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**MASTER'S THESIS**

ENTREPRENEURIAL OPPORTUNITIES  
MAIN DRIVERS OF EMERGENCE AND IDENTIFICATION

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# ABSTRACT

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Entrepreneurial opportunities have been studied a lot in the last decade. There have been a lot of theory building and debate but the lack of empirical research labels the field. Entrepreneurship is a current topic and many people wonder why some people identify opportunities and others don't and where do the opportunities come from. This study focuses on the drivers and factors that affect opportunity emergence and opportunity identification. The purpose of this thesis is to give insight on this whole concept and help to understand the process of opportunity emergence and identification in practical level. To achieve this the goal is to identify and determine which factors and drivers are clearly prominent. The research is based on a theoretical review and a case analysis. The empirical research is conducted as a multiple case study by interviewing 5 entrepreneurs. The theoretical review is arguably very fragmented but it seems that most of the possible situations in opportunity emergence and identification are discussed to a certain point. Empirical findings support some of the theories but some important points were made that needed clarification in theoretical literature. The study contributes to the current theoretical discussion by providing some evidence on how opportunities emerge and are identified in different settings.

# Tiivistelmä

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Yrittäjyysmahdollisuuksia on tutkittu runsaasti viimeisen vuosikymmenen ajan. Yrittäjyys on ajankohtainen tutkimusaihe, jonka myötä on yritetty vastata kysymyksiin, kuten ”miksi jotkut henkilöt tunnistavat mahdollisuuksia paremmin kuin toiset?” ja ”miten mahdollisuudet syntyvät?”. Tämä työ keskittyy yrittäjyysmahdollisuuksien syntymiseen ja tunnistamiseen vaikuttaviin tekijöihin. Työn tarkoitus on selittää aihetta ja auttaa ymmärtämään yrittäjyysmahdollisuuksien syntymisen ja tunnistamisen prosessia. Tavoitteen saavuttamiseksi pyrin tunnistamaan ja määrittämään prosessiin ja tapahtumiin eniten vaikuttavat tekijät. Tutkimus pohjautuu kirjallisuuskatsaukseen sekä empiiriseen case-analyysiin. Empiirinen tutkimus toteutettiin monitapaustutkimuksena haastatteleamalla 5 taustoiltaan erilaista yrittäjää. Kirjallisuuskatsaus on hajautunutta ja jakautunut useampiin eri näkökulmiin, mutta selittää kokonaisuudessaan kohtuullisen hyvin prosessia ja tapahtumia käytännössä. Empiirisen tutkimuksen perusteella voidaan harkiten todeta jotkin teoreettiset väitteet todeksi. Lisäksi tutkimuksessa löytyi yksityiskohtaisempia löydöksiä, joita tulisi käsitellä tarkemmin tulevaisuudessa. Tämä työ edistää nykyistä yrittäjyysmahdollisuuksien tutkimuskenttää testaamalla teoreettisia viitekehyksiä ja antamalla käytännönläheistä tietoa yrittäjyysmahdollisuuksien syntymisestä ja tunnistamisesta.

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Funny how not too long ago I never imagined that I'm going to be in this situation. This thesis was a real sprint to the top of a mountain. I had a very limited time to put it together and it really felt challenging at times. Despite the challenges I managed to make the deadline.

I'm truly grateful to my supervisor Kaisu Puumalainen who actively supported me with the thesis from start to finish despite the tight schedule. She even gave me the last advices while on vacation. Hats off. I also want to thank my second supervisor Anna Vuorio for great feedback and advices.

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Now it's time to grab the champagne and celebrate!

Peace and love,

Jouko Koskinen

Helsinki, 2.3.2018

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# 1. INTRODUCTION

## 1.1. Background

“The ability to identify and choose the right opportunities for a new business is one of the most important abilities of a successful entrepreneur.” (Stevenson et al., 1985).

Kizner suggested in 1973 that the core of a business is the identification of an opportunity which is followed by exploitation of the opportunity. Also Shane et al. (2000) states that even if an opportunity for profit exists, entrepreneur can only capture this profit only if the opportunity is identified and has value; in other words entrepreneurship can only happen after identification of entrepreneurial opportunities. Obviously for a business venture to succeed it has a significant effect how well an entrepreneur can identify quality opportunities and how these opportunities are exploited and evaluated and formed into a successful business.

