2007). The agreement is detailed on human resources available for faculty and premises, and overall costs are compensated as actual generated. Faculties are in theory equal to each other in parallel.

University employees were civil servants and later on employees, and their nomination is based on monthly compensation with an hourly working obligation. The later reform from civil servants to employees maintained the compensation agreement. The compensation level is agreed on a normal fixed basis and fixed performance compensation. The performance compensation is based on nominal examination and personal negotiation. The behaviour-based agreement includes formal obligation of education activities defined hourly and research activities defined by publication. The objectives for the third mission were not defined in detail for individual actors (civil servant or employee). In general, the monetary compensation is fixed and the behaviour of agent is monitored through research publications and presentation activity as well as teaching and lecturing activity. Also hours worked are monitored, but by a system that all hours are included without control. The performance of an agent is valued by the scientific output by publications and presentations. The performance compensation is arranged for fixed-term employees with their employment contract, which may or may not be continued, and for permanent employees a promotion at rank of organisation and compensation level. For university management, the usage of organisational rank may or may not create a problem for the amount of needed ranks for performance compensation, especially in the upper level or organisation. Also university's upper level employees have managerial and scientific responsibilities, which are competing for their working time, which may undermine their ability to produce scientific results.

However, the performance compensation is disordered by interference of other universities or employers, which may or may not offer better or similar contracts, especially those who are recognised performing well. Universities are worldwide ranked by their level of expertise, and that has created undefined prestige for some universities and their researchers. For those universities with lower prestige this may create an adverse selection problem for the university as principal. Some researchers may accept financially lower level compensation in trade of prestige of a high ranked university and position as part of their faculty. Universities have differentiated their expertise to gain a worldwide-recognised level in the field of expertise and also prestige on that field. For

those universities with a lower level general prestige, the success on a narrower field of expertise may tempt well-performing agents and make competition of their fields of expertise easier. However, universities are increasingly affected by global competition and even in-depth fields are very competitive.

## 5.2 Second development stage of GVL concept – creation

The analysis of the selected characteristics of the *second GVL development stage* is based on the report of Seppä & Suoranta (2008) and personal notes from meetings from May to September 2008. During that time, the research group consisted of me, Marko Seppä, Mari Suoranta, Jane Porter, Mia Häkkinen and Sakari Sipola. The group had not created a formal description of itself or a detailed job description. The research group had several unofficial and official gatherings with changing compositions. Total 18 major development meetings were arranged. During the first months also several private business investor individuals were met, focusing on the discussion about investment management and investment process. The strategy logic of sweat equity investor and venture capital investor is based on a discussion with Pekka Rissanen (for further readings, see Seppä 2000).

The second developmental stage is based on the action learning project report edited by Seppä and Suoranta, published in 2009. The unfinished version was however ready in the spring 2008. I joined the development project of GVL in May 2008, familiarized myself to GVL via an unpublished manuscript and therefore the second stage is considered as a given, created without any significant influence from the researcher. The publication includes a clear description of the objectives the development project aimed to solve, a short description of activities, the stakeholders, a limited description of the ownership structure and a discussion on ideological questions. The description of a three-dimensional approach is explained, the process description of GVL model and a discussion of designed impacts for the society as whole is given a short review. Figure 9 illustrates the common ground where the GVL activity aimed to focus: the very spot between research, education and business.

In the second developmental stage and in the beginning of the GVL development project, the research group defined the stakeholders in its working environment as follows: the general public, the faculty members (referring to members of the science community), students, entrepreneurs, co-entrepreneurs and venture capital. All stakeholders had their own attachment level: For the *general public*, the attachment level was the international GVL concept as a web presence and bigger events and also in life-changing solutions (refers to practical solutions, which commercially produce a better life for a significant amount of people), for which GVL was formed to produce; for *faculty members* the attachment level was the local GVL office; for *student* the attachment level was study programs, especially at that time the current minor

programs but also the designed majoring program; for *entrepreneurs* the attachment level was different development projects, which at that time were StraLo, R2G, VentureCup business idea contest and LaunchPad international entrepreneurship education concept, among others; for *co-entrepreneurs* the attachment level was a business idea or nascent business deal-flow; and lastly, for *venture capital* representatives the attachment level was a venture flow.

In the second developmental stage, the first and still un-precisely described organisational model was created. The first organization model of GVL was a mixed model of a *global association* and *local investment limited companies*. The GVL association's function was to manage the global brand of the GVL community, for example by owning the web domains and common visual characteristics etc. The income model of GVL association was the franchising fees from local GVL limited companies. At that time, the calculation model of franchising fees wasn't defined. The GVL association's management model was defined. Members of GVL association were approved the heads of local investment limited companies. The association was designed to be managed under Finnish law. The GVL association was a purely managerial unit for the private brand of GVL and had no practical local activity.

The GVL process, i.e. the GVL practical activity, was designed to emerge in GVL local investment limited company (later GVL lilc). The practical activity geared around the creation process of new business ventures. As stated, the creation process of new business ventures aimed to produce scientific knowledge of the industrial level of business creation. The researchers were designed to be inside the new business ventures, to be able to spot the very detailed picture of the business venture's creation process. Also the process allowed students to learn business venture creation and process produced venture flow. The GVL lilc had silent partners and managing partners from its local environment, and the general organisational management model followed the investment fund limited company structure (FVCA, 2009a).

