Master Thesis

New approaches to early stage entrepreneurship

* The experimental paradigm

-

Research conducted by
Mikkel Rathje Andersen

Date: 28/08/2015
Cand. Soc. Organisational Innovation and Entrepreneurship
Copenhagen Business School

Supervisor: Balder Onarheim
Total character count: 113.698
Total page count: 75/165

———
Copenhagen Business School - Spring 2015

Acknowledgements

The process of writing this master's thesis has without a doubt been one of the most interesting and challenging tasks of my life. At the same time as it finalizes my masters studies at CBS, it has helped me find new perspectives on one of my great passions in life; the chaotic field of early stage entrepreneurship.

I want to thank my advisor Balder Onarheim for taking on the challenge, keeping things simple and making me see the big picture. Another big thank you goes out to my friend and "thesis-coach" Julie Ugleholdt Pedersen for assisting me in the process, bringing good ideas and energy, and holding me to my deadlines week after week.

This thesis would not have been completed without you.

Enjoy the reading

Executive Summary

Traditionally, long-term business planning has been viewed as a key element in start-up projects. In contrast, newer experimental approaches disregard long-term predictions and focus instead on building fast, and cheap prototypes in a highly iterative process that encourages learning by experiencing early failure.

By investigating two separate start-ups in a comparative case study, I will explore how the experimental approaches to early stage entrepreneurship, are affecting start-up processes. Furthermore I aim to clarify how traditional and experimental approaches can be distinguished and finally I will explore the foundation for decision-making in the two approaches.

The two cases in focus are two startups that I have founded. Case A) *I Like Locals* – represents the traditional approaches to early stage entrepreneurship and case B) *CykelKarma* – represents the experimental approaches to early stage entrepreneurship.

In order to gain a variety of perspectives on the cases, the research design makes use of a methodological triangulation composed by 1. *Participatory Observation,* 2. *Historical Data*, and 3. *Autoethnography.* Together, these different perspectives compensate for the risk of bias that I possess in my double role as both researcher and founder of the two startups.

The theoretical foundations for the study provide an insight into the processes and perspectives of both approaches to entrepreneurship and create an overview that both explains the similarities and differences of the approaches. As a direct result of the theoretical analysis I demonstrate how a scientific decision-making process consisting of a problem, a hypothesis, and an experiment, is applicable as a universal process in all types of entrepreneurial projects.

In the analysis of the two cases I support my theoretical findings by applying them to the empirical data and continue by comparing the two in the discussion. Furthermore, the findings suggest that all entrepreneurial projects can be viewed as scientific experiments, regardless of the entrepreneur being aware or unaware of the scientific decision-making process. In relation to this, I demonstrate that understanding the scientific process can be a great advantage, since this knowledge can lead to decisions based on actual market data as opposed to false predictions about market tendencies.

Table of contents

Table of figures

1. Introduction

While traditional start-ups have focused on long term planning, new experiemental start-up approaches focus on quick iterations and early failures. This thesis will focus on how these approaches can be understood and analyzed by looking at two real world cases.

Entrepreneurship is considered to be one of the key factors in driving economic growth (Solow, 1956; Nadiri, 1993; Crosby, 2000) and (Sarasvathy, 2001). Meanwhile, the field of entrepreneurship is also widely recognized for another characteristic: the fact that the majority of new start-ups fail (Sarasvathy, 2001). In fact recent Harvard Business School research shows that 75% of all start-ups fail (Blank, 2013).

"I failed miserably at my first business. It was a complete and utter failure. On my second attempt, I failed. It was a terrible failure, but I could salvage something. On my third attempt, I built a business, but it was barely successful. On my fourth attempt, I built a business that was good and I later sold, knowing I could do better. On my fifth attempt, I founded Paypal." - Max Levchin, Paypal co-founder

According to Isenberg (2011) it is misguided to embrace failure to encourage entrepreneurship. Instead failure should be accepted as a natural part of doing business and the importance of early failure should be stressed (Isenberg, 2011).

Researchers and practitioners have been struggling to identity a theoretical framework for establishing successful early stage entrepreneurial ventures[1] (Sarasvathy, 2001). In business schools across the world, the most widely used techniques for teaching and understanding

[1] In the scope of this thesis the term “start-up” will be used to define an early stage entrepreneurial venture since it is the most commonly description in the most relevant and recent literature on the subject.

entrepreneurship have been through writing a business plan, pitching to investors, assembling a team, introducing a product, and selling (Blank, 2013).

However, over the recent years start-up literature has seen a move away from the traditional approaches and towards an increased focus on a culture of experimentation and hypothesis testing (Blank, 2013) with methods such as effectuation, business model canvas, customer development and the lean start-up.

These new methods move start-ups away from detailed business planning and ultimately guesswork and towards a more scientific approach of evidence-based evolvement of business models, where entrepreneurs are advised to get the heck out the building and test in the real world (Blank, 2005).

On that note the focus of this thesis lies in the implementational part of early-stage start-ups and the recent years evolvement of entrepreneurship literature with the main focus on effectuation, customer development, and the lean start-up methodologies.

1.1. Problem statement

Several new methods for understanding entrepreneurship seem to take a rather experimental approach to building a start-up. Some researchers even call the experimental approaches scientific, thus implying that a systematic method for validating a business model is possible in the field of early-stage entrepreneurship, which is generally referred to as a field of high risk and uncertainty (Ries, 2011).

One aspect that separates traditional entrepreneurship approaches from newer experimental approaches is the term failure. Start-up failure has traditionally been associated with the end of a start-up and thus an addition to the negative entrepreneurial statistics, which show that more than 75% of all start-ups fail.

In the experimental approaches, start-ups embrace the term failure as a natural part of experimenting with the creation of sustainable business models. In this context, early and fast failure in the short run is viewed as a effective way of learning, that may very well save start-ups from failing in the long run (Ries, 2011). However, although new approaches allow short-term failure through experimentation, the lack of a common theoretical understanding of what makes

these start-ups successful in the long run, is perhaps the most interesting aspect of entrepreneurship today.

"I have not failed. I've just found 10,000 ways that won't work."

- Thomas Edison

In my exploration into the newer entrepreneurial literature during my masters studies and in my specific thesis literature research, I was struck by the similarities in the different approaches and the lack of comparative analysis on the subject. This thesis serves to look a the paradigm shift within entrepreneurial literature to find shared factors in the various approaches to early stage start-ups. Based on the theoretical findings, two different start-ups (one traditional paradigm and one experimental paradigm) will be analyzed, with the purpose of identifying empirical support.

1.2. Research question

Based on the problem statement this thesis explores the following research question:

How are the experimental entrepreneurship approaches affecting how entrepreneurs pursue the process of early stage entrepreneurship?

1.2.1. Sub questions

Q1: How is it possible to clearly distinguish between new and traditional approaches to early stage entrepreneurship?

Q2: How does the foundation for decision-making differ in traditional vs experimental approach cases?

1.2.2. Clarification of research

Q1: The first sub question serves to define key differences within the new and traditional entrepreneurial approaches. This is done by finding and comparing the most prominent literature, within the respective paradigms.

Q2: The second sub question serves to analyse how the decision-making processes apply to real world start-up situations. This is done through an investigation of two empirical cases providing insights into new and traditional start-up processes.

The answers to sub question Q1 will result in a theoretical overview that outlines the analytical scope of both new and traditional approaches to start-ups. The theoretical overview will provide me with an analytical framework to analyze and discuss the empirical data of this thesis, hence answering subquestion Q2.

1.3. Field of interest

My personal interest in early stage entrepreneurship lies in my practical experience with start-up projects, which indicates that winning business plan competitions and receiving titles like “Denmarks Best Creative Entrepreneur”, does not necessarily directly lead to profitable business models. At the same time my experience has taught me that even though I have more entrepreneurial failures than successes behind me, my passion for entrepreneurial projects is only getting stronger. Thus I might as well continue to search for methods to improve my start-up process.

On a broader societal level new business failures are causing enormous amounts of productivity loss each year. Therefore every bit of research that can be produced on this subject is needed, in order to help entrepreneurs succeed. After all, entrepreneurial success is highly relevant for societal success.

1.4. Purpose

The purpose of this thesis is to produce knowledge that creates a distinction between traditional and new approaches to early stage entrepreneurship. Secondly the thesis will draw lines between the various methods within the new experimental approaches to better understand similarities that have not been linked previously. By doing so the thesis will attempt to cut through hype and buzzwords that some of these new approaches have produced over the past couple of years, in order to find the core andwe shared values of the approaches.

Furthermore, because of the novelty factor of these new approaches, only very little research has been conducted. In fact, the amount of research that has been conducted on the field of early stage entrepreneurship is very limited in general (Zott & Huy, 2007). I therefore aim for this thesis to add valuable findings that can serve as a guideline for future entrepreneurs and researchers.

a. For researchers my findings will give a new perspective to how theoretical knowledge fits real world cases
b. For entrepreneurs the thesis will give concrete insights on how to speed up start-up processes and decrease associated risks

1.5. Research approach

In order to find out how experimental approaches influence early stage start-ups, it is appropriate to look at the defining factors of traditional versus the new approaches. Furthermore, an empirical analysis is needed to gain insight into the differences in the approaches. Thus, I need specific empirical cases in which the various traditional and experimental approaches have been utilized in the start-up processes.

Prior to the analysis, I will gain a thorough understanding of the subject literature, in order to create a theoretical framework that I will use to hold up the two cases against each other.

The methodological approaches to solving the cases will be formed by a triangulation of methods using comparative case study, participatory observation, and autoethnography. The aim with the triangulation is to generate insights into the empirical data from several perspectives. These methods will be described in depth in chapter 3 on Research Design.

1.6. Case overview

Two very different case companies will be used as empirical data for this study.

Case A is the case of *I Like Locals* (*ILL*) - an Internet start-up for finding and hiring locals as an alternative to tourist guides in large cities. *ILL* was founded in 2011 and built on traditional entrepreneurship approaches. The start-up won the *Creative Business Cup* the same year, but

ultimately failed to gain sufficient traction and revenue and was eventually shut down in 2014 after three years in the making.

As the founder and CEO of *ILL,* I was personally deeply involved in the entire start-up process, and therefore the case builds around a retrospective view on the progress of the company, from my first-hand perspective.

Case B is the case of *CykelKarma* - a social entrepreneurial start-up under development for The NGO *Danish Refugee Council*'s *(DRC)'s* entrepreneurship program *Mind Your Own Business (MYOB)*. The business model of *CykelKarma* is currently being tested and validated using effectuation and lean start-up processes, which makes it a valid empirical case for the experimental approaches for the scope of this thesis.

As in the first case, I am personally involved in the start-up process of *CykelKarma*, but case B differentiates from case A in that it takes place during the process of this thesis. Furthermore, in the *CykelKarma* case I have been hired as a project coordinator to come up with the idea and build the start-up for *MYOB.*

1.7. Thesis overview

This thesis is divided into seven chapters, starting with an introduction to the field of research, chosen problem framing, research question and empirical setting.

The second chapter introduces the research design and chosen methods that will be utilized in a triangulation for the comparative case study. Additionally, the chapter explains the evolution of the research process and the most important considerations concerning the quality of the study.

The third chapter is a review of the most prominent literature in the field of early stage entrepreneurship and outlines a theoretical framework, which will serve as the theoretical foundation of the analysis and answer Q1: *how is it possible to create a distinction between new and traditional approaches to early stage entrepreneurship?* The literature review is divided into two phases. Phase one provides a brief review of the most important findings from traditional entrepreneurship theory, thus framing the historical context of the literature. Phase two introduces the most relevant literature in the new entrepreneurial approaches.

Chapter four serves as a comparative analysis of the two cases. Through the methodological triangulation the chapter analyses the empirical findings in order to show how the traditional and new entrepreneurial approaches occurred practically in the empirical context. This will in return answer Q2: *How does the foundation for decision-making differ in traditional vs. experimental approach cases?*

Chapter five discusses the findings from the analysis from chapter five to answer the research question: *how is new entrepreneurship literature changing approaches to early stage start-ups?*

Chapter six concludes the findings in a brief summary and outlines opportunities for further research.

2. Research design

The following section will clarify how the research in this thesis has been designed to answer the research question. The chapter is divided into five parts. Part one discusses the scientific approach, and explains the chosen methodologies and reasoning behind these choices. Part two focuses on explaining the comparative case study approach. Part three looks at how the concept of reflexivity applies to this study. Part four explains the collection methods of the empirical data as well as the approach to the case analysis. Part five is a description of the type of data that will be used and part six discusses the reliability and validity of the study. Finally, part seven looks at the methodological delimitation and the consequence of the choices made to set the boundaries for the study.

2.1. Scientific approach

Due to the qualitative nature of this thesis the scientific approach is rooted in social constructivism. From a social constructivist perspective, it is argued that any phenomena that we perceive as independently existing, is in reality constructed by human thinking, language, and social practices (Young & Collin, 2014). Knowledge is not universal and what is perceived as reality is ever changing (Rasborg, 2004). Thus, reality can be viewed from several different perspectives and social constructivism claims that there is not one single solution to a problem, but rather a collection of possible solutions and problems (Young & Collin, 2014). In theory, social constructivism can be contrasted against realism, which claims that reality is made up by an objective reality that exists regardless of society's acknowledgement of its existence (Rasborg, 2004). Central to social constructivism is the point that social phenomena are not eternal and unchanging, but rather has come to exist through historical and social processes (Rasborg, 2004).

In the context of this thesis, these different social constructivist perspectives will be generated through a triangulation of methods, focusing on the two cases as the subject of study.