The topic of entrepreneurship and entrepreneurial opportunities has been a popular research topic for the last decade but also a topic of discussion for a century for a reason. When people hear amazing stories about successful entrepreneurs, familiar thoughts come into mind.

*“Why didn’t I think of such an obvious solution and start the business myself?”*

*“How did the entrepreneur identify the opportunity and I didn’ even though it was right there?”*

In reality the whole process of opportunity emergence and identification is very complex and challenging to examine. The first problem is related to a simple dilemma; “where do opportunities come from?” There are multiple drivers that work as a catalyst for opportunities and for entrepreneur to identify opportunities it is

reasonable to argue that understanding the drivers and sources of opportunities helps entrepreneurs to identify opportunities. The second problem is which factors affect individuals ability to identify opportunities.

The goal of this thesis is to explore the topic of opportunity identification, the drivers of opportunities and produce insight in practical level. At this point I will address “finding” of an opportunity with the term “identification” to be consistent, although in the theoretical field the way an opportunity is found dictates what term is used. I will address this aspect in further chapters. First I will review the theoretical background and models. What are the key factors that affect the ability to identify or possibly create opportunities, how do opportunities emerge or what are the sources of opportunities are questions I will answer. In this thesis I have separated the drivers and factors in two categories which are the external drivers that affect opportunity emergence and the internal factors that affect opportunity identification or possibly creation which means the internal factors also work as drivers for the opportunity to emerge. To give a more overall insight how the identification or creation of entrepreneurial opportunities happens and what were the drivers and sources of the opportunities. I will interview 5 entrepreneurs to produce examples how the process happens in reality. This is an interesting part of this thesis as there are in general very little empirical evidence on this topic (Nerine et al. 2014) and one of the main reason is that the identification process is hard to quantify because of the complexity of the whole event. Still I’m going to study how the opportunities were discovered, what were the initial setting and what were the key enabling factors. I believe it is possible to acquire useful information by doing an in depth analysis on selected real cases. In the case analysis I will summarize different factors that seem to be the factors that lead to opportunity identification and opportunity emergence. Based on the theoretical review and empirical findings I will try to answer the research questions and problems as well as possible.

In the end I hope to build a general overview in practical level that could help to understand the process of opportunity identification and the characteristics of opportunities and drivers behind them.

## **1.2. Research Gaps**

Entrepreneurial opportunities have been studied from many perspectives but one essential gap exists and that is the lack of empirical evidence. (Nerine et al. 2014) Nerine et al. continue that the research field of entrepreneurial opportunities is heavily fragmented. There is a lot of theory building and argumentation for and against different perspectives and this aspect labels the research field of entrepreneurial opportunities and opportunity identification.

There is still need for empirical examination and deeper review of different elements of the whole topic for example to test how well the theoretical implications apply in real cases. There are lots of studies that try to answer the dilemma which drivers have the biggest effect on opportunity emergence and opportunity identification but they lack solid evidence. The problem is that it possible to get only indirect results how different factors affect opportunity emergence and identification but still it would be beneficial to examine these cause-effect relationships between the drivers and opportunity emergence and identification (Shane, 2003)

## **1.3. Research problem and questions**

Entrepreneurship is trending and I have heard countless of times that people want to start a venture but are missing a business idea. How business opportunities are identified and where do opportunities come from are relevant questions which are hard to answer especially when there is little empirical evidence on this matter. I want to focus on this problem to understand what lays behind successful opportunity identification and is there prominent drivers and factors behind these opportunities. Also an important question is how much internal and external factors affect opportunity emergence assuming opportunities can emerge from external drivers, internal factors or from a combination of these.

The main research problem is divided into two categories. The first one is about the prominent external drivers and sources of opportunities. I will focus on external drivers that affect the emergence of the opportunities. The second one is related to the internal perspective which includes the factors affecting the ability to identify opportunities if an opportunity is already emerged.

1. What external drivers affect the emergence of entrepreneurial opportunities?

The first research question is relevant for understanding where do opportunities come from and what are the drivers behind them. By answering this question it would help to understand the mechanics of opportunity emergence and furthermore opportunity identification.