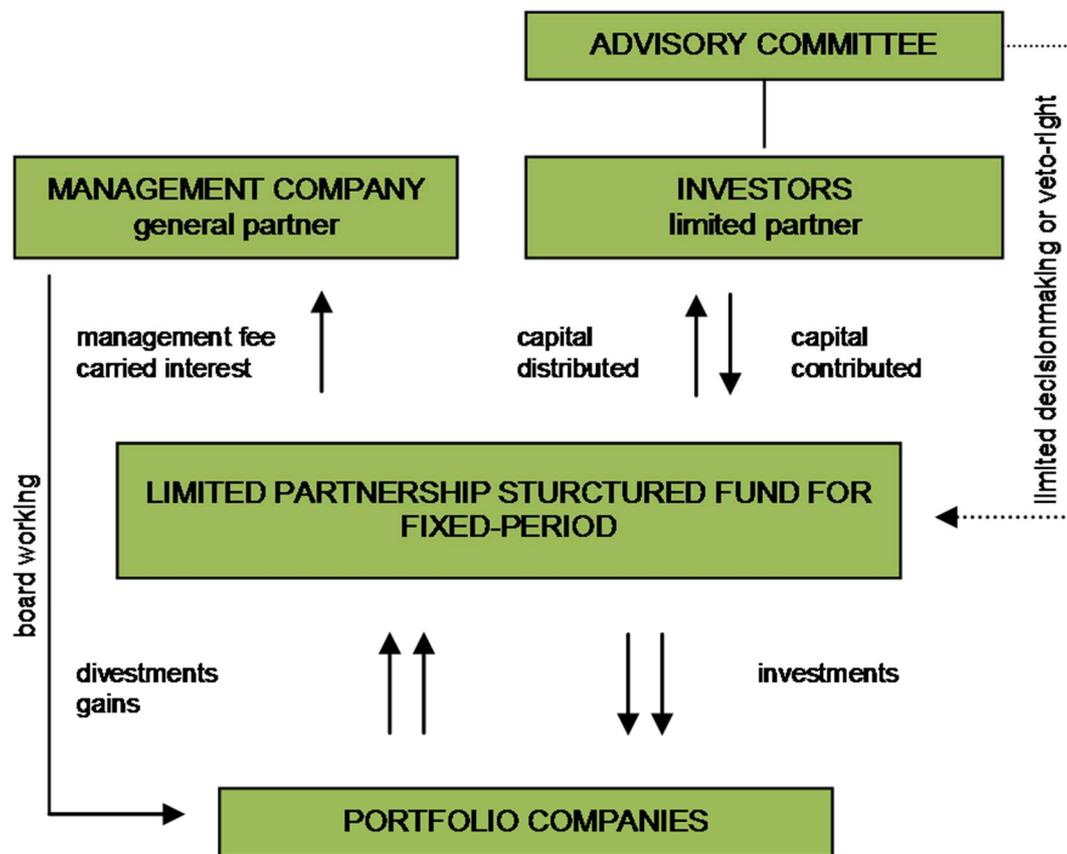


Figure 10 FVCA presented standard model of venture capital company structure (FVCA, 2009a)

The GVL lilc was established for a fixed term in the foundation agreement between the partners. The partners of GVL lilc were at any rate the university as a juridical entity and the management company of GVL lilc. At that time, the model included also participation of university staff. The governance of GVL lilc was handled through a specialised management company. The foundation of GVL lilc preceded a careful screening of managerial partners and their management company by university or its affiliates.

The GVL lilc was to be contracted by university to produce educational, research and business development services alongside official faculty entity, as a special private facility of university. The actual contract paper was never produced, but the GVL lilc earning logic design included university guaranteed management, production and result based fees and the incomes of business venture creation exit incomes. The income distribution inside of GVL lilc was based on a private agreement between limited partners, managerial partners and brand management fee to GVL association. An important aspect was that the income distribution is based on a partner agreement for 5 years fixed term.

The relationship between the university and GVL lilc was based entirely on their private agreement.

The university educational and research quality measure control was based on the quality of output control, and quality of business venture creation was based on market pricing as quality control. The earning logic of GVL lilc was aimed to support the idea that only a fraction of expenses was covered through input based fees, such as employees working and hours of study lessons given. The main income was designed to consist of output-based revenues. The income structure was also aimed to stress the importance of long-term outputs. The GVL lilc contract agreement planned to contain only minimum qualifications for employees for GVL lilc management company. The GVL lilc design included to have basic traditional qualifications for educational and research staff, but the development project had also other positions, where the employee's traditional research career may have been a disadvantage.

In practice, GVL lilc's educational and research staff is applied similar basic qualifications as a university employer would, but with increased requirements for certain abilities, such as connections to local business environment and communicational skills. However, the GVL lilc relationship to other traditional faculty organisations was designed not based on agreement, but on collegial relationship; both had similar task-based contractual relationship towards the university, and university had several different faculties. The major difference in the GVL lilc - faculty relationship was their expectation level, which for GVL lilc had more business creation included. Because the GVL model is not designed to replace the traditional faculties but to act as special supplement in the field of business venture creation education and research, the expected organisational relationship should be supportive, not competitive.

The objectives of the GVL organisation at second stage were to stress the soft emotional dimension of organisational life: initiative, creativity and passion and their implementation into daily practical organisational activity. The aim was to empower employees, students and partners and have them commit to their own project and GVL model through ownership share of GLV lilc. The extra input, guaranteed by extra commitment and empowerment strengthened work, knowledge and other personal inputs, is invested as sweat equity to business venture development projects expected to pay-off extra dividend. The basic objective is to build a model that enables a sweat equity investment process into business venture creation, and using that process to educate and study business venture creation process. In development discussion, the traditional faculty based education and research process was seen more separated from each other, and business venture creation is not on their list of objectives.

The traditional faculty recognised the useful invention and its commercialisation through Innovation service. The focus is on inventions and the process of commercialization is left for a separate specialised organisational unit (Jyu, 2008). The nature of Innovation service is a more independent one, a

task-force unit separated from research of commercialization itself, even though current serving civil servants have an ambition to take their invention and innovation research and practice as far as possible (Hynynen & Reitzer, 2010). Herein the University's internal Innovation service wasn't considered as a comparable unit for GVL lilc due to its limited nature as a supportive internal unit of university. The objectives of the GVL organisation in GVL - Actor - relationship are divided. The GVL model expects actors to commit to creativity and to be passionate through ownership structure.

Very soon, however, the complications for building a suitable, simple structure emerged. The very idea of shared ownership of business venture requires careful consideration of current owners and potential new shareholding partners. Among other issues, sincerity, openness and trustworthiness were found most important obstacles to address. In the beginning, the membership of GVL society was seen as a guarantee of the quality of its members, to address the trust issues, but later it was discovered that more structured issues were needed. The GVL lilc, which is at the core of local GVL action (business venture creation process), was designed to offer limited partnership to selected partners. The limited partnership agreement guaranteed an agreed per cent of capital refund at termination of partnership. In exchange of limited partnership, the partner invested their knowledge and work time to the GVL action. However, the precise definition and screening methods of investment amount, nature and value was in disagreement. For some it was negotiable and for some a fixed minimum.