2.2. Comparative Case Study

A case study can be described as a research method that involves an analysis of a subject of study (the case) and its related context. The case study is a detailed, up-close and in-depth look at a chosen case (Mills, Durepos, Wiebe, 2010). According to leading researchers, case studies have had an important place in several disciplines and professions, ranging from anthropology, psychology, sociology, and political science to administrative science, clinical science, education, and social work (e.g. Mills, Durepos & Wiebe, 2010). A case study can be conducted on a variety of subjects, such as a company, a person, an event, a project evaluation, or an organisation. The case study focuses on the complexity and uniqueness of the case context in question (Bryman & Bell, 2011). Case studies often make use of qualitative research strategies, as these tend to generate intensive and detailed analysis. In terms of gathering data, case studies can use a variety of techniques (Yin, 2009). These include surveys, unstructured interviews, and participant observation (Bryman and Bell, 2011).

In order to look at the two cases for this thesis, I will make use of comparative case study methodology. "'*comparative case study' is the systematic comparison of two or more data points ("cases") obtained through use of the case study method* (Kaarbo & Beasley, 1999, p. 372). Comparative case studies serve as a comparison of two or more cases, which is created through the case study method and can utilize both quantitative and qualitative approaches (Kaarbo & Beasley, 1999). Furthermore, comparative case studies are especially useful for comprehending and explaining how a context influences the success of an intervention and how that particular intervention can be altered to a specific context, to better achieve intended results (Kaarbo & Beasley, 1999).

For the purpose of understanding how an entrepreneur such as myself can learn and build new knowledge and skills during a start-up process, I will make use of the comparative case study method to research my own role, as founder of *I Like Locals* and *CykelKarma.* The research includes my feelings and thoughts as I reflect on my thought processes and behavior.

The comparative case study of this thesis can be categorized as a personal narrative with a purpose to understand the aspect of early stage start-up processes as they occur in my life, and in terms of how they have taken place in my experience. My goal is to share learnings from my personal development process by looking at selected start-up processes. On top of the self-

reflective view on my experiences, I make use of literature to provide a framework and a sense of purpose around the case experiences. The intention with the study is to create a deeper understanding of the evolvement of the literature while at the same time providing insight in real world cases.

2.2.1. Methodological triangulation

To conduct the case study I will make use of a methodical triangulation, which can be achieved by leveraging multiple research strategies to examine the same phenomena (Hantrais, 2009). By performing this triangulation, I can achieve both a view of the context itself as well as a view of my role as a researcher in relation to the context.

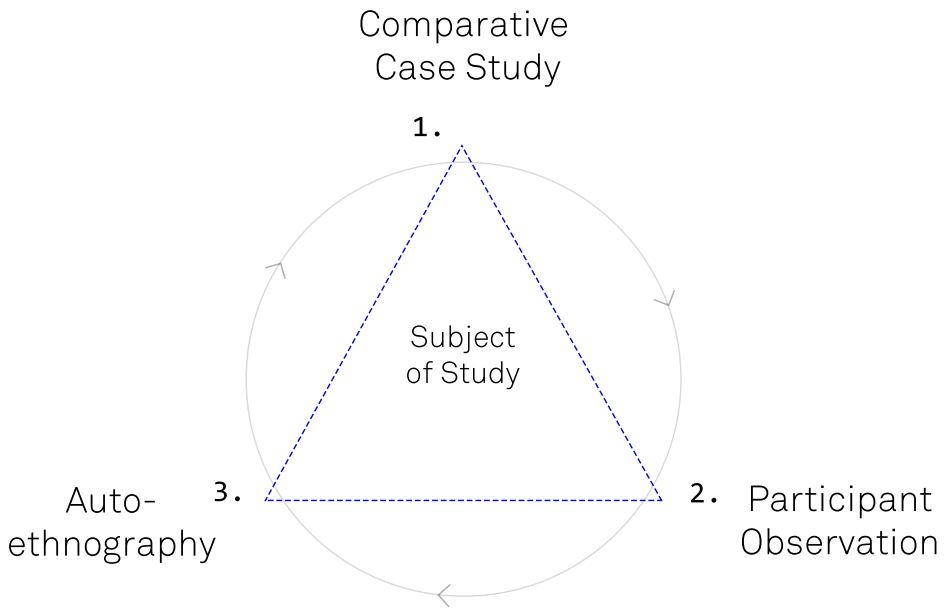

Figure 2-1 – Methodological Triangulation Model

The above figure serves as a representational model of the methodological triangulation comprised by:

1. *Historical Research*
2. *Participatory Observation*
3. *Autoethnography Research*

Each of these methods will add a distinctive perspective and process to the mix, while simultaneously serving as part of the combined output of the comparative case study.

In addition, the triangulation can be viewed as three levels of self inclusion, where I as a researcher go from possessing a minor role at level 1: *Historical Research*, an increasingly larger role at level 2: *Participatory observation*, and finally a major role at level 3: *Autoethnography Research*.

Level 1: Historical Research

Various researchers describe historical research method as an attempt to describe, explain, and understand actions or events that happened in the past (e.g. Gay, 1996; Wiersma, 1995, Fraenkel & Wallen, 2010). *"Some aspect of the past is studied by perusing documents of the period, by examining relics, or by interviewing individuals who lived during the time"* (Fraenkel & Wallen, 2010, p.534). *"An attempt is then made to reconstruct what happened during that time as completely and accurately as possible and (usually) to explained why it happened - although this can never be fully accomplished since information from and about the past is always incomplete"* (Fraenkel & Wallen, 2010, p.534). Historical research is thus an attempt to gather objective data that reflects a historical process as accurately as possible, thereby improving transparency of the subject of study.

Sources of historical data are categorized as primary or secondary. Primary sources can be explained as having direct access to the experiences, or events and secondary sources can be understood as having indirect access or being at least one level removed from the experiences or events (Wiersma, 1995). Furthermore, primary sources are viewed as most valid and should be used whenever possible (Wiersma, 1995).

In the context of this thesis, the historical research method will be utilized to collect and organize a variety of documents from both cases, ranging from surveys and emails to business plans and website iterations. Furthermore, the historic research method will provide an objective balance to the subjectivity that occurs in the process of conducting autoethnography research.

Level 2: Participatory Observation

As a qualitative method rooted in ethnographic research, participant observation is the primary method for anthropologists to perform fieldwork (DeMuck & Sobo, 1998). In terms of data collection, most participant observation data is captured in the form of field notes that is recorded in a notebook by the researcher (Kawulich, 2005). Researchers can benefit from observation methods in several ways, including the ability to understand who communicates with who, how participants communicate, nonverbal interaction, and how much time is spent on individual activities (Kawulich, 2005).

Various researchers explain that through observing and participating in day-to-day activities, the participant observation method enables researchers to learn about activities of the people being studied in a natural setting (e.g. LeCompte & Schensul, 1999; Kawulich, 2005). The observer (the researcher) records observations while also participating in ongoing activities and the technique is widely used in both Anthropological and Sociological studies (Sommer, 2013).

Participant observation allows the researcher to actually take on the role that is being studied. By doing so, the researcher is able to get a "backstage" view on activities that may be richer than if it was collected by systematic observation (Sommer, 2013).

According to Sommer (2013), bias and reactivity are two sources of error that are magnified in participant observation, as events are interpreted through the eyes of a single observer. Since participant observation most often involves extensive note taking based on the researcher's own impressions, it is clear that the researcher's own views may come into play (Sommer, 2013). Furthermore, because the researcher is both participating in — and observing activities — it is very likely that other people's behaviour will be influenced and thus causing the problem of reactivity, which basically concerns that what is being observed is also being influenced (Sommer, 2013).

Level 3: Autoethnography

Due to the self-reflective nature of the cases, autoethnography was a natural methodical choice. As an approach to research and writing, autoethnography seeks to describe and systematically analyse personal experience in order to understand cultural experience (Ellis, 2004). A researcher retroactively and selectively uses autoethnography to write about past experiences as the methodology combines autobiography and ethnographic characteristics (Holman Jones,

2005). Researchers explain that rather than hiding from subjectivity, emotionality and the researcher's influence on research, autoethnography acknowledges and accommodates these matters (e.g. Ellis, 2004; Holman Jones, 2005). Autoethnography researchers write about epiphanies that are made possible by being part of a culture by looking at them retrospectively and selectively (Ellis, Tony E. Adams & Arthur P. Bochner, 2011).

As researchers do autoethnography, they are selectively and retrospectively writing about epiphanies that either originates from, or are made possible from being part of a culture and/or by having an identity within the particular culture. However, autoethnographers are often required by social science publishing conventions to analyse these experiences in addition to telling about them (Ellis, Tony E. Adams & Arthur P. Bochner, 2011).

My own participation and decision-making is what I study and observe. Ellis (2004) calls this the "ethnographic I". Furthermore Ellis (2004) argues that the story can be the analysis: "*Stories are the way humans make sense of their worlds. Stories are essential to human understanding and are not unique to autoethnography*" (p. 32).

2.3. Reflexivity

Reflexivity is a phenomenon that occurs when research observations are not independent of the observer's participation. In an effort to define reflexivity, the Thomas theorem, states "*the situations that men define as true, become true for them*" (Thomas, 1923).

With this section on reflexivity I will attempt to create an understanding of the term itself, as well as explain how I will compensate for my role as both researcher and entrepreneur.

Generally reflexivity occurs when observations or actions of observers in a social system affect the very situations they are observing (Bartlett, 1987). It can also happen when a theory being formulated affects the behaviour of the same persons or systems the theory is supposed to be modelling from an objective standpoint (Bartlett, 1987). Therefore in the case of this thesis my role as a researcher working on a start-up project, which I am also researching, may affect the behaviour of the start-up. The observations are thus not independent of my participation as the observer.

In the two following case descriptions, I will explain my role in each case respectively and also clarify how I attempt to compensate for my effect on the research.

2.4. Data collection & case analysis

The data collection and analysis of this thesis will be structured in the form of case studies, which will look at the two separate cases *I Like Locals* and *CykelKarma.* The two cases were selected as they each represent elements from the traditional and the experimental approaches. Furthermore, having had founding roles in both cases, provides me with unique insights and experiences on the start-up development processes.

Although the two cases are not perfect examples of neither traditional nor the experimental approaches, Case A will focus on *I Like Locals* as a traditional approach start-up, while case B will look at *CykelKarma* as a start-up built in the experimental approaches. The reason for this division is first of all that *I Like Locals* was initiated with a business plan, without any awareness about the experimental approaches. On the other hand, *CykelKarma* was explicitly initiated using methods from the experimental approaches. However, it is important to note that the two cases are not perfect representations of traditional versus experimental approaches, as they do not follow the respective approaches rigorously, but rather find themselves balancing on a continuum between traditional and experimental.

2.4.1. Case A – *I Like Locals* (traditional approach start-up)

In the case of *I Like Locals (ILL),* my role as the founder possess obvious challenges to look at the case from a neutral and objective standpoint, due to my deep involvement in the entire start-up process. However, in order to work around this challenge, the case narrative will be backed up by empirical data.

The original idea for *ILL*, came after I had showed two German girls some of my favorite spots in Copenhagen. The experience led to an idea of creating a platform where any locals could offer guided tours, based on their own interests, thus offering an alternative to traditional tourist guides. The concept was based on the idea that travelling is more fun, when you see the "local side" of your destination and the start-up aimed to bridge the gap between the travellers and locals in any city, starting with Copenhagen and scaling to other cities from there.

As *ILL* evolved, it quickly showed great potential. Both international and local stakeholders, such as *AirBnB,* the city of Copenhagen and *Wonderful Copenhagen* showed interest in future partnership with *ILL* and team members were easily recruited. The start-up even won the Creative Business Cup in 2011 (App. , with the title of Denmarks best creative entrepreneur.

Unfortunately, the product development process turned out to be a bigger challenge than expected. The initial product had been planned as a complete, scalable, and fully functional platform - ready to be rolled out in several cities, once the initial Copenhagen release proved successful. This first product release was about 18 months in the making and released in June 2012, but failed to gain the expected traction. Several iterations of the platform were released. The iterations, each took more than six months to develop and as a result, *ILL* never managed to gain sufficient traction.

However good and award-winning an idea that built the foundation of the start-up, it was never possible to find a successful business model and eventually *ILL* closed down its operations, after more than three years in the making.

The case of *ILL* is viewed in retrospect and my role as a researcher, will not have a direct effect on the behaviour of persons or systems in the start-up. However since this thesis focuses on my personal perspective of the case, it is impossible for me to maintain a neutral and completely objective view on the case, thus there is a significant risk that my perspective will be biased.

The main start-up processes at *ILL* involved long-term business planning and a linear and fully planned product development process, which makes *ILL* a relevant case to study through the perspective of the traditional approaches.

2.4.2. Case B – *CykelKarma* (experimental approach start-up)

In case B of *CykelKarma,* my role takes a very different form than my role in case A, since I was hired by the youth entrepreneurship program *Mind Your Own Business (MYOB),* to develop a new social entrepreneurial start-up. The main social goal with the start-up is to create spare time jobs for the programs' targeted group of young Danish ethnic minority boys.

MYOB is organized as a separate program in the integration department of the NGO *Danish Refugee Council (DRC).* The program is very untraditional in an NGO context, given its entrepreneurship focus. Furthermore the program is 100% funded by a strategic partnership

with *TrygFonden* foundation. The main goal of the program is to strengthen Danish ethnic minority boys' social and professional skills, by giving them an opportunity to build their own micro-businesses in collaboration with adult volunteers, established companies and local partners consisting of social workers in residential areas who are in direct contact with the boys in their daily life.

Because of an expressed need for spare time jobs, by many of the participants in *MYOB*, a decision was made to create a new spare time job project and this is where I was hired as project coordinator to develop new start-ups for *MYOB*. The first start-up in this new context is called *CykelKarma.*

CykelKarma is a start-up that aims to spread love to Copenhagen bikes, by offering a simple cleaning, tightening and lubing service. The proposed business model is that Copenhagen companies will buy the service as a fringe benefit to their biking employees, thereby improving employees biking happiness, supporting an environmentally friendly substitute to alternative forms of transportation, and creating jobs for the targeted group of boys at the same time.