2. Which are the key factors affecting opportunity identification?

The second research question is meant to give insight on the dilemma why some people identify entrepreneurial opportunities and others don't, which is one of the main single dilemmas that has driven the research field forward (Nerine et al. 2014). My assumption is that there are as many combinations of these factors as there are people but the goal is to gather information on these factors and of the whole process via empirical analysis and make possible conclusions whether some drivers and factors are clearly prominent or if there are other possible relationships for example between external settings and the identification process.

## **1.4. Research framework**

The framework in this study will be constructed from three main elements. The first element is the external factors that affect the market setting where opportunities emerge. The main focus is in markets and how the changes and stages of markets affect opportunity emergence. This is relevant because the market cycle and

market development is considered to be one of the main sources of entrepreneurial opportunities. (Sarasvathy et al. 2003).The second one is the internal factors regarding the individual who identifies the opportunities. From entrepreneurial process I will leave out the evaluation and exploitation part of opportunities as the focus is on the drivers of opportunities and the identification of opportunities. The third element is the identification or possibly creation process which is affected by the internal factors.

In the following figure I have illustrated the research framework. Im going to examine which external drivers affect opportunity emergence, how internal factors affect opportunity identification and possibly opportunity emergence.

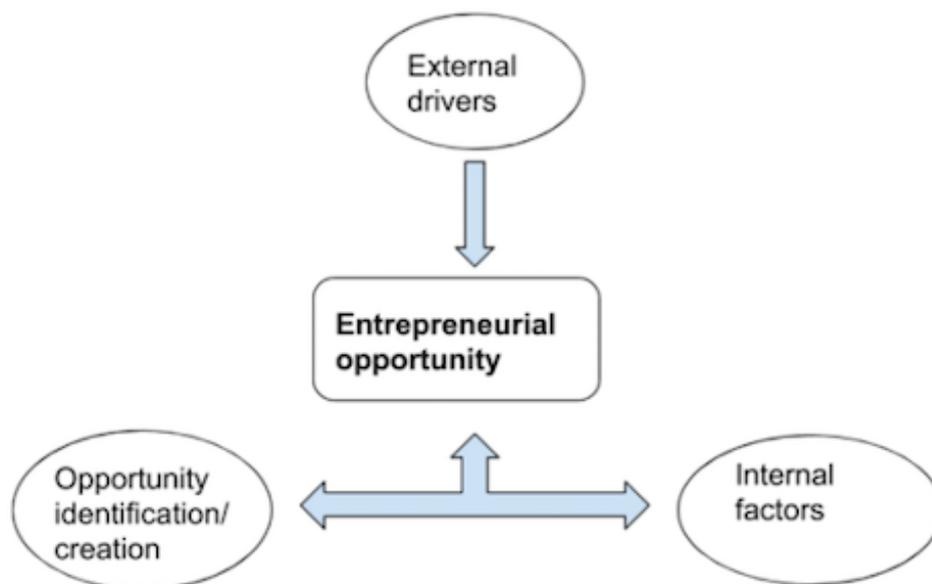


Figure 1. Research Framework

## 1.5. Research Structure

The study will contain a theoretical part and empirical part ending with conclusion and discussion. In the theoretical part I will introduce the concept of entrepreneurial opportunities and present different theoretical perspectives including characteristics of entrepreneurial opportunities, what forms of opportunities there are and elaborate on the process of opportunity identification.

In the following chapters I will review separately the drivers and factors that affect opportunity emergence and the drivers/factors that affect opportunity identification.

The empirical section contains interviews of 5 entrepreneurs. The section is divided in presentation of the entrepreneurs following with an analysis of the gathered answers. I will then make a cross-case analysis and discuss the prominent drivers and factors.

In the end I will draw final conclusions where the goal is to answer research problems and questions as well as possible. Finally I will discuss the thesis in general and present further research proposals.

## **2. The concepts of entrepreneurial opportunities**

### **2.1. What are entrepreneurial opportunities?**

The research of entrepreneurial opportunities has been growing rapidly for the past 10 years but the scholars still haven't had an agreement how to define entrepreneurial opportunities. One reason is that the scholars have approached the concept of entrepreneurial opportunities in variety of perspectives. (Hansen et al. 2007) Also Nerine et al. (2014) have the same conclusion that the field of this topic is fragmented but also empirically underdeveloped. One reason is that the topic of entrepreneurial opportunities has been discussed in many research fields. As Narine et al. (2014) stated: "insights on entrepreneurial opportunity identification research have been spread across diverse research areas".