The selection of suitable limited partners for the GVL lilc was based on a foundation agreement between the university and the management company. In the agreement, a certain percentage was left for binding suitable partners with needed core competence to co-operation with GVL action. The selection process was left for the GVL management company in the limits of agreement with university. In development discussion, it was recognised that co-operation actors may not be at the level of partnership but nevertheless important for GVL action, and there should be a structure to commit their interests too. For actors who committed their investments to single business venture creation process, the ownership was built in the venture creation. The GVL - actor was found to be most problematic in organisational level and was later further developed.

The means of GVL organisation to achieve the objectives were the described organisational model. As stated before, the main tool to engage the actors to the objectives of GVL was an ownership model of GVL association and GVL lilc. The GVL association aimed to engage selected persons, seen as global enablers of university based high growth business venture creation process, to secure the brand image, the purity of process and to guarantee the results by their personal interest as owners and members of GVL association. The GVL lilc was formed between a main limited partner, the university, and the management company. The university had selected directly or through competitive bidding suitable management staff and agreed with their

represented management company through a written foundation agreement to run the GVL lilc. The contract is for fixed term with a mutual option to continue for another term if both parties agree. The basic inputs of running the GVL lilc environment provided by university were e.g. access to libraries, international databases, physical office and educational space among others. The management company basic inputs were also defined as qualification of staff to meet generally ordinary faculty staff and a basic educational and research work. To secure the GVL lilc healthy cash-flow, a fixed payment for providing certain limited educational and research services would be implemented. The payments are made to GVL lilc, which pays the management company's fee based on the foundation agreement of GVL lilc.

However, GVL lilc foundation agreement would make possible to engage other silent partners to commit to GVL objectives through ownership. The foundation contract of GVL lilc includes the terms of terminating the company and the distribution of accumulated incomes between university, the management company and other silent partners after reaching the end of fixed term. The foundation agreement includes also terms of terminating the company, in case of failing to meet the basic requirements in education, research and some managerial requirements. The relationship between traditional faculty and GVL lilc in aspect of means to pursue their objectives is competitive by nature. The GVL lilc is by nature terminated in fixed term and possibly earlier, if requested results aren't delivered or certain qualifications met. In this development stage, the discussion didn't concern these special termination conditions. In exchange of the risk of termination, there is a possibility for earning extra yields in case of success.

Traditional faculty as an institution is in no risk to be terminated. The methods engaging professionals to certain tasks are relaxed in GVL lilc, and it is expected that GVL lilc exploit aggressively performance-based contracts with its partners and also via contracting an expanded circle of principals. The ownership is also the main tool to engage the different actors to GVL action, though in the current stage the detailed ownership structure was undefined.

The scope of the second stage GVL organization is global on brand level, but on action level it is based on local entities in co-operation contract universities. The scope of traditional faculty and GVL lilc is very similar, and no significant difference could not been identified.

In the GVL lilc the direction of action is national and local university environment. International connections are built in individual projects and with no global GVL network. Also in the aspect of direction of action, the traditional faculty is very similar to GVL lilc.

### 5.3 Third development stage of GVL concept - launch

*The third stage* of development of organisational model continued emerging to the launch of GVL in V2C Forum on 23.3.2009. On that day, the GVL had its conceptual launch after all key positions were considered fulfilled and some of the key development steps had been taken. After the previous stage, the most important issues were implementation of an operational level partners' ownership engagement and global aspirations of high-end of activity. The operational level partners referred to those partners with whom the daily GVL business venture creation process was executed. These partners were for example students, other faculty members of current university and mature established business partners.

The GVL research group was also presented new members, such as Samppa Lajunen, Christian Aspegren, Mila Hakanen and Mitro Kivinen. At the time, the GVL research group created a brochure of themselves to introduce the group located in Jyväskylä, Helsinki and Tampere. Samppa Lajunen was a half-time coordinator and half-time business controller of Kuiskaaja Oy, an investment company. He is described as a determined individual and a champion. He also had world-class results in sports, which is mentioned also in the brochure. His expertise or passion, as GVL method required expressing the issue, is on financing and in investing both cash and knowledge in suitable business ventures. Christian Aspegren, project director, is described as a global innovator and brand creator with entrepreneurship in his heart. He had experience of demanding marketing and new innovation product launches internationally from 1970 to 1990s. He is interested in design and creating a method to mobilize resources for growth ventures.

Mitro Kivinen, researcher, is described to be an operational manager to make the difference between success and failure and a force to get things done. He also had experiences of creating start-ups since 1990s in adviser and executive tasks. Mila Hakanen was a junior researcher of our team and described as an enthusiastic networker, interested in social capital and co-creation and shared growth strategies. Also the older members of our team were given a short presentation. Jane Porter, researcher, was the social conscience of the group, especially fond of the slogan "problems worth solving" and not only those solutions were worth large piles of cash. Her background is in Canada. Mia Häkkinen, researcher, is introduced as an explorer of brands as a growth tool in business venture creation. Mari Suoranta, assistant professor, is presented as the first of the team to explore the live case method in teaching and research, and also one of the launching the program.