The case of *CykelKarma* is currently in the development process and my role as project coordinator/researcher has a significant chance of affecting the behaviour of persons and systems within the start-up. Thus my ability to remain neutral, objective and unbiased is once again very much at risk. The consequence hereof will be added reflexive behaviour on my role in the start-up, which may cause me to make decisions that I would not have made, had I not been studying and developing the start-up simultaneously.

CykelKarma is relevant to this study as a case working specifically with experimental approaches, since it has been initiated by conducting several fast and early experiments to test the value of its services, as early and fast as possible.

2.5. Empirical data

2.5.1. Historical data

Business plans

As a central part of the start-up process in *I Like Locals,* business plans were written at different points of time, to provide a strategic overview of the market opportunity. The business plans were

mainly used for participation in business plan competitions and served as a strategic directional tool for the company along the way. The business plans are important in terms of empirical data to show changes in the direction of the company and to show the underlying assumptions for the business model. The first completed business plan (App. 3.1) was completed in May, 2011 and used as the submission for the *Creative Business Cup*. The second iteration of the plan (App. 3.2) was finished in May 2012 and served as a submission for the Venture Cup and the final version (App. 3.3) was completed in April, 2013.

Websites

I Like Locals was built as a web platform for travellers and locals to connect, and thus the development process of the website provides some of the most central elements to understanding the effect of decisions made in the product development process. Furthermore the website was built in several long-term product iterations that each resulted in very different product changes, which are interesting to investigate from a product development perspective. The first website (App. 1.2) was launched in June 2012. This was the first time the concept was actually tested with real users in the market place. A second iteration of the site (App. 1.3) followed in May 2013, with improvements from feedback from the first test. The third and final version of the site (App. 1.4) was completed in February 2014, but was never released.

An early stage website was also created for the second *CykelKarma* experiment (App. 1.7). The initial version of the website consisted of a landing page created to explain the concept in simple terms, and to capture feedback from ten participants of the second business experiment.

Prototypes

Several iterations of prototypes were built in the making of the web platform for *I Like Locals,* in the form of sketches, wireframes, and mockup designs (App. 1.1, 1.2, 1.3 & 1.4). This iterative prototyping process reveals the development from the initial idea, as well as the complexity of the platform.

In terms of *CykelKarma,* the prototyping process consists of a few different items, including printed note cards to hang on the bike after completed service, and a toolpack for servicing the bikes. This collection of tangibles and intangibles (App. 1.5 & 1.7) made up the prototypes for the two experiments.

Artefacts

For the purpose of this category overview, artefacts is presented as a broad term for a mixed selection of elements from *I Like Locals* (App. 2.1) including images, emails, website screenshots, and other elements that provide important insight, but are too limited in numbers and too specific to deserve a category of their own.

Surveys

In the *CykelKarma* case, a quantitative survey was created for the first value hypothesis experiment. The survey (App. 1.5) provided a method for gathering structured feedback from the initial test of the concept, which was created to test whether or not the participants getting their bike serviced, would find the service valuable. The survey resulted in valuable answers that proved to become an important tool for the decision-making process.

Emails

As the primary internal and external communication tool in both *I Like Locals* and *CykelKarma,* email exchanges (App. 1.5, 1.8 & 1.9) are a very central element in the empirical documentation. Email exchanges show exactly when and how external stakeholders reached out to engage with the start-ups in partnership collaborations.

2.5.2. Participatory observation

Field notes

Field notes provide another inside look into the evolvement of the two start-ups. The notes are in many cases the first place ideas are captured, either in the form of sketches or words or in most cases as both. The field notes (App. 1.5 and 1.6) thus play an important part in the conceptualizing process and consist of brainstorm sessions, business model sketches, and experiment planning.

2.6. Reliability & Validity

When conducting a study, researchers must ensure reliability and validity in order to be able to take away synthesized conclusions from the research (Bryman & Bell, 2007). In terms of this study, there are various relevant forms of validity that should to be addressed. Furthermore, to ensure validity, Yin (2009) demonstrates three central tests; construct validity, internal validity,

and external validity. The aim with construct validity is to assure that the study measures the actual concept that is being studied (Yin, 2009). In order to ensure construct validity of a case study, the researcher must follow three steps (Yin, 2009):

1. Multiple sources of evidence
2. Chain of evidence
3. Subjects reviewing the research material

Firstly, multiple data-sources were used for the comparative case study in terms of the methodological triangulation. These sources included historical research, participatory observation, and autoethnography. Secondly a chain of evidence was provided for each phase of the analysis through the use of field notes in participatory observation, a variety of case-relevant data sources in the historical research process. Thirdly, although the autoethnographic method was a self-reflective process, my role as researcher and founder of the case start-up provided a first person insight, which was later held against the data from both historical research and participatory observation. In this situation where I simultaneously take on the role as researcher and the subject of study, there is an obvious risk of the study being biased and thus, questioning the reliability and validity of the study becomes highly relevant. To compensate for these issues I aim to provide sufficient empirical evidence to support my own voice as the teller. Furthermore I aim to take on a highly reflexive approach to the study.

The questions of reliability and validity in this autoethnographic case study, concerns my credibility as the narrator, while also being founder of the two case start-ups. However, by assuming this "double" role, I personally possess specific intangible knowledge on the start-up process that could potentially lead to valuable learning for others and myself. The self-reflective possibilities of autoethnography, allows the analysis to get unique personal insights of the two start-up experiences.

As a final critique of the case study, it is relevant to note that the findings cannot be generalized and thus have restricted external validity. In general, case study researchers do not deny this lack of external validity and argue that this is not the goal with case studies. Instead, the purpose is to provide a close up examination of a single case (Bryman & Bell, 2011).

2.7. Delimitation

The reason I have chosen to examine traditional and experimental approaches to early stage entrepreneurship is simply because of my own personal experience and interest in the field. In order to narrow down the scope of this study even further, the study takes a close look at decision-making processes in the two approaches. The objective of the study is to explore how experimental approaches affect start-up processes. Furthermore the study investigates how experimental approaches can be distinguished from traditional approaches, and how decision-making processes differ.

I have chosen to focus only on two cases that I have been personally involved with, since this gives me a unique advantage to provide an insiders view into the field. This obviously limits the external validity of the study and generalizability would increase if the study drew from a larger number of start-up projects. Within these two cases I narrow the scope even further, by only looking at the following aspects of start-ups: definition, decision-making, resources, planning, market, and failure. This narrow focus means that there are many start-up processes that this study is not looking at. For example the study does not give any details about the start-up teams, budgeting, or financing, since I do not find these details relevant for this study.

3. Literature review

The purpose of this literature review is to give an overview of the differences and similarities in traditional and new approaches to early stage start-ups, and to summarize the key principles that will be tested in the empirical data. The review is divided into three parts. Part one will look at traditional approaches, where business plans are viewed as the backbone of any new company. Part two will look at the experimental approaches that focus on experimentation and hypothesis testing in the validation of new start-ups and part three summarizes key findings in a brief overview that will provide the framework for the theoretical analysis.

Although both academia and practitioners have tried to create a general theoretical approach to entrepreneurship, different researchers have demonstrated that a universal entrepreneurship theory has yet to gain acceptance (e.g. Alvarez, 2005; Ricketts, 2008). It is argued that both common terms and frameworks from scholarly researchers — as well as basic assumptions for entrepreneurship are lacking (Alvarez, 2005).

For this literature review I have conducted searches through a variety of databases including Google Scholar, SAGE Journals/publications, ScienceDirect, and Business Source Complete. Furthermore I have been in contact with several entrepreneurial scholars and practitioners to make sure I have been focusing on the most relevant literature in the entrepreneurship field.

In terms of distribution of focus, this literature review builds a short overview of the background in the traditional approaches to entrepreneurship, while taking a more thorough approach in describing the more recent experimental approaches. This is a crucial point to make, since after having worked with both traditional and experimental approaches, I am very drawn to exploring new start-up approaches. This fact does makes me biased as a researcher. However, by being aware of this issue, I am able to be reflective about it.

3.1. Definitions and distinctions

3.1.1. Entrepreneurship & start-ups

The term “entrepreneur”, originates from the French word “entreprendre” — to undertake (Merriam-webster.com, 2015). One of the leading entrepreneurship researchers of the 20th century, Joseph Schumpeter (1965) defined “*entrepreneurs as individuals who exploit market*

opportunity through technical and/or organizational innovation". More recently the term "start-up" has gained popularity in the field of entrepreneurship and is defined by Steve Blank (2012) as an "*organization formed to search for a repeatable and scalable business model.*" For the purpose of this thesis the term start-up will be used as a definition for an early stage entrepreneurial venture, where I define early stage as prior to the point where the venture has found a repeatable and scalable business model, and prior to funding.

3.1.2. Defining traditional and experimental approaches

For the purpose of clarity, I choose to define traditional and experimental approaches to start-ups by the following process models:

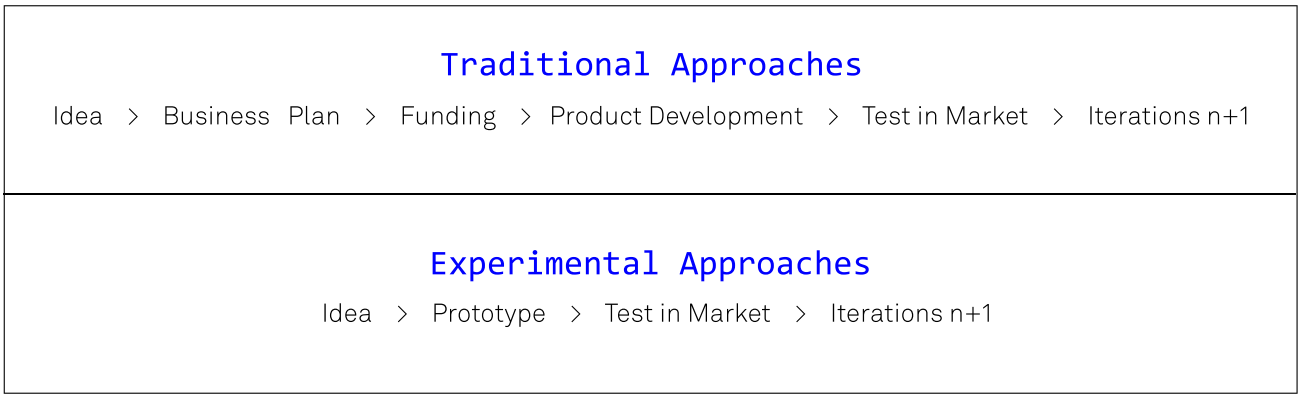

Figure 3-1 – Defining traditional vs. experimental process models

3.1.3. Distinctions in literature

In terms of the literature review, it is necessary to make a clear distinction between popular and academic entrepreneurship literature. To make this distinction the two types of publications will be categorized as prescriptive and descriptive literature respectfully.

1. The prescriptive literature include various non-academic how-to books such as *'The Four Steps to the Epiphany'* (Blank, 2005), '*The Lean Start-up'* (Ries, 2011), the '*Business Model Generation'* (Osterwalder, 2010), and *'Getting to Plan B'* (Mullins & Komisar, 2009). The prescriptive literature is imperative to include as the field of start-ups per definition is very practical and hands-on oriented. Furthermore, because of the novelty of the experimental approaches, only little to no research has been conducted in this area.
2. The descriptive literature is based on academic publications. It takes a retrospective view on entrepreneurial activities in order to describe entrepreneurship based on empirical

evidence, using a scientific approach. Most of the descriptive literature in this thesis concerns the traditional approaches, except for Sarasvathy's '*Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency*' (2001), which also describes the experimental approaches. Other examples of descriptive literature include '*How Entrepreneurs Learn: A Popperian Approach And Its Limitations*' (*Harper*, 1999), '*Discovery-Driven Planning*' (McGrath & MacMillan, 1995) and '*Do Business Plans Make No Difference in the Real World? A Study of 117 New Ventures*' (Lange, Mollov, Pearlmutter, Singh & Bygrave, 2007).

3.2. Traditional approaches

3.2.1. Background

How to successfully go to market with a new product is not a new entrepreneurial challenge. Several researchers have shown that traditionally companies and entrepreneurs have been applying a very linear approach in terms of the product development model — starting with the identification of an opportunity, followed by the creation of product specifications, then the actual development of the product and finally bringing it to market for sale (e.g. Blank, 2005; Furr & Ahlstrom, 2011).

The entrepreneurial approach for bringing new businesses to market has traditionally been very similar to this linear product development approach (Furr & Ahlstrom, 2011), since it also originates in an opportunity identification, then moves through raising capital, product development, refining the product and finally selling it to customers. During the early part of this process the interaction between the entrepreneur and customers, is often limited to the initial market research and early customer interviews. Furthermore, researchers point out that in traditional approaches customers are not usually involved until the end of the process, at which point a significant amount of money has already been invested (e.g. Blank, 2005; Furr & Ahlstrom, 2011).

As much as this process makes sense in an ongoing business setting, where the main focus is execution on known problems, the approach has been seen as unfit for start-ups (McGrath & MacMillan, 1995). Ries (2011), argues that start-ups are commonly characterized by a high degree of uncertainty, which indicates that they are often based on assumptions and thus very

difficult to accurately plan for. In line with this thought Sull (2004) believes that an entrepreneur should instead be focusing on navigating through the uncertainty associated with the start-up.

3.2.2. Definition

In the scope of this thesis the traditional approaches will generally be defined as the before mentioned linear business planning approach with many similarities to the product development model in terms of identifying an opportunity, writing a business plan, getting funding, developing the product, refining the product and going to market (Blank, 2013).