The simplest form of an opportunity can be thought as a situation where an individual notices that another individual is willing to sell something for less than others are willing to pay. This gap enables the opportunity for an individual to profit by buying for less and selling for more. (Holcombe, 2003) In addition there are large amount of other definitions and here I will present few of them.

Scholars have defined entrepreneurial opportunities in following way:

Shane (2000) “Entrepreneurial opportunities are opportunities to bring into existence new goods, services, raw materials, and organizing methods that allow outputs to be sold at more than their cost of production.”

Grégoire & Shepherd (2012: 756): “Situations that are relevant for introducing new or improved products, services, or ways of doing business to better serve the needs of consumers in one or more markets.”

Dimov (2003: 412) “A perceived possibility of economic gain.”

Shane (2003): “a situation in which a person can create a new means-ends framework for recombining resources that the entrepreneur believes will yield profit”.

Sarasvathy et al. (2003) summarize entrepreneurial opportunities in three aspects:

1. “New idea/s or invention/s that may or may not lead to the achievement of one or more economic ends that become possible through those ideas or inventions”
2. “Beliefs about things favorable to the achievement of possible valuable ends”
3. “Actions that generate and implement those ends through specific (imagined) new economic artifacts (the artifacts may be goods such as products and services, and/or entities such as firms and markets, and/or institutions such as standards and norms).”

Because the relatively variant views and perspectives I'm not going to specifically limit the definition of entrepreneurial opportunities in only one. Especially in the empirical part I'm going to examine the opportunities and compare the definitions to my findings and how well they illustrate the opportunities.

To further examine the definitions we can see the possibility or belief of profit is an element that is present in most of these definitions. As a conclusion the opportunity can be a combination of many elements but profitability is the core.

Also opportunities are discovered/created which means the novelty of an opportunity to is a relevant aspect to discuss. Furthermore when discussing about the concept of “new means-end” The difference between entrepreneurial opportunities and other situations where people seek profit as entrepreneurial opportunities require a creation of new means-end and a new framework and not optimizing within an old one. (Shane, 2003) This could be understood that there has to be certain amount of difference to the old venture to be considered as a new opportunity. The exact point where something is considered as “new means-end” remains unclear.

Also to elaborate on the concepts, in this topic “ideas” and “opportunities” are different components. Ideas should not be misunderstood as an opportunity as opportunities require an individual to act upon the idea (Sarasvathy et al. 2003). Therefore ideas should be considered as a component that is a part of the whole process of identification and exploitation. For recap, idea becomes an opportunity when potential is identified and it is exploited.

More specific characterization of entrepreneurial opportunities have been made by Baron (2006). Entrepreneurial opportunities have three determining main characteristics and they are a) Economic value, b) newness and c) perceived desirability. Economic value stands for the ability to generate profit, newness is the novelty of a product/technology/service. Desirability means the moral/legal acceptability of the new product/service in society. Based on this an opportunity can be defined as a “perceived means of generating economic value that previously has not been exploited and is not currently being exploited by others”. This view represents Kirznerian school where opportunities are identified/discovered. Although an opportunity may be exploited in a specific place or market it can be new in other places and therefore can still be considered a new opportunity.

In a more theoretical perspective by Vaghely et al. (2010) entrepreneurial opportunities can be seen in two ways, subjective and objective. for some, entrepreneurial opportunity is objective; endogenous; discovered; exclusive;

centered on the entrepreneur and the way he processes information as an individual, albeit contextualized in order to develop knowledge. For others, it is subjective; exogenous; enacted; inclusive and social cognition based; centered on the entrepreneur, his information network and how information is shared in context within the network in order to develop knowledge. To add “opportunities” describe a range of phenomena that begin unformed and become more developed through time.” (Ardichvili, 2003). In the following table I have summarized the characteristics of these definitions:

Study	Opportunity	Objectivity	Value acquisition
Shane (2000)	New raw materials, services and organizing methods	Objective	Creation
Grégoire & Shepherd (2012)	New or improved services/products to serve markets and demand	Objective	Creation
Dimov (2003)	Possibility of economic gain	Subjective	Creation/capture
Shane (2003)	Recombination of existing resources for new means end	Objective	Capture
Sarasvathy et al. (2003)	New ideas that leads to valuable output, belief of things resulting in valuable output, actions that generate new valuable products or services	Subjective	Creation/capture
Holcombe (2003)	Gap between demand vs supply	Objective	Capture

Table 1. Opportunity characteristics summary

Even though the definitions vary a little the same core idea seems to be present in most of the definitions. The core element in all of these definition is unquestionably the possibility to make profit. The perspective what generates this profit varies. In

some definition it requires a creation of new product or services or just a recombination of existing resources. Other perspectives include purely a general idea that any possibility to make profit is an entrepreneurial opportunity. This can be seen in the figure as value acquisition column. It is possible to argue that the value can be either created or captured if the opportunity is sourced from existing resources.

As we can see the definition of opportunities depends on the perspective. In this thesis I will examine the concept of entrepreneurship from different angles and perspectives which means a liberal interpretation of these definitions. Although in the empirical section I can define the opportunities more deeply using these definitions and characteristics. Furthermore it is helpful to understand the concept of opportunities but in the end the more relevant questions are related to the emergence of opportunities and the identification of opportunities which will be the main chapters of this thesis.

## **2.2. Forms of opportunities**

Referencing the previous chapter the discussion about entrepreneurial opportunities can be quite philosophical when arguing about the definition and what it really is and what they are but in this section I will give more practical insight about what different forms entrepreneurial opportunities take in real life and how they can be categorized.

Shane (2003) have introduced 5 basic forms of opportunities based on Schumpeter's (1934) studies. Although these are valid in some cases, Shane admits the lack of research regarding different forms of opportunities.

Shane (2003) have categorized opportunities in 5 distinct forms and they are:

1. New products or services
2. New geographical markets
3. New raw materials
4. New methods of production

## 5. New ways of organizing

An example of a new product/service is for example a new computer software or new devices. Internet can be seen as a new way of organizing as it enabled remote control over activities. When a new product that existed in another country is exported to a new country it is an example of new geographical market. Oil is a good example of a new raw material that created multiple opportunities as an energy source. New methods of production are for example computer aided and more efficient production lines. (Shane, 2003)

### 2.3. Process of opportunity identification

The process of opportunity identification and entrepreneurial process in general have been illustrated in many ways and we will start with a simple one. In the next figure Long & McMullan (1984) have illustrated the process from identification to venture launch in a straightforward way with few variables and factors. At this point it is enough as I will elaborate on the different factors later.

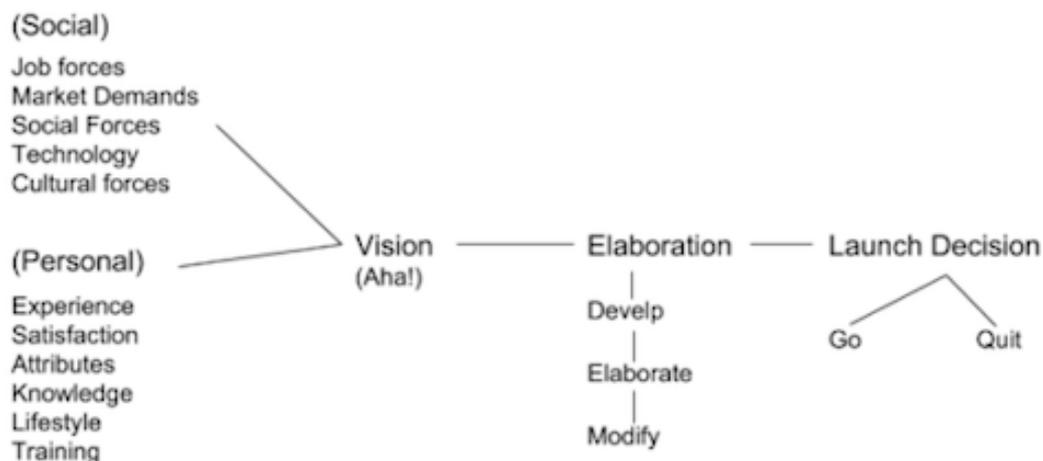


Figure 2. Opportunity identification as a creative process.