Marko Seppä, professor, is introduced as a former venture capitalist with work experience from US, Russia and Finland, a head of the research unit and a passionate co-creator and promoter of venture-to-capital based thinking. Sebastian Caisse is also mentioned, but he didn't participate in the research group in reality. Also the writer of this study is mentioned, described as a

researcher and venture portfolio manager. My background is explained to be wide experience of local business in Central Finland in different fields of expertise. My passion is mentioned to be a development of a dream factory to build masters and venture that change the world. The brochure at that time introduced GVL as *a university based business creation platform for problems worth solving* as follows:

*Global Venture Lab is a university based business creation platform. It is powered by a globally connected faculty, students, and alumni of business competence: A community of individuals passionate about growth venturing for problems worth solving. The mission is to produce "masters of the art" and the needed scientific knowledge. To achieve this, entrepreneurs are invited over to open their businesses for co-creation, as Live Cases, via action research and action learning programs.*

The language of GVL was English and the way of expressing the issues was unintentionally imprecise in public brochures. Also the aim to stay independent from the authority of university is seen in constant reference to be a shared unit of three Finnish universities and three universities globally (Seppä, 19.9.2008). The formal concept and structure of GVL wasn't working, and strict definitions weren't seen as possible to publish. The discussion in the group, however, was very fast in autumn 2008, gearing towards operational production planning of business ventures. Figure 12 illustrates the funnel model, presented by Sampsa Lajunen, for business ideas to be processed business ventures and further investable ventures. The model is very familiar from equity investment companies' model of sieve investable ventures out of random business ideas.

The GVL process described by Lajunen is a practical model with three stages of screening of the business ideas and formal steps of development: The first level is GVL entry level stage, where discussion is whether there is enough idea to invest it some time and carefully screen the idea through. In informal discussion, this stage was seen very relaxed and as the strength of GLV compared to other comparable business incubators. Screening stage allowed GVL to give more time and careful consideration for a wider range of ideas. The second level is a more demanding stage, where suitable business ventures and those with development potential are presented to outsider venture-to-capital and other potential low level but very serious investors. The third level is the most demanding stage, where only those business ventures are taken that have succeeded in commercialization, i.e. sales of their products or services, and have proven ability to run the business and have firm plan of growth. The final products include, as stated before, graduated students who have know-how of creating business ventures and financing them, probably some sustainable enterprises, and an emerging theory base of business venture creation process. Important notes were that from the first stage the business planning is done, and from second stage the focus is on sales and operational business. The view of Lajunen was very strict on the issue and stresses the idea that it is most

important to acknowledge early enough if the business is a survivor or should it be abandoned due to lack of customers.

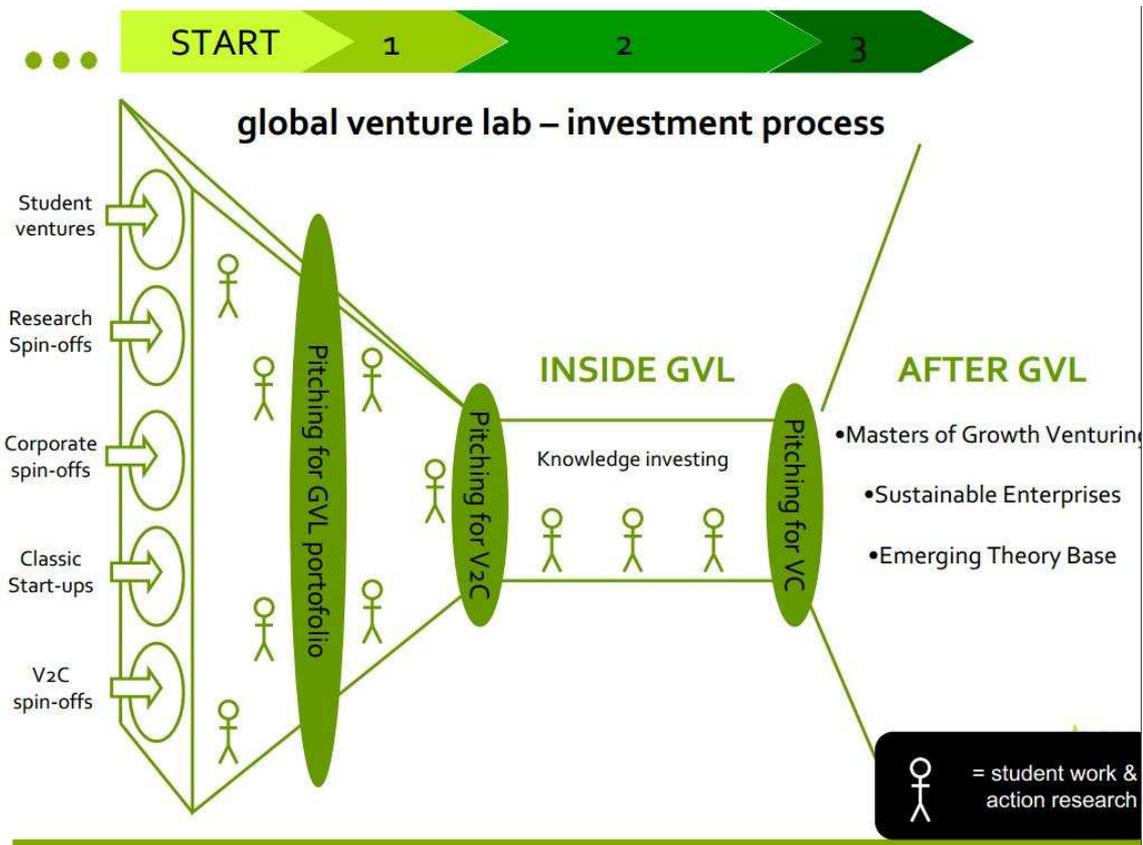


Figure 11 Lajunen 2009. GVL funnel investment process (Lajunen, 2009)

The operational model of Lajunen 2009 remained as the GVL operational description since, but further on the development of the structure of GVL was on firm problems. In January 2009 the discussion was how to combine the possible Whisperfund together with GLV discussion. In February 2009, the first draft of an agreement of ownership of business venture was handed over to University of Jyväskylä Legal Counsel by Lajunen (3.2.2009). Legal Counsel commented (2.3.2009) the agreement with links of university's agreement policy. In the beginning he noted that the existing agreement model served the situation, where student work or research was ordered by an existing company. The conclusion based on the discussion was that the official agreement should be as light as possible (Seppä, 9.3.2009). The agreement of the ownership of business venture aimed to combine the interests of all parties developing the business idea, to give the feeling of empowerment and to stress the commitment and understanding the importance of each individual owner (Seppä, 9.3.2009).