Sarasvathy (2001) defines the business planning approach as causation, which is basically the idea of following a recipé from start to finish with a pre-determined goal. It rests on a logic of prediction (Sarasvathy, 2001), where it is believed that one can predict a future outcome. It is a linear approach where a plan is laid out from start to finish. This linear approach however, is an obvious challenge in a setting of high uncertainty such as starting a new venture (Ries, 2011). Despite that the causal approach is widely accepted and taught at the world's leading management schools (Sarasvathy, 2001).

Finally some scholars point out flaws in the historical development of management and organizational theory (Furr & Cavaretta, 2012). The point they make is that entrepreneurship is viewed as just another business context by general management theory. They argue that general management theory fails to acknowledge that there is an enormous difference between early stage entrepreneurial ventures and well-established corporations (Furr & Cavaretta, 2012).

3.2.3. Decision-making

Harper (1999) explains the entrepreneurial decision-making process by referring to the growth of knowledge approach (Popper, 1994). According to *Harper*'s presentation of the growth of knowledge approach, entrepreneurs gain knowledge as a consequence of testing particular hypotheses in the market. Therefore entrepreneurship can be viewed as sort of a scientific process of learning, in which entrepreneurs continuously formulate relevant hypotheses to test in the market.

Following the market test, the entrepreneur is able to make decisions about changing those hypotheses based on the findings (*Harper*, 1999).

This entrepreneurial learning process can be described as:

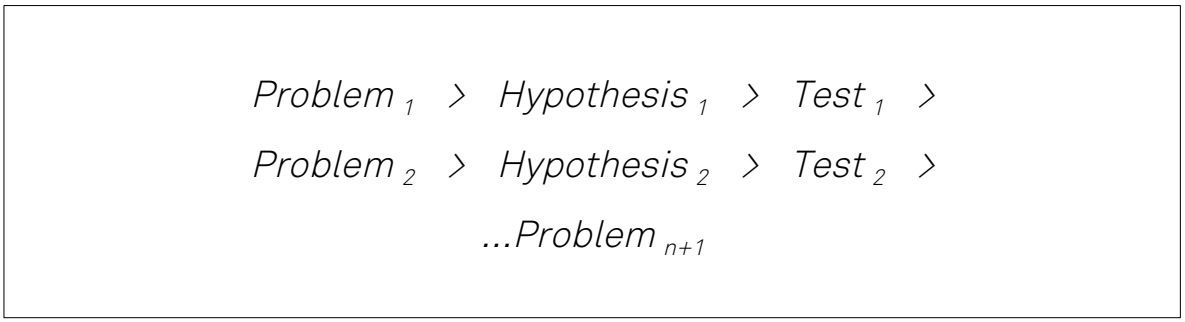

Figure 3-2 - The entrepreneurial learning process (Harper, 1999)

3.2.4. Resources

One of the most critical aspects in the traditional approach is securing sufficient financial resources in terms of institutional funding, venture capital or angel investment for product development (Blank, 2012). In order to secure the funding, the causal entrepreneur has to maintain a focus on the start-ups expected return on investment and how it capitalizes on the market opportunity to maximize revenue (Sarasvathy, 2001).

External funding however, is no guarantee for business success. In fact – most start-ups that secure venture capital funding do not become profitable and are eventually forced to close down as a result (Harvard Business Review, 2013). Furthermore, dilution of ownership is another issue to entrepreneurs who accept funding at an early stage, and thus end up with an insignificant ownership percentage after several rounds of funding (Bettignies & Brander, 2007).

3.2.5. Planning

The business plan still strives as a popular foundation for a start-up for both entrepreneurs, educators and within investor environments (Lange et al., 2007). Several researchers demonstrate that one of the most commonly known advices to entrepreneurs is to write a business plan before launching their company (e.g. Hills, 1988; Lange et al, 2007; Furr & Ahlstrom, 2011). A business plan works as a roadmap for success during the early life of a company as it specifies founding strategies and resource allocation, which is usually projected for a five year period (Lange et al., 2007; Blank, 2013). Start-up founders traditionally write a business plan to project the expected return on investment for the investors (Sarasvathy, 2001). Attracting these resources is one of the main reasons for writing a business plan (Shuman, Shaw et al., 1985).

From the perspective of entrepreneurship educators business plans have also been viewed as the most important tool in entrepreneurship courses (Hills, 1998). Furthermore business plan

competitions have seen wide popularity around the world where especially universities in the U.S. have valued these competitions highly, thus creating an emphasis on business planning over business implementation (Lange et al, 2007).

Critics argue that the only reason entrepreneurs should write a detailed business plan before opening a business is if they need to raise substantial start-up capital from institutional investors or business angels (Lange et al, 2007). Furthermore some scholars have been questioning the importance of business plans for start-ups during the last years (e.g. Blank, 2005; Ries, 2011; Sarasvathy, 2001). One major fact to consider is that it is a resource consuming task as time spent on writing a business plan easily adds up to more than 200 hours according to some experts (Lange et al, 2007). Furthermore as Sarasvathy (2001) points out in her definition of causation, the business planning approach maintains a predictive nature, which may not be very suitable for the highly uncertain environment of a start-up venture.

3.2.6. Market

In traditional approaches the market is analysed thoroughly to study the attractiveness and dynamics of a specific market (McDonald, 2008). Market research is therefore a core element of the business planning process (McQuarrie, 2005). An opportunity in the marketplace can be defined as a product or a service that fulfills the market need better than competing companies (Czepiel & Kerin, 2011). Therefore a competitor analysis is viewed as an important part of the market description, which explains how the start-up differentiates from its competitors (Czepiel & Kerin, 2011).

This in-depth study of the market is a prerequisite for writing the business plan that connects the market with the opportunity for the product or services, thus adding an important element in the validation of the business plan projections, for expected returns (McQuarrie, 2005). Market research for a business plan by itself is a time consuming task, which can consume a considerable part of the up-to 200 hours spent on business plan writing.

3.2.7. Failure

Throughout history, failure has been the dark side of entrepreneurship. According to several researchers, failure is the destiny of the vast majority of all start-ups (e.g. Blank, 2013; Lafontaine & Shaw, 2014). However, not only is failure an entrepreneurial premise, it can also be

a very important part of future success for previously failed entrepreneurs (Lafontaine & Shaw, 2014).

In traditional approaches, business planning or causal reasoning is essentially an effort to minimize the probability of unexpected outcomes (Sarasvathy, 2001), and thus ultimately to avoid the failure of a start-up. As mentioned in the planning section, business plans are inherently predictive (Sarasvathy, 2001), and often written based on untested assumptions to cover a five-year period (Mullins & Komisar, 2009). In addition, traditional approaches often works with long-term product development models, where the product is not tested until it is released in the market and receives direct customer feedback (Blank, 2013), thereby increasing the level of prediction and risk of failure. In terms of the traditional approaches, I will thus refer to failure as the negative end result of a start-up.

3.3. Experimental approaches

3.3.1. Background

The high failure rate for start-up companies has received a lot of attention over the last decades. This increased focus on start-up failure is more relevant now than ever, in the wake of economic downturns such as the 2000s dot com bubble and the more recent global financial crisis. However, due to the complexity in the processes of starting new businesses, researchers have been struggling to find a commonly accepted recipe for entrepreneurial success (e.g. Alvarez, 2005; Ricketts, 2008). That being said, several new approaches to start-ups have been surfacing over the recent years, where implementation through experimentation is prioritized over business planning (e.g. Ries, 2011; Blank, 2012; Furr & Ahlstrom, 2011).

Saras D. Sarasvathy's findings from her entrepreneurial research on effectuation from 2001, clearly indicates that expert entrepreneurs are not using causal business planning processes when starting highly successful ventures. Instead her findings show that expert entrepreneurs make use of a logic of effectuation, where entrepreneurs start with their means (Sarasvathy, 2001). More recent additions to start-up literature was led by Steve Blank in the late 2000s, with an increased focus on implementation and hands-on experimental approaches for entrepreneurs. Blanks book "Customer Development" created the basis for the book "The Lean Start-up" by Eric Ries (2010), which focuses on start-ups as an organisation designed to search

for business models through a series of experiments. For the scope of this thesis, this literature will be grouped as the experimental approaches.

3.3.2. Definition

Some researchers demonstrate that a central point in understanding the various new approaches to early stage entrepreneurship is to understand that start-ups are not micro companies (e.g. Furr & Ahlstrom, 2011; Blank, 2012). This idea makes a clear effort to move start-ups away from corporate business planning.

As Blank (2013) points out, a critical defining factor between start-ups and existing companies is that start-ups are looking for a business model, while existing companies are executing a business model. According to Blank (2013, p.1), this distinction defines the heart of a start-up as "*a temporary organisation designed to search for a repeatable and scalable business model*". Ries (2011) argues that building a start-up is the art of navigating under conditions of extreme uncertainty.

As the above introduction indicates, several researchers in the experimental approaches prioritize experimentation over prediction and aim to test business hypotheses through a series of experiments as early and fast as possible, at the lowest possible cost (e.g. Sarasvathy, 2001; Brown & Kätz, 2009; Blank 2015; Ries 2011; Furr & Ahlstrom, 2011). These tests are carried out through a series of iterative experiments where the expert entrepreneur is in direct contact with potential customers, partners and other stakeholders, to continually gain valuable feedback and finetune the business model (e.g. Sarasvathy, 2001; Blank, 2010; Ries, 2011; Furr & Ahlstrom, 2011).

3.3.3. Decision-making

As shown earlier, entrepreneurial decision-making is inherently a scientific approach (*Harper*, 1999). This indicates that experiments have always been an implicit part of entrepreneurial decision-making.

Scientific Approach

Several researchers show that at the heart of the experimental approaches lies a scientific approach to decision-making that focuses on testing hypotheses through an iterative approach of rapid and cheap experiments (e.g. Mullins & Komisar, 2009; Ries, 2011; Furr & Ahlstrom, 2011;

Blank, 2012;). Instead of assuming that the early stage entrepreneur holds the wisdom to predict the future, the experimental approaches focuses on building experiments to test hypotheses, thus letting the result decide for the entrepreneur (e.g. Blank, 2015; Ries, 2011; Furr & Ahlstrom, 2011).

Rather than trying to predict a market need for a business idea, experiments can evaluate business hypotheses by testing them in a controlled environment where guesswork is eliminated and the result is learnings, which allows the entrepreneur to build a business model, based on facts rather than predictions (Blank, 2015; Ries, 2011).

Cheap & Rapid Experiments

Decision-making in the experimental paradigm is based on a process of creating cheap and rapid experiments, conducted by turning entrepreneurial ideas and assumptions into testable hypotheses (Brown & Kätz, 2009; Furr & Ahlstrom, 2011). The hypotheses serves as the foundation for developing a minimal viable product, which is then tested on potential customers, partners and other stakeholders (Ries, 2011).

Validated Learning

The process of conducting cheap and rapid experiments with the purpose of hypothesis testing and validated learning is conceptualized by *Ries* (2011) as the feedback loop. It is a simple and iterative approach to conducting experiments consisting of the three stages:

1. Build,
2. Measure
3. Learn

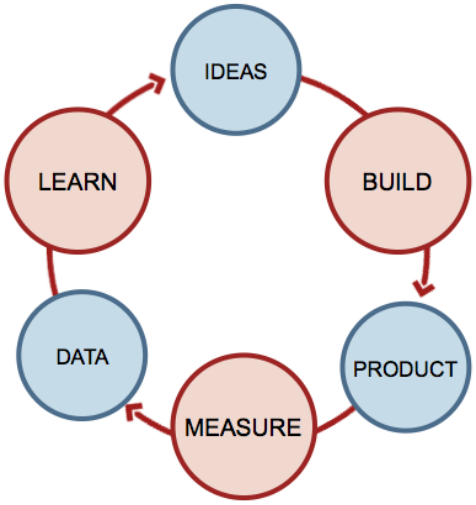

Figure 3-3 The Feedback Loop (Ries, 2011, p77-78)

The *Build* stage is where the minimum viable product is created. The *Measure* stage focuses on listening to the potential customers, partners and stakeholders, and the *Learn* stage is where the entrepreneur captures learnings from the customer feedback data, and generate new ideas to test new hypotheses (Ries, 2011). The feedback loop is then repeated in rapid iterations until a business model has been validated and customers are actually generating revenue (Ries, 2011).

Several researchers thus emphasize that measurable learning is the main goal of a business model experiment (e.g. Sarasvathy, 2001; Blank, 2005; Furr & Ahlstrom, 2011; Ries, 2011). Whether or not the hypothesis is validated or not is not the main concern and failure is therefore a valid result, in a short term perspective.

3.3.4. Resources

Affordable Loss

One way to understand resource allocation in the experimental approaches, is that instead of looking for a potential upside in all-or-nothing business opportunities - expert entrepreneurs limit their start-up risk by understanding what they can afford to lose at each step of building a new company (Sarasvathy, 2001). This principle of affordable loss (Sarasvathy, 2001) indicates that the size and cost of the business experiment is relative to the size of the budget of the entrepreneur.

Start With Your Means

Furthermore Sarasvathy (2001) states that in the concept of effectuation, expert entrepreneurs start with their means - in terms of a basic combination of intangible and tangible resources. "*Entrepreneurs begin with three categories of "means": they know who they are, what they know, and whom they know - their own traits, tastes, and abilities; the knowledge corridors they are in; and the social networks they are a part of*" (Sarasvathy, 2008, p.250). Thus Sarasvathy (2008) suggests that expert entrepreneurs looks to resources within their reach, instead of looking to external sources of funding. This also indicates a suggestion that expert entrepreneurs only build projects in a size that they can handle, which is relative to the budget and means of the individual entrepreneur.