The development process in stage three concentrated on implementing the operational level partners in the GVL business venture creation process. The original design, focused on business venture creation process, was acknowledged to be challenging. It was also noted that the students were in general very unfamiliar with business thinking, which changed the needed educational actions and also changed the utilisation of students in GVL new business venture creation process. It was found necessary to implement more theory studies and to find more mature business partners to offer suitable co-operational cases. Another question that raised discussion was the situation of university staff towards the GVL lilc, and especially in cases where they are engaged in new business venture creation process. Especially interesting in the discussion was the potential situation of how to handle the inventions made under employment contract to university, where all inventions are fully or partially university-owned. This was seen a certain kind of potential limitation to bring university based inventions to GVL business venture creation process.

The other development track was the GVL structure, where the co-operative model was found and seen suitable as management company of GVL. The launch of the development of co-operative based management structure was initiated on 13.9.2009, in a development discussion meeting arranged at private legal adviser's premises. The legal expert, host of the meeting, speculated with GVL management structure and human nature: even the best and most honest people sometimes need a guidelines and steering to the correct direction, and herding is always painful. The GVL structure must address the situation, where somebody is not fulfilling the promises made. He also noted that even a slightest hint of fraud might end the cooperation and kill the feeling of empowerment and commitment. In the discussion, one participant from private co-entrepreneur and investor raised an idea that the GVL investment of time and resources are guaranteed with a GVL certificate of quality. The trustworthiness is essential though. Another private knowledge capital investor and knowledge capital investment company owner, also confirmed the importance of trustworthiness in a meeting on 17.9.2009. He noted that entrepreneurs tend to try to survive alone as long as possible, and only a small fraction has a need for external help, especially concentrated on growth of business such, as knowledge investor. All private sector investor background participants confirmed, based on their experience, that both parties must understand the nature of the project the owner and investor are committing themselves in, and especially the owner of venture needs to be sincerely convinced of the trustworthiness and commitment of investor. The ownership structure is not a legal problem but a conceptual one. This meant that legal advice is always available and the justice system is rather known, but if the structure will not work in practice and results are vague or even totally missing, each party will seek solutions or, at worst, somebody to blame. The most important stage of the knowledge investment process is the careful screening of the potential investor, the nature of his knowledge and abilities to increase the value of business. If knowledge investment is made through a structured fund,

the investment target must ensure the fund rules and usage of the ownership share in worst-case scenario, such as fund insolvency or fund termination. In the investee's interests is also the person in question. Knowledge investments are highly personalized and the commitment of the person must be guaranteed. If an investment fund holding the ownership shares is in a position that they might change the person investing in to the company, the issue may not be in the best interest of the investee.

Furthermore, during the fall 2008 and winter 2009, the co-operation with the investment company Kuiskaaja Oy, concentrating on Finnish small and medium sized companies, accelerated to a level that Kuiskaaja Oy was interested to discuss the establishing and funding a joint investment fund together with GVL. In January, Kuiskaaja Oy (Lajunen, 2009b) proposed two models to implement a joint-managed fund for GVL. The model included financing GVL portfolio companies through a private fund with up to 100 000 euros, or in another model up to 200 000 euros development path of companies and division of labor between GVL in the private investment company. Both structures would have been Kuiskaaja Oy led models, where the final decision "invest or not" would depend on Kuiskaaja Oy's professional opinion.

However, the development project had given a new direction and in a team meeting in early January 2009, Seppä published a new plan for year 2009. The management company was designed to be a co-operative, the members of which would be faculty members. The co-operative would serve as general partner of GVL Fund I L.P together with Kuiskaaja Oy. Individuals and institutions would serve as limited partners of the Fund. A minimum 30 private investors would invest 10...20 per cent of total equity, where university would invest another 20...30 per cent of total equity and TEKES would invest the rest. The Limited partnership would serve a limited lifetime, expected to be 2+5+5 years. The example return on investment would be as follows: 1. Capital to investors, 2. Capital to knowledge investors up to 1M€, where all share 33,33% equal between General partners, private investors and institutional investors. The general partners' cash flow is secured with a yearly management fee, calculated as defined fraction of capital (Seppä, 2009).

The objectives of the GVL organisation at third stage were to stress the hard economic side and private investors' interests, but utilizing them as a tool to achieve: initiative, creativity and passion and their implementation into daily practical organisational activity. As before, employees, students and partners are aimed to be empowered and committed to their own project and the GVL model through ownership share of GLV Fund I L.P. As with the GVL lilc, the discussion stressing the question of selection or accepting of the selected partners caused confusion. Also the joint management model raised questions, for example the question of the methods to solve disputes between general partners (Turkki, 2008). In the third stage, the role of actor was limited. Actor had three possible serious roles, such as entrepreneur, student or faculty member. For the actors (anyone or all) who committed their investments to single business venture creation process, the ownership was built in the venture

creation. The GVL - actor was found to be the most problematic in organisational level and was later further developed. It was also seen that different cases required different level of equity or knowledge investments, a situation where a single model wouldn't fit.

The means for GVL to achieve their goals were the organisational model that would commit and empower the right person to deliver the results. Co-operative model offered those members of the co-operative a very good situation to have actual power over the operational and direct influence over all GVL activity. Overall, the entire role of the co-operative would be smaller because it would only serve together with Kuiskaaja Oy, which would be seen as a limitative qualification too. The differences compared to the second stage would also be in the detailed agreement and the governance policy of University to supervise and enforce the implementation of the agreement. Unfortunately, these documents couldn't be produced in the overall development project. An important aspect in development discussion was engaging competent labour to execute the business venture creation process, as it was acknowledged as a complicated model. In the discussion with the legal department (Lajunen - Ikävalo), the engagement process of the individual to deliver the value promise of GVL was revealed challenging.

The scope of the third stage GVL organization is on a local investment company model in a co-operation contract relationship to universities. The scope of traditional faculty and GVL activity is left undefined. From private individual - actor perspective, the scope is very local only to have good international contacts. For University, the scope of GVL activity was seen similar to a standard faculty. Discussion at late 2009 GVL Network meeting was enthusiastic on the methods to engage local business environment to GVL activity (Sidhu, 2010, 9). The scope of the relationship of traditional faculty and GVL developed even further to a situation where their activities were strategically backing each other, since GVL business venture creation process aimed at different goals compared to traditional faculty. However, the scope of the actors' relationships to GVL process was much more versatile. The relationship was seen to be deeper or much wider than expected. The wide variety of roles for different actors was seen as a strength to engage actors via soft methods to activities, and later to make possible the deep engagement through a suitable business venture creation case.

In the GVL co-operative, the direction of action is national and local university environment. International connections are built in individual projects and with no global GVL network. However, the beginning of building the network begun on 7.1.2009, as Global Venture Lab IIT Kharagpur was launched in Kharagpur, India. The international network of GVL was finally called together by Iklaq Sidhu at the University of California, Berkeley, in Global Venture Lab Executive Summit 18.11.-20.11.2009, which included partners of that time from Finland, India and China.

## 5.4 Fourth development stage of GLV concept

The fourth level was a situation in the end of researchers' paid participation to the development project in end of 2010. The one part of formal structure was published in a press release 24.11.2010 (Seppä, 2010a) and named as Global Faculty Partners for Problems Worth Solving LP Ky. It was presented as a new global knowledge investment company for part-time partner involvement. The management of LP is designed to be handled by faculty partnership, which includes professors, doctoral students and lecturers. The discussion of the ownership structure in 2010 was about the minimum ownership share (Seppä, 2010b) and how much will generate the needed empowerment and commitment effect.

After the public launch of Global Venture Lab Finland in Jyväskylä 23.3.2009, the design of GVL was boosted. As Lajunen (2009b, 2009c) had suggested, the development of GVL was directed to include different financial instruments, funds, to support the core activity of business venture creation on local and national level. Together with international connections, the discussion lead to questioning a possibility to have also a bigger global Fund, as presented in table 4 below.

Table 3 Fund for different purposes. Presented by Seppä. (2009)

Target area	Local Fund	National Fund	Global Fund
Legal form	Limited partnership	Limited partnership	Limited partnership
Strategic partners	Co-operation with local university	Co-operation with national co-entrepreneur association and investment companies	Co-operation with GVL network locations
Fund optimal size	~1 M€	~10-25 M€	~100M€
Investors	Local investors, University, Government	Corporates, Government, Investment companies	International Fund

After the team meeting on 2.4.2009, the decision to develop the Fund management based on co-operative on local level was confirmed and the process to create the rules of the co-operative was started. Also another interesting side development project was emerging. The GVL process of

business venture creation suited only very nascent business ideas, but also more matured businesses had interesting cases and very much growth potential. Christian Aspegren presented his idea to use a special agreement model to transform given value to shareholdings in more matured companies. The idea is to turn agreed results into shareholding with a method familiar from convertible bond issued by an invested company. The terms triggering conversion would be concrete measurable results, for example sales or other areas where the invested value is calculated.

Also another ownership sharing tool was brought to the development project by Christian Aspegren. His developmental concept (Aspegren, 2009) was a note with special covenants, issued by a start-up, to pay special resources within a special investment fund. The special investment fund refers to a concept, where some resources are agreed to be pooled together to be used as growth tools for selected start-ups. Suitable for such pooling and investment procedure was designed to be such as professional services in the fields of marketing, juridical and accounting services. The idea was originally presented on 13.11.2008 in at development meeting at private legal adviser at Helsinki held meeting and was later developed alongside the GVL concept and eventually implemented into it (in 2011).

The objectives of the GVL organisation at fourth stage were to stress the global approach of activities and even further bring the industry scale in focus (Sidhu, 2009). The model of shared ownership was still Limited liability company with a special purpose co-operative as a managing partner. The development project combined aims to the empowerment and engagement in to the concept of a Human Accelerator (Seppä, 2010). The early concept of Human Accelerator was under discussion also at GVL Network summit in 2009 (Sidhu, 2010, 3-7). Also problems worth solving had developed to a Business Ecosystem and industry creation level illustrated in figure 10 (Sidhu et al., 2010).

The means for GVL to execute the business venture creation process was in a slow development phase at stage four. The most important change was the emphasis on the discussion of ownership share limitations to engage people to venture. Developmental discussion with Lajunen (2009) and Seppälä (2010) challenged the commitment of ordinary researchers to business creation goals, and it was recognised that all individuals aren't suitable for breaking silos (Seppä, 2009 in Sidhu, 2010). The discussion lead to a developmental challenge to create a more sophisticated model to select suitable members to the managing level of GVL.

The scope of the fourth stage of GVL organization is on local investment company model in a co-operation contract relationship to universities. The scope of traditional faculty and GVL activity is left undefined. From private individual - actor perspective, the scope is very local, only to have good international contacts. For University, the scope of GVL activity was seen similar to standard faculty.

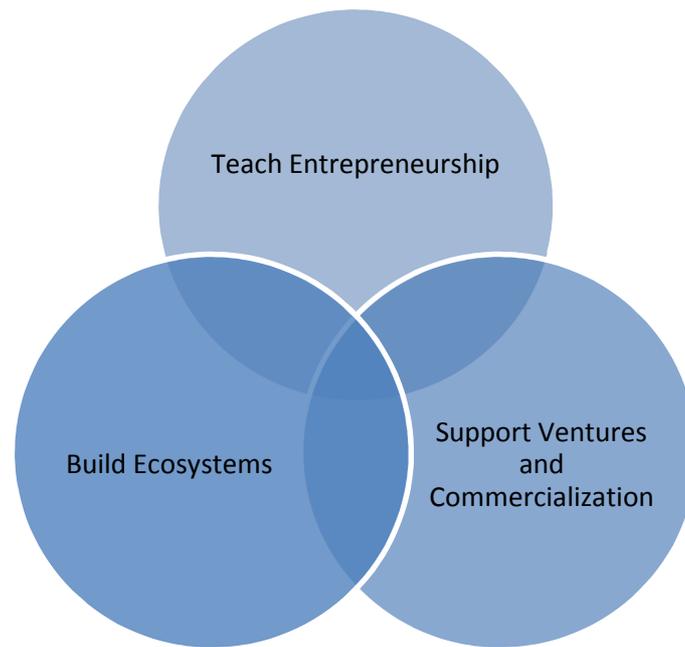


Figure 12 Globally, Engineering Entrepreneurship Programs Commonly Focus on These Three Areas presented by Sidhu et al 2010.