Minimal Viable Product

Instead of looking to investors to fund product development, the minimal viable product concept suggests that entrepreneurs make use of readily available technology such as open source software to build the smallest possible version of your product that can do the job (Ries, 2011). This process strips down the product to the absolute minimum, thus making it more simple and affordable in order to make cheap, rapid experiments (Furr & Ahlstrom, 2011).

Customer Development and Customer Funding

Another way to look at resources in the experimental approach is through the concept of customer development (Blank, 2005), which basically states that entrepreneurs should get out of the building to test their hypothesis with potential customers, partners, purchasers for feedback on different parts of the business, such as product features, pricing and distribution channels. The customer development approach emphasizes speed to rapidly create minimal viable product to generate customer feedback and then repeat the process (Ries, 2011). This cycle is repeated in several iterations where small adjustments are made until a sustainable product and business model has been found (Ries, 2011). If done right the result of the customer development approach will end up generating customers as a natural progression of the high degree of stakeholder involvement from day one (Blank, 2005). Another side effect of such a customer inclusive approach can result in building a customer funded start-up, where cash is received from customers instead of entrepreneurs funding the product development on their own (Mullins, 2014).

3.3.5. Planning

"*To the extent that we can control the future we can predict the outcome*" (Sarasvathy, 2001, p. 252). Planning in the experimental approaches is mainly characterized by a strong focus on the short term and planning in incremental parts in order to create controlled experiments where hypotheses can be tested.

Business Model Canvas

In contrast to writing a complete business plan, the experimental approaches utilizes simple sketches of business models, such as The Business Model Canvas (Osterwalder, 2010). Some researchers argue that this reduces business planning to a single page, thus making it a fast tool for sketching a business model and to find out which hypothesis should be tested in the experiments (e.g. Osterwalder, 2010; Ries, 2011; Blank, 2012;).

One Experiment At a Time

The method for building a business in the experimental approaches happens through a series of iterative experiments designed to test hypothesis for value creation and customer needs (e.g. Blank, 2005; Ries, 2011). Researchers demonstrate this process by showing how one experiment leads to another by rejecting or validating hypotheses (e.g. Ries, 2011; Furr & Ahlstrom, 2011;

Blank 2012). Sarasvathy (2001) also implies that expert entrepreneurs make use of experiments to test their business assumptions in small steps to see if they hold true and whether to continue on the projected path or to change approach in a different direction. Similarly, from the effectuation perspective expert entrepreneurs are more focused on making or shaping opportunities than finding them - meaning that opportunities evolve as the entrepreneur goes along (Sarasvathy, 2001). This idea contrasts the causal predictive approach to traditional business planning, since the entrepreneur starts with their means rather than a predefined goal (Sarasvathy, 2001).

3.3.6. Market

When looking at the market from the view of the experimental approaches one of the most central aspects is that there are no preconceived certainties - only hypothesis to rigorously test in the market (Mullins & Kumisar, 2009). Instead researchers argue that reliable market knowledge starts by talking with customers (e.g. Blank, 2005; Furr & Ahlstrom, 2011; Ries, 2011) and is generated from creating the rapid experiments that engages potential customers and stakeholders, and then listening to their feedback.

Customer focus

Thus, customer development is also an important method for building the customer market segment for a product, by getting out of the building to test hypothesis with potential customers, partners, purchasers for feedback on different parts of the business, such as product features, pricing and distribution channels (Blank, 2013).

Target customers

Sarasvathy (2001) defines the target customer as the first customer to buy the offered product. Through listening to the customer and building an increasing customer and strategic partner network, the entrepreneur can eventually identify a workable segment profile (Sarasvathy, 2001).

Partnerships

Rather than focusing on competitors, expert entrepreneurs engage in strategic partnerships with stakeholders. By selecting key partners to obtain a pre-commitment the entrepreneur co-create a new market with its stakeholders and thereby reduce uncertainty (Sarasvathy, 2001). The choice of partners is a key determinant for which markets the start-up will end up in.

3.3.7. Failure

Failure serves as an important part of the learning process in start-up experiments (Blank, 2011). According to Sarasvathy (2001), instead of making "what-if" scenarios, expert entrepreneurs are open to surprises and view bad news or failed experiments as potential opportunities to create new markets. Various other researchers demonstrate that the main point to make about failing is that start-ups should embrace small, fast, and early failure (e.g. Blank, 2005; Brown, 2009; Furr & Ahlstrom, 2011; Ries, 2011). Failing is built in as a valid result of an experiment and small failures that lead to new iterative improvements in the short run, will provide valuable feedback on how to succeed in the long run. In other words, it is much safer to fall while running, than to crash an airplane.

Early and small

Early failure means less time and resources spent on the experiment (Brown & Kätz, 2009). This is why prototyping in terms of the minimal viable product is a great way to embrace early failure, since only the most vital features of the product is being built (Ries, 2011). The failed experiment leads to another iteration of the product, which is built to test new hypotheses (Blank, 2013). Ries (2011) explains this type of decision-making as pivoting, where the entrepreneur takes a different path, if the hypothesis has been rejected.

3.4. Wrap up

To wrap up the literature review, this section highlights the most interesting findings in the process. In addition it shows a visual overview of the key differences in the traditional and experimental approaches to entrepreneurship, in terms of a matrix, which also serves to answer sub-question *Q1: How is it possible to clearly distinguish between new and traditional approaches to early stage entrepreneurship?*

	Traditional approaches	Experimental approaches
Definition	A startup is a small version of a big company. Business planning, is the foundation of any startup.	A startup is not a small version of a big company. A startup is temporary organisation designed to search for a business model.
Decision-making	Hypothesis testing in the market place.	Hypothesis testing in the market place
Resources	Attract investors based on predicted return on investment.	Focus on affordable loss. Start with your means. Prototyping. Customer development
Planning	Long term business plans. Expected return. Linear product development.	Business model canvas. Rapid experiments.
Market	Market opportunity. Market analysis. Focus on Competitors.	Customer feedback. Focus on Partnerships.
Risk / Failure	Failure is the ultimate end of startup.	Failure is part of learning. Fail early, fast & small.

Figure 3-4 - Comparison tabel traditional vs. experimental

An important — and very interesting finding from this review, is that traditional approaches do not differ from experimental approaches in terms of the decision-making process. As explained earlier in the review, *Harper* (1999) argues that the *Popperian* approach - consisting of a scientific model where hypotheses are essentially tested in the marketplace, is a universal part of entrepreneurial learning. This essentially indicates, that all types of entrepreneurship are inherently built on experiments, where the hypothesis being tested is the start-up's product or service.

One element that distinguishes the experimental approaches from the traditional is the explicit focus on the length of the experiments, which in general can be considered to be short process in experimental approaches and a longer process in traditional approaches. The time frame aspect is not specified for either of the approaches. However, considering the time consuming aspect of the business planning and product development process in the traditional approaches, and the contrasting explicit focus on fast, early, and cheap experiments in the experimental approaches, there is a clear indication of a difference in focus, in terms of the length of product-to-market experiments.

Finally, another distinguishing factor in relation to the timeframe aspect is the awareness of the scientific decision-making model. The scientific approach is an explicit part of the experimental approaches, but not in the same way emphasized as a tool for decision-making in traditional approaches. The timeframe aspect is interesting because it is crucial to understand if the market predictions (hypothesis) a start-up is operating on are true or false. Answering this question is only possible once the start-up has completed the entrepreneurial learning process, which thus indicates that the timeframe plays an important role.

4. Analysis

As evident from the literature review, the scientific decision-making process proved to be the main shared factor in traditional and experimental start-up processes. Therefore, I find it natural to utilize decision-making as the focal point (figure 3.1), from which the analysis of the two cases will unfold. Furthermore, as the focal point of the analysis, the decision making section will take up a significantly larger part of the analysis, than the remaining sections.

In addition it is important to add that each case represents a difference in mindset regarding decision-making processes. This difference can be explained as:

> Case A: *The entrepreneur being unaware of the scientific decision-making process.*
> Case B: *The entrepreneur being aware of the scientific decision-making process.*

In the analysis, I will explore the major strategic decisions affecting the business model and product changes of each case, since both of these areas are directly applicable to *Harper*'s (1999) concept on entrepreneurial learning and market processes:

```
Problem 1 -> Hypothesis 1 -> Test 1 ->
Problem 2 -> Hypotheses 2 -> Test 2 ->
                ...Problem n+1
```

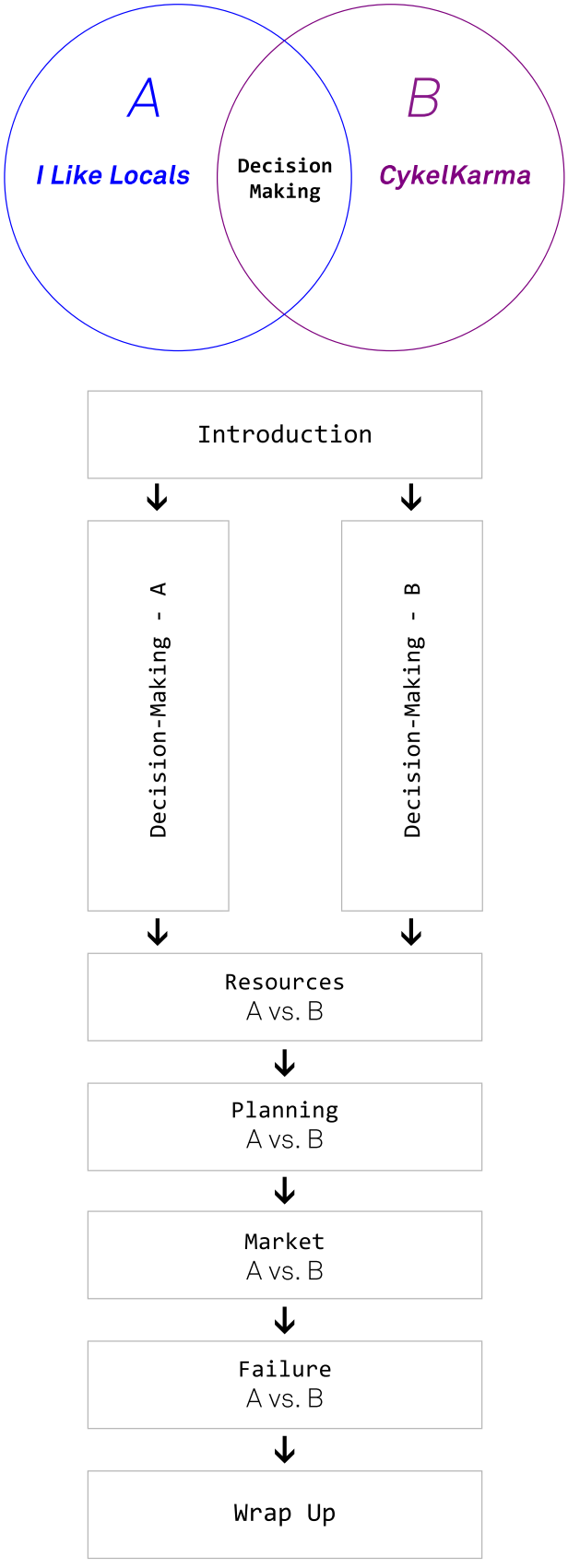

Figure 4-1 – Analysis overview

For simplification, each decision-making event will also be plotted on a timeline. In return this will provide an overview of each case, which I will use to hold the theoretical framework up against, in terms of the market, resource, and failure perspectives. Figure 4.2 provides a visual overview of the flow in the analytical process and a colour coding for each case. To finalize the analysis I will wrap it up with a quick summary of the findings from each section.

4.1. Decision-making - Case A

For the scope of the analysis of *ILL,* I will provide a limited and selective overview of the case by looking at decision-making processes concerning *change of concept* and *product launches.*

4.1.1. Change of Concept

Over the course of *ILL's* first year and a half, the product concept was fundamentally changed two times prior to test in the market. This section will investigate the reasons behind the decisions for the changes and relate these decisions to *Harper's* (1999) entrepreneurial learning process.

The first change of concept occurred in mid May 2011, after *ILL* was about a half a year in the making. The decision to change the concept was made based on several events. First of all, the initial concept was meant to offer local bike guides through a website, and a physical location in downtown Copenhagen (App. 3, p. 56). It turned out that the permits for the physical location (a remodelled shipping container) were difficult to get passed with the local authorities and much more costly than expected. At the same time offering bike tours was very location specific to Copenhagen, as a city where bikes are very popular. As we believed that the concept should be scalable to other cities from day one, we decided to drop the bikes and instead focus on offering local guides in general. Another factor influencing the concept change was that we had just lost our first web developing partners with only a couple of months to the planned launch in the summer of 2011. Therefore we were behind schedule and hoped that this simplification of the concept would make it possible to develop faster and get our initial prototype (App. 1.1, p.2) ready for August 2011.

> ***Change one**: From offering local bike guides in Copenhagen to a web platform for local guides in general (similar to the AirBnB business model)*

The second change of concept happened very shortly after *ILL* won the *Creative Business Cup* in November 2011 (App. 3.1, p.53). At this point the web development process had been delayed again and the initial prototype had still not been launched as planned in August 2011. Instead, a new launch date was set for March 2012. However after winning *the Creative Business Cup,* the web-developing partner at the time, decided to leave *ILL*. This left *ILL* without a web developer once again and in an attempt to find a new developing partner, meetings were held with a digital agency to get them to take on the web development. Although initially interested, the web agency declined the offer to join *ILL* in early January 2012. Their reason for declining the offer was due to the fact that they found the market situation too risky because a similar Berlin-based start-up called *Gidsy*, had just secured their first round of funding at about $1.2 million[2]. As a result, *ILL* still did not have a web-developing partner. Instead we became aware of the new competition in Berlin. After considering the options for *ILL* and after a suggestion made by a newly joined business developer, we decided to change the concept from a platform offering local guides to a platform where visitors and locals could meet up for free on a voluntary basis, thus altering the business model from paid guides.

> ***Change two**: From web platform with local guides (like AirBnB) to a voluntary "meetup" platform (no cash exchange)*

Tendencies

The two decisions for concept change show some clear tendencies. From *Harper*'s (1999) perspective on entrepreneurial learning the decisions were made prematurely and there was not sufficient basis for learning and thus, not enough data for making decisions to changing the product. As a result of these decisions, each concept was never actually tested in the market. Thus it raises the question of whether or not the dismissed concepts would have failed the market tests.

4.1.2. Market tests

During the about three and a half year lifespan of *ILL,* the start-up had two official product launches: one in June 2012 and another in May 2013 as evident from email content (App. 2.1, p.54). When relating the product launches to *Harper's* entrepreneurial learning perspective, the

[2] https://www.crunchbase.com/organization/gidsy

problem is viewed as the problem in the market; that *ILL* is meant to solve, the product is viewed as the *hypothesis*, and the launch is viewed as the *test* in the marketplace. Thus, looking at the case from *Harper's* perspective, *ILL* only had two occasions for actual entrepreneurial learning during the start-ups lifespan.

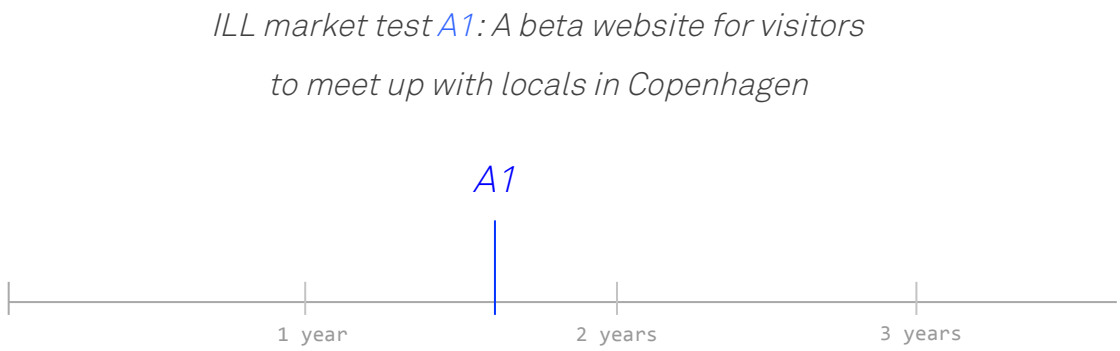

Figure 4-2 - *ILL* market test A1

The initial test in the marketplace happened as the first beta version of the *ILL* platform was launched in June 2012 (App. 1.2, p 16-17). The concept for the platform had been developed through several iterations (App. 1.1, p.2-6) and concept changes for about a year and a half prior to the launch, while the actual web design and web development (App. 1.2, p.7-17) of the platform had taken place from February the same year.

The product was launched as a fully functional backend and frontend platform — meaning that it was built for an unlimited amount of users to sign up, and ready to scale to any new city from day one. The product was launched with most functions imaginable by the *ILL* team and a feedback button had been placed on every page of the site in order to make it easy for users to provide feedback, directly on the site.

Consequences of launch one

As a direct consequence of launch one, *ILL* had about two hundred users signing up within the first few days (App. 2.1, p.52), of which about twenty were active users. The rest of the users did not return. At the same time none of the users provided feedback, so we had to rely on personal conversations with users in order to find out what the users liked and what they did not like on

the site. Furthermore, the size of the platform would prove to become another challenge (App.1.2, p. 9), since the bigger a site gets, the more work it takes to make changes. And since we had built a fully functional platform, there was a lot of work.

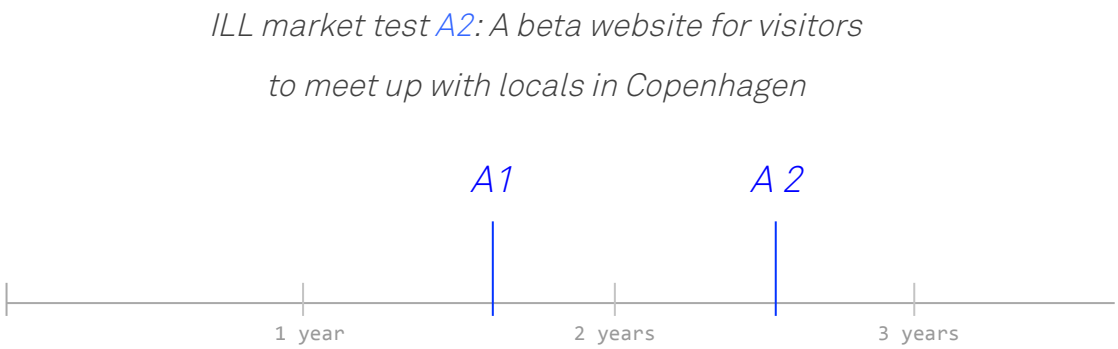

Figure 4-3 - *ILL* market test A2

As evident from an email (App. 2.1, p.61), the second market test took place in May 2013 as we launched the second version of the website on May 7th - about two and a half years after the initial idea. Since the platform had failed to gain any significant traction from the initial beta launch almost a year earlier, we decided to make some product improvements (App. 1.3). The decisions on the improvements to the platform were mostly based on our gut feeling, since we had only gained a very limited amount of feedback from users of the beta platform. Furthermore, the second iteration of the website was another long-term process due to the large size of the highly scalable platform, and with only a two-people team working on the actual design and development.

Consequences of launch one

We had managed to create some hype leading up to the second launch of the website. At least enough that we were contacted by *AirBnB's* Scandinavian headquarters in Copenhagen (App 2.1, p.61), since they were interested in meeting us and talk about possible future collaboration. However, once the site launched on May 7th we had to realize that the product improvements had once again failed to gain any significant amount of traction and recurring traffic. And once again the market test was completed without a clear focus on a feedback framework or a system for learning from the launch.

The second launch was the beginning of the end of *ILL*. The work on the start-up continued for almost another year and a new version of the website (App. 1.4) was ready for launch in February, 2014. However, at this stage there was no resources or energy left within the team. We had lost faith in our start-up process and as the ultimate consequence we decided to close down.

4.2. Decision-making – Case B

From the beginning of the *CykelKarma* project, decision-making has deliberately been rooted within the concepts of the experimental approaches. Here, assumptions are turned into hypotheses and then tested in a series of small and quick experiments to find out if the business idea actually creates value.

The initial decision for choosing a bike service as the testing start-up for MYOB, was made through a series of design thinking processes leading to *CykelKarma* as the final choice based on the following challenge:

Create a social entrepreneurship start-up, within the MYOB framework that will hire ethnic minority boys age 13-17 from troubled neighbourhoods in Copenhagen. The boys will run the start-up in collaboration with adult mentor volunteers. The start-up will receive no additional financing.

Within the boundaries of these guidelines lie some significant underlying limitations:

1. The tasks that will be performed in the operations of the enterprise should be simple enough that the targeted boys can easily learn them.
2. The start-up must be assumed to possess a clear and scalable business potential.
3. The start-up should be built, using my means as project manager in MYOB.

1) The task of performing a quick bike service is a fairly simple task and consists of cleaning the bike by wiping it down, lubricating moving parts, and tightening screws and bolts. Thus, it is assumed that 13-17 year olds can learn the service within a short training period.

3) As Copenhagen is one of the most active bike cities in the world, the market has a significant size for *CykelKarma*. The main business model assumption for creating *CykelKarma* was thus;

there is a need for a simple, and affordable bike-service solution in Copenhagen due to people's lack of time, skill, money, or priority to take good care of their bikes.

3) Considering that my task is to build the start-up using my means, *CykelKarma* was a great option, as one of my hobbies is building bikes. I therefore possess specific knowledge in the bike service field. Secondly I have several years of experience with graphic design and simple front-end web-development, which made me able to create all prototyping-elements for conducting the first start-up experiments, without additional financing. Initially two start-up experiments were conducted to test CykelKarma's business hypotheses.

4.2.1. Experiment 1 - Oct. 10th, 2014

The initial experiment was conducted at *DRC* in order to test the actual service in terms of equipment needed, time spent and the value hypothesis:

Figure 4-4 - *CykelKarma* - market test B1

Hypothesis 1: *"Bike owners will be very happy to receive a free and simple bike service, while at work"*

The participants in experiment one were a selection of ten employees at the *DRC*. They all received an email invitation (App. 1.5, p.34) to be part of the experiment and receive a free bike service. Furthermore all ten participants commute to work by bike every day and none of them had heard about *CykelKarma* before.

To conduct the experiment, an initial prototype was created consisting of a test plan (App. 1.5, p. 36) for the actual service, a few essential pieces of bike tools, some WD40 cleaner/rust loosener, a few cloths to clean the bikes, and some oil for lubricating the moving parts. In addition a basic

laminated paper card[3] with a message in a personal tone to explain the service, was printed to hang on the bikes after the service (App. 1.5, p. 33). In order for me to determine which bikes were part of the experiment I also handed out red bands that the participants were to tie around the handlebars. Last but not least a three-page survey (App. 1.5, p. 38) was created to get a semi-structured list of feedback from the participants.

The actual execution of the experiment went as planned. As evident from my field notes (App. 1.6, p. 41), I spent two hours and two mintues, with an average time of about 10 minutes per bike and the service itself went fairly smooth. However, a few obstacles came up both during and after the experiment. First of all, the ten bikes were all in very different conditions, where some of them were almost completely worn out and in serious need of an actual bike mechanic. Other bikes were in such good shape that they did not need any form of service. About half of the bikes were in a perfect condition for a light service, where it was clear to see that someone had given them a loving hand. Secondly a group of workers were doing exterior renovation on a building next to the parking lot where I was performing the service. As a result, most of the bikes got covered in dust about half an hour after I had finished my service. And finally, without knowing it, I had somehow caused a simple malfunction in the gear shifter on one of the bikes (App. 1.6, p. 41).

Consequences of experiment one

Experiment one produced a variety of results and feedback not only limited to the survey. The first evidence supporting the value hypothesis H1 came after sending out email invitations to the selected DRC employees. Their replies were overwhelming, and one participant even stated that the offer of getting a bike service is "better than a spa retreat", showing a definite attitude towards the concept. A complete list of the replies can be found in the appendix (App. 1.5, p.35).

The second round of feedback came in the form of survey responses (App. 1.6, p.38). Overall the participants accepted the value hypothesis H1, as they responded that the service was valuable to them - scoring 2 out of 5 (where 1 is the highest and 5 is the lowest score). Other interesting findings include that the participants rated the idea of getting a "surprise bike service" — without their approval before hand — as high value — scoring 1.3 out of 5. In addition, all ten

[3] From here on referred to as "bike-card"

respondents added that such a surprise service would probably make them visit the concept website and tell about the experience, to people they know (App. 1.6, p.39).

Although the survey responses were mainly positive, a few issues became evident from conducting experiment one. First of all - the invitation email that was sent out in advance may have created too high expectations from the participants. A couple of them explained that they anticipated more than the service actually delivered (App. 1.6, p.38), and they could not see any change after the service had been performed. In a comment in the survey responses, one participant suggested that the bike-card clearly should indicate what type of services had been conducted, since it was difficult to see (App. 1.6, p.38).

4.2.2. Experiment 2 - November 10th 2014

Figure 4-5 – *CykelKarma* market test B2

CykelKarma's second start-up experiment was conducted outside the digital agency *In2Media* in corporation with *In2Media*'s product director. He and I made an agreement that he would not to tell any of his colleagues about his knowledge of the experiment — even the day after the experiment was conducted. This was due to the fact that I wanted to find out if the surprise experiment would create enough value to the participants that they would tell their co-workers about the experience, the day after the test. As a further evolvement of the learning from experiment one, the second experiment was designed to test another value hypothesis and two growth hypotheses:

H2: *"Owners of dirty bikes, will be happy*
when they get surprised by a simple and free bike service"

H3: *"The bike owners will be so happy when they read the bike-card, that they will share the experience with people within their network"*

H4: *"The experience will mean so much to the bike owners, that they will provide feedback through the CykelKarma Website"*

The participants in the second experiment were ten *In2Media* employees and this time the bikes were chosen randomly, in order to test the surprise element. By selecting ten random bikes that were parked in the street in front of In2Media's office, none of the participants were aware of the service beforehand.

Decisions

Based on the results of experiment one, a second iteration of the MVP was created for experiment two. The tools for the service remained the same, but the bike-cards had been redesigned to clearly show the owner what services had been performed on the bikes. Furthermore in order to improve the service experience, I put a lot more effort into the second design-iteration of the bike-card, to create a more aesthetic experience (App. 1.7, p.43). In addition to the redesigned bike-cards, I created a website landing page (App. 1.7, p.47) with a matching identity. The website address www.CykelKarma.dk as well as a QR code that linked to the website, were also placed on the bike cards for easy access. The landing page was created with the aim to get the experiment participants to visit the website and leave feedback about their experience. The feedback process was divided into two simple steps.

In step one the process the participants were asked if the surprise bike service made them happy by giving them two option buttons saying A) it made me happy or B) it did not make me happy. Once the initial question was answered, the participants moved on to step two, where they were asked if they would like to add additional information by writing a comment.

The experiment was conducted on November 10th and took about two hours and fifteen minutes, averaging at a little less than 14 minute per bike. One major difference from experiment one was that in experiment two I was free to select bikes randomly, meaning that I only selected bikes that were dirty or otherwise had obvious signs of needing a simple service. Thus, the chance of making a noticeable difference on the bike was highly increased.