In the GVL co-operative, the direction of action is national and local university environment. International connections are built in individual projects, and the Finnish approach had little or no official faculty based global GVL network. The invitation letter of UC Berkeley hosted summit has more emphasis on the institutional connection, but still Global Venture Lab is regarded as an international collaboration hosted at UC Berkeley (UC Berkeley, 2009). The then collaboration partners were mentioned to be IIT Kharagpur, University of Jyväskylä in Finland, and Tsinghua and other leading universities in China. Later on in 2013, the collaboration partners are listed at UC Berkeley's website, including 24 universities in the Americas, Europe, Asia and Australia (UC Berkeley, 2013).

The Global Venture Lab continued its development in 2011. The management company was registered on 27.9.2011 and the limited liability company was registered 18.10.2011. Seppä published his latest paper on GVL concept in 2012 with the latest development, which is presented to you here. The development work in India has produced a concept of co-incubation, where mixing new start-ups to may increase their probability to survive and develop market success (Kumar, Amrita, Bhowmick & Biswas, 2012). Later GVL activities in Universities of Kharagpur and Jyväskylä were closed and the GVL concept only continues in UC Berkeley related 24 universities.

## 6 RESULTS

In the research project I have presented a developing organisational concept for a science community, which would have a mixed behaviour and performance-based contract with university. The concept would also expand the mixed behaviour and performance-based contract to their employees and, in some cases, students. The concept aimed to use the performance based contract as a tool to engage individual actors to the objectives of concept. The requirement of performance-based contract was several times (Turkki, Kapanen, Rissanen, 17.9.2009) emphasized due to the need to avoid moral hazard and adverse selection. The main strategic goal of the GVL concept was to create engagement and commitment for a common goal in all personnel involved in GVL process to achieve the objective of GVL. The main tool to achieve the engagement was creating a feeling but also to employ an ownership model to formalize the connection to activity. The assumption of the GVL concept was that strong personal commitment is required to create high growth aimed ventures as well as world level science. As described earlier, the research work consists only of a survey of situations, where the GVL concept may or may not address the issues of Agency Theory in selected dimensions moral hazard and adverse selection.

All GVL models had similar end results compared to the university - GVL relationship. The GVL was designed to make a similar agreement with university than traditional faculty, but the GVL model had the requirement that university would create markets, where independent actors (organizations) would emerge and act as faculties and compete for resources with their performance. The GVL model also suggested that university would have a neutral position of organization model of actors. The University is employed by a mixed performance and behaviour-based contract by the government, and the creation of faculty markets would enable the university to transfer their performance requirements to faculty level and to strengthen the steering leverage of faculty activities. However, research revealed that possibilities of faculty markets would require careful consideration and extreme caution with agreement policy. The current agreement between university and faculty is complicated and detailed. The creation of markets of faculties would change the contract emphasis from behaviour to performance. One clear threat is market

failure, where university fails to attract competitive actors to compete, and university failure to nourish competition on faculty activity. The GVL development process revealed that the faculty organization could be established as a co-operative, private company or association. The suggested market of faculties would enable the profitability of faculty, but only from performance-based incomes. The threat that faculties are enabled to rent-seeking by university agreement, where agreed results and activities are diminished, is a result of agreement failure. The terms of agreement may enable the faculty to profitable operation with good results and correct behaviour.

There are several moral hazard and adverse selection related issues in university faculty markets. For example, a number of individual actors (even majority) may have grounds to press the university to mitigate performance requirements and strengthen the behaviour-based dimension. The university's internal faculty markets would require a significant amount of purchase and business intelligence to correctly address the possible pressure, and also some risk-appetite is necessary. Also the markets would have an uncertainty of performance (for example, research may produce an uncertain number of publications, if that is to affect the performance compensation), which would be addressed by faculty as agent with risk-premium. The risk premium is related to individual risk appetite or information asymmetry, where agent knows better if the results are achieved. The university as principal would have to create a sophisticated model to evaluate the performance of agreement partners. If terms of compensation are diluted (for example, full performance bonuses are paid with mediocre results), the principal, university, would suffer significant loss of credibility as agreement partner. However, university may need to maintain the methods to allocate the academic prestige to individuals acting in faculty agreement partners. The right allocation of academic prestige would dilute the temptation of moral hazard and boost the commitment and engagement to produce agreed objectives. The organization competing faculty agreement (if competition is ever to emerge) would have the temptation to exaggerate their competence and abilities, as well as understate their weaknesses and limitations. The university has a possibility to address the problem by screening the past behaviour of agent (or, for example, past resumes of individuals part of agent's organization) and also screening the activities of agent during the agreement. The compensation-based performance was designed to address the incorrect behaviour and problem arising. During the research, one interesting aspect was the formation of faculty. Since the compensation is based on performance, the selection of measurement of performance is vital. If markets are working well and the university has improperly defined the field of science or education or other field, where performance related results are produced, faculties direct their resources to fields where results are produced with lowest level of input with highest efficiency (normal market tendency). This turn of events may endanger the guidance ability of the university and increase their desire of behaviour-based contracting. The different development stages of the GVL concept showed very

similar agreement model with university and there were no significant differences of activities.