Consequences of experiment two

The results from experiment two came in completely different forms than experiment one. Within 24 hours of the test, 10 out of 10 participants had visited the *CykelKarma* website and gave their feedback on the experience (App. 1.8, p.48). In the feedback 9 out of 10 participants responded by clicking on button A) it made me happy and only one participant responded B) it did not make me happy. Unfortunately the participant who responded B) did not provide any further comments about why. However, out of the nine responses for option A), four respondents added very positive comments (App. 1.8, p.48). One of them read:

> *"Fantastic experience, after a long workday, to come outside to an oiled, clean, beautiful bike. This morning the chain fell off twice on my way to work, so you came as sent from heaven. Full support from here for a brilliant initiative."*
>
> *- Anonymous respondent*

Other than the official feedback route, one of the participants took a picture of the bike-card and shared it directly on *Instagram* (App. 1.8, p.47). In addition, the day after the experiment, the Product Director overheard a conversation where an *In2Media* employee told a colleague about the experience at the agency (App. 1.8, p.48).

And building on the viral potential of *CykelKarma*, about two weeks after experiment two, the Program Manager of *MYOB* — received two emails, one from *Supercykelstier* (a bicycle highway project at the Copenhagen Municipality), and another email from the *Danish Bicycle Union (DBU)* (App. 1.8, p.49-50). Both emails were sent with an aim to potentially engage in partnerships with MYOB around *CykelKarma*. After meetings with both organisations, it turned that in both cases, the organisations had heard about *CykelKarma's* surprise service from people in their respective networks. In the case of *Supercykelstier* the project manager had read about *CykelKarma* in a Facebook post and at *DBU* they had heard about it by word of mouth.

All of the above examples prove the value and growth hypotheses H2, H3, and H4 and certainly show that *CykelKarma* as a concept has a great potential to spread virally.

4.3. Planning

The different types of decision-making processes of each case had consequences for the planning, market, resource, and failure aspect of the two start-ups.

From a planning perspective *ILL* took a highly predictive approach as it was relying heavily on business planning based on untested assumptions as a strategic tool to set the direction of the start-up. The initial business plan was created for the initial product version and altered in various iterations along the way as assumptions about the market changed (App. 3.1, 3.2, & 3.3). Similarly to the business planning approach, the product development process was based on planning the full-scale development of the platform before launch. This added to the highly predictive nature of the start-up, where decisions were made based on untested assumptions.

Overall this focus on elaborate and long term planning had a few major consequences for *ILL.* On one hand, the business plan provided the basis for winning the *Creative Business Cup* (App. 2.1, p.53), 2011 in terms of providing information for the application. On the other hand, the business plan and product development plan were based on untested assumptions, thus adding to the risk of the start-up.

On the opposite side of the scale, planning in *CykelKarma* is limited to sketching the business model canvas (App. 1.5, p. 31) and planning of one hypothesis experiment at a time (App. 1.5, p. 32). Thus, *CykelKarma* is only looking at a very short time frame and as a consequence the risk of time and resources wasted are reduced to a minimum. The result of *CykelKarma's* experiment one (App. 1.6, p. 38-41), provided important learning in terms of actual data to make decisions for planning the second experiment (App. 1.7, p. 42-45).

4.4. Resources

From a resource perspective the cases assume two very diverse approaches. *ILL* used the "product-first" approach that basically says that first you build a product and then you find users for it (Blank, 2005). Therefore the *ILL* approach began by looking outwards to search for expert team members and partners to develop the product. On the contrary *CykelKarma* starts with the customers by talking with potential users and customers from the beginning and all the way

through the experimentation process (App. 1.5, 1.6, 1.7 and 1.8). At the same time *CykelKarma* is focusing on how to get the product off the ground with the means available internally.

These two resource perspectives result in completely differently executed projects. In *ILL* there is a focus on launching a fully functional, complete, and scalable product from day one (App. 1.2). This focus creates a demand for finding external expertise in terms of highly skilled web developers. On the other hand *CykelKarma* focuses on testing hypotheses by creating prototypes (App. 1.5 & 1.7) as small and fast as possible, which makes it possible to get going with only the internal resources.

Although sharing a common focus on speed of execution, *ILL's* demand for external resources, made the actual execution everything but fast, as the start-up was too reliant on these external factors. Several web developers joined the team and left again for various reasons, before the final web-development partner, who completed the initial platform (App. 1.2) was found after about 18 months.

On the other hand, *CykelKarma's* focus on building small prototypes by only using internal resources, remove an uncertainty factor as the reliance on external resources diminishes. This rather narrow minded outlook, has its limitations as it very much limits the possible size of the initial start-up project to whatever internal resources are available. However, the decrease in size of the start-up experiment also means a decrease in the risk of failure.

4.5. Market

The two cases have highly contrasting approaches to the market. As evident from the various versions of the *ILL* business plan (App. 3.1, 3.2 & 3.3), the start-up utilized market research and tendencies to form assumptions and an attempt to predict the success of the company. In *CykelKarma*, initial assumptions are replaced by hypotheses to test in the market (App. 1.5 & 1.7) in a real time market experiment. This focus on fast experiments and a structured feedback process for collecting experiment results (App. 1.6 & 1.8), allows *CykelKarma* to learn whether or not the assumptions about the market tendencies are as favourable as assumed.

Attention from winning the *Creative Business Cup* (App. 2.1, p.53), as well as media coverage (App. 2.1, p.56) supported the highly assumed attractiveness in the market section of the *ILL*

business plan. However, *ILL* was not in actual contact with the market until the first product launch two years after the initial idea. At this stage it became obvious that the product did not live up to the users expectations and as a result *ILL* created a product that there was no need for in the market.

CykelKarma's quick experiments allowed for direct and feedback from potential future customers (App. 1.6 & 1.8), while also validating several value hypotheses. This validation can be viewed as actual market data, which can be used in planning further start-up experiments and getting closer to finding a reliable business model.

4.6. Failure

When looking at the two cases in terms of failure, *ILL* experienced the ultimate start-up failure in the spring of 2014, when the decision was made to close down the website and development process before releasing the final product-iteration (App. 1.4, p.23). At this stage, three and a half years in the making, the start-up had not been able to build a sufficient user base, nor been able to find a sustainable business model. Within this time frame *ILL* had made three changes to concept (App. 1.2, 1.3 & 1.4), but only had two actual tests in the market (shown in figure 3-9), as according to *Harper's* model on entrepreneurial learning. It is thus reasonable to argue that the *ILL* process can be categorized as a failed long-term start-up experiment.

The failure experience in *CykelKarma* takes a very different form than *ILL*. Each of the two market experiments (App. 1.5 & 1.7) was designed to gain knowledge about the market and target customers. Failure was expected as a potential outcome of each experiment. However, since both experiments resulted in validation of the respective hypotheses (App. 1.6 & 1.8) they are viewed as successful. However, several minor failures in the concept, were quickly found from the results of experiment one and addressed in the design of experiment two. These early failures resulted in customer feedback that lead to quick product iterations and ultimately replaced predictions with actual market data.

4.7. Summary of findings

4.7.1. Decision-making

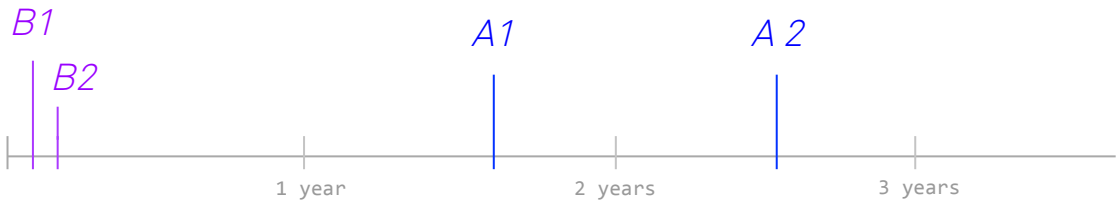

Figure 4-6 - Market Test Timeline

Overall, the findings of the analysis indicate that the scientific decision-making model have a wide impact on a variety of aspects of the two cases, in terms of both planning, market, and resources and failures. For *ILL*, decision-making was largely made based on untested assumptions, consequently making the start-up highly predictive. In contrast, decisions in *CykelKarma* are made based on learning in the form of data from testing early prototypes (App. 1.5 & 1.7 in the marketplace (App. 1.6 & 1.8), thus leading to decision-making based on actual data.

4.7.2. Planning

The planning approach to *ILL* took a very linear form with long term business planning (App. 3.1, 3.2 & 3.3) and product development (App. 1.1, 1.2, 1.3 & 1.4), where a strategic direction was set as a recipe to be followed. This approach resulted in the creation of a fully functional and scalable website (App. 1.2) with high development costs, both in terms of time and resources. In *CykelKarma,* the planning aspect is limited to a sketch of an assumed business model (App. 1.5, p.31), leading to the planning of iterative, fast, and small start-up experiments (App. 1.5 & 1.7), to test the business hypotheses. As a result of the initial experiments, hypothesis were quickly validated and turned into real data (App. 1.6 & 1.8), thus eliminating the risk of long-term predictions.

4.7.3. Resources

From a resource perspective, *ILL* was aiming to build a fully functional and scalable website from day one (App. 1.2). This meant that the founding start-up team had to look externally for expert developers as human resources for the team. This task of gathering and managing a large team had major consequences in the start-up, where several partners and team members joined and left *ILL,* even before the initial prototype (App. 1.1) was ready for market testing. In contrast, *CykelKarma* started with the means of the founding team, which translates to a main focus on how to get started with the resources already available internally. As a result the first prototype (App. 1.5) was ready for testing only about a month into the start-up and the second iteration followed just one month later.

4.7.4. Market

In terms of the market *ILL* relied on market analysis, competitor analysis (App. 3.1, 3.2, 3.3), winning business plan competitions (App. 2.1, p.53), media attention (App. 2.1, p. 56), and general assumptions by the founding team. These sources were used to validate the market need for the platform, without any on-going customer dialog and testing along the process. As a consequence *ILL* launched two iterations of a fully developed web platform, neither of which managed to gain significant market traction. For *CykelKarma* the market focus has been on customer development from day one, and each experiment is designed to get feedback that either accepts or rejects the value hypotheses with real potential customers. As a result, the predictions about the market only occur in the short term for *CykelKarma*, after which these predictions are turned into testable hypotheses. Only results from the hypotheses experiments count as market data to continue building the start-up on.

4.7.5. Failure

After three and a half years in the making, *ILL* had only conducted two actual tests in the market (App. 1.2 & 1.3), both of which had proven unsuccessful in generating a sufficient user base. *ILL* thus experienced the ultimate start-up failure, when the decision was made to close down the project due to lack of users and a sustainable business model. The highly scalable ambitions for the service had turned it into a large-scale web-development project that eventually missed the targeted users of the platform. For *CykelKarma,* failure was experienced on a much smaller scale and as an expected premise of the two early hypothesis experiments (App 1.5 & 1.7). The first market test was made possible after only one month in the making by creating a fast prototype.

This quick market experiment enabled the start-up to correct several minor failures early in the process, which were corrected for test two. By doing so, assumptions about *CykelKarma's* market potential were turned into hypotheses that were validated with potential users in both experiments (App. 1.6 & 1.8).

Chapter 1: Introduction

Chapter 2: Literature review

Chapter 3: Research design

Chapter 4: Analysis

Chapter 5: Discussion

Chapter 6: Conclusion

5. Discussion

Part one of this section will highlight and discuss the most important findings from the analysis. Part two will discuss how the traditional approaches from *Case A* could learn from the experimental approaches in *Case B,* and vice versa. Part three will discuss the differences in the cases. Finally I will discuss how the findings could lead to possible societal applications.

5.1. Discussion of findings

5.1.1. A scientific approach

As evident from the analysis, *Harper's* (1999) scientific decision-making process is universally applicable to all types of entrepreneurial projects, whether the project is explicitly framed as an experiment or not, and with or without the entrepreneur being aware of the scientific process. The findings also suggest that being aware of the scientific decision-making process does provide an advantage to the entrepreneur, since it will likely lead to decisions based on the actual market data from the results of the experiment.

Another point to make in terms of the scientific decision-making process is that it naturally encourages a short time frame and an iterative approach for conducting experiments, since the experiment result is the only valid data for making decisions. Thus, a shorter the time frame to conduct the experiment, will enable shorter time for decision-making. On the other hand, the longer the time frame stretches for each experiment, the longer the start-up has to rely on the uncertainty of market predictions, which increases the start-up risk.

5.1.2. Failure as a premise

As the findings reveal, failure is a premise of entrepreneurship. It will happen in start-up projects. Therefore start-up experiments should be designed with failure in mind. The faster and earlier a start-up fails the cheaper the experiment will be and the faster the start-up can move on to build the next iteration of the prototype.

This idea of fast, early and cheap experiments is supported in the findings where case B is able to conduct two small market experiments within the first three months from the initial idea. By doing so, the start-up receives valuable customer feedback at a very early stage, allowing it to adjust the prototypes before moving on. On the other hand it takes two years for case A to

conduct two market experiments due to product development at a much larger scale. This also leads to lack of early customer involvement and thus a much bigger, slower and more expensive failure as the product releases fail to gain traction in the market.

5.1.3. How case A can learn from case B

- Being aware of the scientific decision-making process could prevent premature decisions in terms of product changes before the prototype has been tested in an actual market experiment.

- Focusing on building early, fast, and cheap prototypes to test market predictions directly with potential customers in a series of small iterative market experiments. These way market predictions would quickly be tested and replaced by real market knowledge.

5.1.4. How case B can learn from case A

- Having a visionary long-term plan as a foundation for the start-up could be an important tool for attracting and motivating team members and investors.

- Traditional approaches for business planning could be utilized once the business model has been validated through start-up experiments and a significant amount of reliable market data has been collected.

5.2. The issue of differences in cases

A relevant issue to point out in this study is whether or not the two cases are too different to compare. They certainly take very different approaches to starting a business and furthermore the two cases are very different types of start-ups. However, as this study explicitly revolves around *Harper*'s (1999) scientific decision-making process, I argue that any two start-up projects could be compared from this perspective, since all entrepreneurship projects per definition aim to launch a product or service in the market.

6. Conclusions

6.1. A theoretical comparison

This master thesis was written with the aim to explore new experimental approaches to early stage entrepreneurship. In order to understand these new approaches it was necessary and highly relevant to provide a historical perspective on the subject by comparing them with traditional approaches. This leads me to sub question *Q1,* which aimed to clarify how it is possible to distinguish between these traditional and experimental approaches. In order to provide an overview of the differences I chose to explore six specific areas within start-ups: definition, decision-making, resources, planning, market, and failure.

Within traditional approaches, start-ups are viewed as smaller versions of big companies where business plans provide the strategic foundation and direction. In the experimental approaches however, start-ups are explicitly viewed as *not* just smaller versions of a big company. Instead, they are defined as temporary organisations designed to search for a sustainable business model.

One of the most interesting discoveries from this theoretical comparison came about as I learned that the decision-making process of both traditional and experimental approaches is defined as hypothesis testing in the market place. The factor that separates the two approaches is that while traditional approaches are not necessarily focusing on advocating this process, an explicit awareness about this scientific decision-making exists in the experimental approaches.

From a resource perspective, traditional approaches focus on attracting investors based on predicted return on investments. The experimental approaches however, focus on the entrepreneur's affordable loss and own means to build early, fast and cheap prototypes.

Long term business plans with focus on expected return and linear product development provide the core of planning in the traditional approaches. In contrast, business planning in the experimental approaches is limited to sketching a business model canvas and designing the next short-term hypothesis experiment.

On one hand the traditional approaches rely on market predictions and competitor analyses as the basis for business planning. On the other hand, the experimental approaches turn market predictions into testable hypotheses to get actual market data from potential customers.

In traditional approaches, failure is viewed as the ultimate end of a start-up, while the experimental approaches view failure as a premise of entrepreneurship and part of the learning process of start-up experiments, with a clear focus on early, fast and small failure.

6.2. Foundations for decision-making

The aim with the second sub-question *Q2* was to clarify how the foundation for decision-making, differ in traditional vs. experimental approach cases. As discovered in the theoretical findings, the decision-making processes in both the traditional and experimental approaches to early entrepreneurship follow the same process as proposed by *Harper's* model on entrepreneurial learning:

$$Problem_{1} > Hypothesis_{1} > Test_{1} >$$
$$Problem_{2} > Hypothesis_{2} > Test_{2} >$$
$$...Problem_{n+1}$$

Figure 6-1 – *Harper's* (1999) Entrepreneurial learning model

However, as a key difference between the two approaches, entrepreneurs following traditional approaches are not necessarily aware of the decisions making process. In contrast, the experimental approaches are explicitly built around start-up experiments that utilize the entrepreneurial learning model to make fast, early, and cheap market experiments. By being aware of this process of conducting scientific market experiments, entrepreneurs in the experimental approaches are more inclined to make decisions based on actual customer data derived from the results of market experiments, than on untested market predictions.

These theoretical assumptions were supported in the findings from the real world cases, where case A (being unaware) and case B (being aware), showed completely different behaviour in

terms of decision-making. The market experiments of Case A were stretched out in long-term product development processes. Decisions to make concept changes were even made prematurely before the product had been tested in the market on two separate occasions. In contrast, case B conducted two early, fast, and cheap market experiments. The results of the two experiments provided real market data to base the decisions for the following iteration of the prototype.

6.3. The effect of the experimental approaches

This thesis set out to answer how experimental entrepreneurship approaches, are affecting the way entrepreneurs pursue the process of early stage entrepreneurship. From the analysis I draw the following conclusions to answer the research question

It is clear from the findings that awareness of the scientific decision-making process provides an advantage for making decisions based on actual market data, rather than market predictions. The case analysis showed clear indications that this awareness had a drastic effect on decision-making behaviour from case A to case B.

At the heart of this scientific approach lies an iterative approach to experiments where early, fast, and cheap prototypes are tested in the marketplace in order to either reject or validate business model hypotheses. This creation of early, fast, and cheap experiments was also supported by the case analysis. By maintaining this focus the entrepreneur is enabled to get early feedback from potential customers, which removes the uncertainty of relying on untested predictions in a business plan. Instead this feedback provides valuable learning that can be transferred directly into following prototype iterations.

In the experimental approaches failure is understood as a premise of conducting entrepreneurial experiments. As evident from the experiment results of case B, prototype failure provides valuable insight to make product changes from. Perhaps the most important note about this failure perspective is that failure should happen as early, fast, and cheap as possible.

By focusing on building rapid prototypes and market experiments with the internal means available, experimental entrepreneurs are able to test their hypotheses at a very early stage as demonstrated in the experiments of case B.

6.4. Limitations & implications for future research

It is important to note that the findings in this thesis are not directly applicable to other start-ups, since they are not generalizable and only provide a superficial insight into the specific case companies in question. Furthermore, as discussed in the case study section of the research design chapter, there are obvious limits in terms of the external validity of this study.

First of all, my findings are based on only two case companies, which make the foundation of the findings relatively insubstantial. However, the purpose of this thesis has been to investigate a specific phenomenon in detail, and not to measure characteristics in a large sample.

Researchers that are interested in experimental approaches to early stage entrepreneurship could extend the application of comparing the scientific decision-making process that this study has identified. It would be natural to extent such a study to other start-ups working with experimental and traditional approaches to early stage entrepreneurship.

7. References

Alvarez, S. A. (2005). Two Theories of Entrepreneurship: Alternative Assumptions and the Study of Entrepreneurial Action

Bartlett, S., (1987). *Self-Reference: Reflections on Reflexivity*, Martinus Nijhoff Publishers, Dordrecht, Boston.

de Bettignies, J., & Brander, J. (2007). Financing entrepreneurship: Bank finance versus venture capital. *Journal Of Business Venturing*, *22*(6), 808-832. doi:10.1016/j.jbusvent.2006.07.005

Blank, S. (2005). *The Four Steps to the Epiphany: Succesful Strategies for Products that Win*. Menlo Park: K&S Ranch Publishing LLC.

Blank, S. (2011). Embrace failure to start up success. *Nature*, *477* (7363), 133-133. doi:10.1038/477133a

Blank, S., & Dorf, B. (2012). *The start-up owner's manual*. Pescadero, Calif.: K&S Ranch, Inc.

Blank, S. (2013). Why the Lean Start-Up Changes Everything. *Harvard Business Review*, 91(5), 63-72. Retrieved from https://hbr.org/2013/05/why-the-lean-start-up-changes-everything

Brown, T., & Kätz, B. (2009). *Change by design*. New York: Harper Business.

Bygrave, W. D., Lange, J. E. and Evans, T. (2004) Do business plan competitions produce winning businesses?, summary, in: S. A. Zahra, C. G. Brush, P. Davidson, J. Fiet, P. G. Greene, R. T. Harrison, M. Lerner, J. Sohl and A. Zacharakis (Eds) *Frontiers of Entrepreneurship Research 2004*, p. 275 (Wellesley, MA: Babson College).

Bryman, A., & Bell, E. (2011). *Business research methods*. Oxford: Oxford Univ. Press.

Ricketts, M. (2008). *Theories of entrepreneurship*: Historical Development and Critical Assessment. (pp: 33-58). Oxford: Oxford University Press.

Czepiel, J., & Kerin, R. (2011). Competitor Analysis (1st ed., pp. 1-23). Northhampton: Edward Elgar Publishing. Retrieved from http://pages.stern.nyu.edu/

Ellis, C. (2004). The Ethnographic I. Walnut Creek, CA: AltaMira.

Ellis, C., Adams, T., & Bochner, A. (2011). Autoethnography: An Overview. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *12*(1). Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/1589/3095

Furr, N. and Ahlstrom, P. (2011) *Nail it then Scale it: The Entrepreneur's Guide to Creating and Managing Breakthrough Innovation*, NISI Institute, USA.

Furr, N., Cavarretta, F., & Garg, S. (2012). Who Changes Course? The Role of Domain Knowledge and Novel Framing in Making Technology Changes. *Strategic Entrepreneurship Journal*, *6* (3), 236-256. doi:10.1002/sej.1137

Fraenkel, J. R., & Wallen, N. E. (2006). How to design and evaluate research in education with PowerWeb (6th ed.). New York, NY: McGraw-Hill.

Gay, L.R. (1996). Educational Research. (5th Edition).New Jersey: Prentice Hall Inc. Reprinted by S. T. Printers, Rawalpindi (2000).

Hantrais, Linda (2009) International comparative research: theory, methods and practice. Basingstoke (England): Palgrave Macmillan.

Harper, D. (1999) 'How entrepreneurs learn: a Popperian approach and its limitations', Working Paper 99-3, Copenhagen Business School (Denmark: Department of Industrial Economics and Strategy).

Harvard Business Review,. (2013). *Six Myths About Venture Capitalists*. Retrieved 1 June 2015, from https://hbr.org/2013/05/six-myths-about-venture-capitalists

Hills, G. (1988). Variations in university entrepreneurship education: An empirical study of an evolving field. *Journal of Business Venturing,* 3: 109–122.

Holman Jones, Stacy (2005). Autoethnography: Making the personal political. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research* (pp.763-791). Thousand Oaks, CA: Sage.

Kaarbo, J., & Beasley, R. (1999). A Practical Guide to the Comparative Case Study Method in Political Psychology. *Political Psychology*, *20*(2), 369-391. doi:10.1111/0162-895x.00149

Kawulich, B. (2005). Participant Observation as a Data Collection Method. *Forum: Qualitative Social Research*, *6*(2).

Lafontaine, F., & Shaw, K. (2014). Serial Entrepreneurship: Learning by Doing?. *National Bureau Of Economic Research*. doi:10.3386/w20312

Lange, J., Mollov, A., Pearlmutter, M., Singh, S., & Bygrave, W. (2007). Pre-start-up formal business plans and post-start-up performance: A study of 116 new ventures. *Venture Capital,* 9(4), 237-256. doi:10.1080/13691060701414840

LeCompte, M., & Schensul, J. (1999). *Designing and conducting ethnographic research.* Walnut Creek, CA: AltaMira.

McDonald, M. (2008). *Malcolm McDonald on marketing planning*. London: Kogan Page.

McGrath, R. G. and MacMillan, I. C. (1995) 'Discovery driven planning', Harvard Business Review, Vol. 73, pp. 44-54.

McQuarrie, E. (1996). *The market research toolbox*. Thousand Oaks, Calif.: Sage Publications.

Merriam-webster.com, (2015). *entrepreneur | a person who starts a business and is willing to risk loss in order to make money*. Retrieved 9 May 2015, from http://www.merriam-webster.com/dictionary/entrepreneur

Mills, A., Durepos, G., & Wiebe, E. (2010). *Encyclopedia of case study research*. Los Angeles: SAGE Publications.

Mullins, J., & Komisar, R. (2009). *Getting to plan B*. Boston, Mass.: Harvard Business Press.

Mullins, J. (2014). *The* customer-*funded business*. New Jersey: John Wiley & Sons, Inc.

deMunck, Victor C. & Sobo, Elisa J. (Eds) (1998). *Using methods in the field: a practical introduction and casebook*. Walnut Creek, CA: AltaMira Press.

Osterwalder, A., Pigneur, Y., & Clark, T. (2010). *Business model generation: A handbook for visionaries, game changers, and challengers*.

Popper, K. (1994) *All life is Problem Solving*, Routledge, London

Rasborg, K. (2004). Socialkostruktivismer i klassisk og moderne sociologi. I L. Fuglsang, & P. B. Olsen (red.),*Videnskabsteori i samfundsvidenskaberne: På tværs af fagkulturer og paradigmer*. (2 udg., s. 349-87). Frederiksberg: Roskilde Universitetsforlag.

Ries, E. (2011) The Lean Start-up: How Constant Innovation Creates Radically Successful Businesses, Penguin Group, London.

Sarasvathy, S. (2001) 'Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency', The Academy of Management Review, Vol. 26, No. 2, pp. 243-263.

Sarasvathy, S. (2008). *Effectuation* (p. 250). Cheltenham, UK: Edward Elgar.

Schumpeter, J. A. (1965) Economic Theory and Entrepreneurial History. In: Aitken HG (ed) Explorations in enterprise. Harvard University Press, Cambridge, MA

Shuman, J., Shaw, J., & Sussman, G. (1985). Strategic planning in smaller rapid growth companies. *Long Range Planning*, *18* (6), 48-53. doi:10.1016/0024-6301(85)90063-9

Sommer, B. (2013). *Participant observation*. *Psychology.ucdavis.edu*. Retrieved 20 July 2015, from http://psychology.ucdavis.edu/faculty_sites/sommerb/sommerdemo/observation/

Thomas, W. (1923). The unadjusted girl : with cases and standpoint for behavior analysis : Thomas, William Isaac, 1863-1947 : Free Download & Streaming : Internet Archive. Internet Archive. Retrieved 17 July 2015, from https://archive.org/details/unadjustedgirlwi00thom

Wiersma, W. (1995). *Research methods in education* (6th ed.). Boston: Allyn and Bacon.

Yin, R. (2009) Case Study Research: Design and Methods (4th edition), Sage Publications, Thousand Oaks, CA.

Young, R., & Collin, A. (2004). Introduction: Constructivism and social constructionism in the career field. *Journal Of Vocational Behavior*, *64*(3), 373-388. doi:10.1016/j.jvb.2003.12.005

Zott, C., & Huy, Q. N. (2007). *How entrepreneurs use symbolic management to acquire resources*.

8. Appendix