The relationship between traditional faculties and the GVL concept based faculty is competitive colleagues. The GVL concept is based on the idea that it is internally organized differently to address more efficiently the performance requirements of new university environment. The GVL concept also requires a more sophisticated performance agreement with university by nature. The relationship depends on the individuals of both organizations, but it is expected that both models of the organization would be able to survive in the markets. The GVL concept, however, has the ability to attract individuals who have extraordinary competencies or knowledge and ambition to exploit in creating high growth ventures. The GVL concept aims to bind such individuals by its ownership model and its objective to produce extra dividend. Traditional faculty with only behaviour-based compensation is in a weak position, if an individual has desires or abilities to develop their competencies or knowledge for creating high growth aimed ventures. Other way round, the GVL concept's attraction is reduced if an individual is risk-averse and traditional faculty develops their traditional incubation policies. Moreover, the GVL concept is very dependent of the level of engagement of the individuals it creates. Traditional faculty with academic prestige is more tolerant for individual views and it has the advantage over nursing emerging concepts of knowledge or for individuals developing them (in practice, individuals who are not performing according to university or faculty policies). The GVL has more sophisticated means to deal with possibilities regarding the individual moral hazard or adverse selection through its more performance-based compensation. The GVL model has weakness, though, on how to deal with shared ownership divided for incorrect participants regarding the venture development process. The incorrect ownership may depress the development of the venture and further on may even expel the possible partners of exit strategies. This weakness was addressed by an investment fund structure, where individual ownership is pooled and sliced between all projects, not only one project. The structure also provides attraction for a risk-averse individual, since ownership is sliced between different projects and the fund acts as insurance for single project failure.

Comparing an individual situation in an organization between the GVL concept and traditional faculty, the performance expectation varies. In the GVL concept, an individual member of the organization is contracted by behaviour or performance or combination of these two contracts. The contract may decrease encourage for moral hazard since individual is more clearly pushed towards common goals. However, if the feel of empowerment and commitment is decreasing, the advantages may hinder. There is risk of adverse selection when only those who fit the goals of organisation will stay at organisation and other may find other challenges. This process would make organization one-sided and the plurality of research would be endangered. Also if extra efforts

are left un-noticed the most productive and promising scholars are encouraged to find new solutions.

## 7 DISCUSSION AND CONCLUSION

For me as researcher and organisational developer the voyage of GVL was personally very interesting. In the process I was stressed by my enthusiasm towards motivation and organisational commitment as fundamental issue building high-performance organisation. The project of building GVL organisation concept was about combining elements together that would at first sight seem incompatible (Kivinen 2006, 6-7). However, the results of four stages of GLV presented interesting model for private ownership model embedded into public organisation. The GVL method relied on the possibility that markets are efficient if they are free but correctly regulated and may offer significant advantages of efficiency, at least if concentrated certain fields of science.

The result allow us suspect that utilizing private organization for selected task operating in university organization is worth of further research. The results have shown that there is possibility for moral hazard and adverse selection in traditional university organization and the efficiency and university's management's steering abilities might be expanded by adding possibilities to engage performance objectives. However the market utilization is very demanding process and may create more problems than it solves if for example purchasing and terms of agreement are done incorrectly. Important to note is that this research is not depth or wide enough to uncover all strengths and weaknesses of the GVL. The most important factor is that the faculty markets demand development of university's business and agreement negotiation skills especially in the business manner.

The GVL is engaging different parties' interests but the precise operational model was till the end of research undefined thus hardly researchable. Agency theory aims to combine the interests of principal and agent in such manner that both parties make together best possible outcomes. If either principal or agent is having difficulties with the agreement policy, there are great risks of both parties are missing their targets. The development of GVL is creating market model for simple trade which may lower the transaction costs and advance the efficiency of trade or organizational behavior. If GVL has simple enough rules and they are easy to follow and to implement, the GVL interest observing and productive individual researcher has stronger position in the GVL than in the

traditional faculty. In the case where the productivity of individual researcher is unaligned with university goals and when GVL offers stronger steering methods, such as cutting the pay, the situation may be worsened. There is a trade-off of private and public interest, for absolute freedom of research the GVL may be harmful but if results are needed, the GVL may offer part of the solution. The trade-off offers possibilities, but also dangers that should be carefully considered.

The research offers some interesting paths of further research. If considered the development of GVL there would be interesting to seek individual current researchers and some likely or would-be researcher's opinions or even their willingness to sign in at private faculty. What would be the ultimate contract they would sign and what would be their terms of agreement. In the case of GVL there was actually no real life test but only possibilities that may suit in a GVL environment. Also how would university handle the competition of traditional faculty with private faculty? Both have their reason to envy each other - another may get rich by inventing and commercializing something, another may leverage their tenure track for example in the bank. University management has been so far very democratic and there might be some difficulties to implement a private meritocracy model alongside.

If ever emerge further need to proceed implementation of Agency theory at university it is important to implement quantitative analysis of ordinary researchers' objectives and their compliance with universities' objectives. The basis of this research was GVL's assumption that big organizations have always a difference of interest of different independent specialists, managers and directors. Also by qualitative analysis the assumption is supported but further research is needed. There is a possibility that the difference of interests is non-existent or minor to affect in the daily operation and serious doubt that the difference of interest is wide enough to harm the daily operation. Also since university is a complex organization where most employees are officially colleagues but in practice tenure or other contract workers are in different positions in the organization. The situation needs careful consideration and further research since GVL's suggested model would actually change the situation.

The development of university organization will continue but the pace may differ. There are signs that for example universities are focusing and using rough steering tools such as lay-offs to slim organizations and also universities are increasingly creating different incubation units and entrepreneurial programs to promote commercialization of invention from students to more advanced scholars. The GVL raised interest in Jyväskylä and in general programs for students were popular as they were seen as a tool to boost employment after graduating. Probably something similar to GVL will emerge to provide an entrepreneurial approach but the model might differ from GVL's presented. I personally suggest that universities will develop their commercialization programs and stress the research to provide concrete results. The focus will raise complaints of risking the freedom of research or even thinking and there will be lots of discussion related to this topic. In the long run the increasing stress

of producing results will be issue of sharing or giving resources to most promising scholars or students and declining resources from others. The methods will be under heavy scrutiny in democratic organization such as university.

The results of this study are useful to adapt in practice in redesign the new more sophisticated university organization. The important issue is that when stressing the efficiency and objective orientation, the freedom of scholars and research boosts the empowerment and commitment of individuals and also ability to produce results. Result that have both high scientific value and high practical value are extremely demanding to produce and the individuals capable to deliver both are worth resourced they are invested. The investment process of resources of university will develop further but under heavy scrutiny. The value add of this work is related to emerging need of commercialization expertise in the university context.

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