This figure illustrates the process in a way that the combination of personal/internal factors create the base for opportunity identification together with

social/external drivers. When the opportunity is identified the opportunity is exploited and as a result a venture will be either launched or discarded.

Caglio & Katz (2001) explains that the process is a combination of multiple personal, social, cultural and technological forces (Pre-vision) which together forms the base to identify an opportunity (Vision). The vision phase is actually an idea and not yet an opportunity. The elaboration of the idea then forms the opportunity if there is one. Long et al. (1984) has defined it in a sensible way:

"An elaborated vision of a new venture which involves a searching preview of the mechanics of translating the concept into a reality within an industrial setting."

In other words the idea becomes an opportunity after the entrepreneur has put the idea in a real world context with further thought. In addition the identification process has to be put in context of time. Question is does the identification happen in a single inspirational moment or does it occur over time. Long and McMullan (1984) suggest that identification happens as a process over time and not as a single moment. Although I disagree with this as I will present a case where opportunities can be identified in a single aha-moment, but still it doesn't exclude the fact that opportunity happen in the context of time. The question is how fast or slow can an opportunity be identified.

In addition to Long & McMullans model Baron (2006) has conceptualized the process of opportunity identification in a more specific way which puts the individual and individuals cognitive process in the center of the process. In this model Baron focuses on the individuals cognitive framework which is the core that processes information from external world and is constructed by individuals experience and knowledge. Already in this model we can see added complexity.

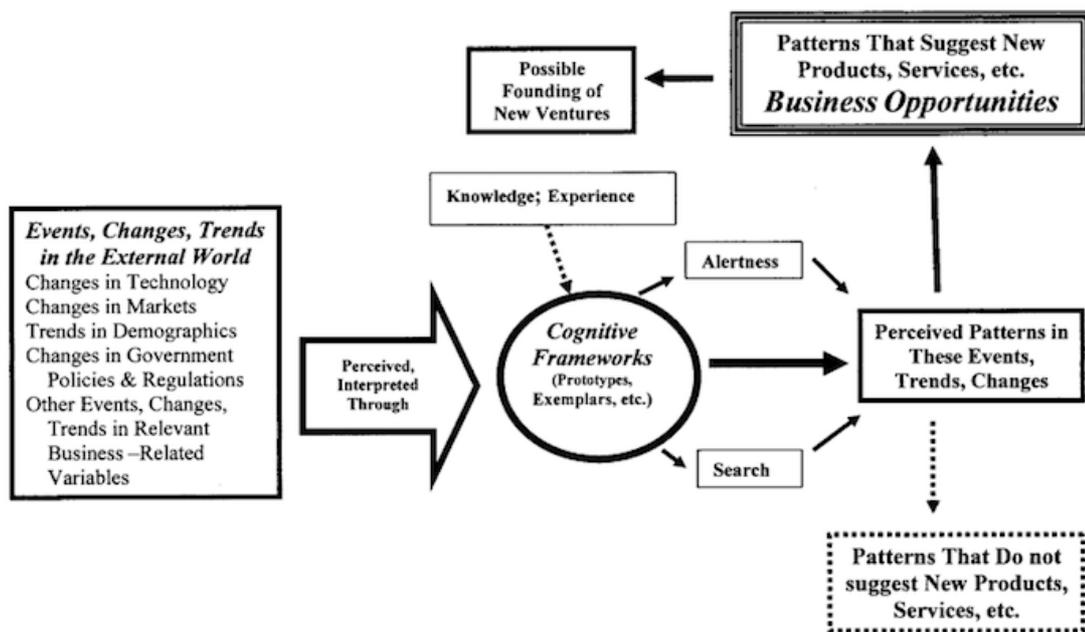


Figure 3. The potential role of pattern recognition in opportunity identification (Baron, 2006)

Barons framework is an illustration about the elements and factors that are included prior opportunity identification and how the process continues in different alternative paths depending on the combination of elements. Barons model differs from Long & McMullan model in individuals activity and especially how the cognitive framework is constructed. Here An individual either actively searches for the opportunity or the opportunity is identified through individual alertness which is absent in Long & Mullan model.

### 2.3.2. Opportunity Identification vs creation

There is basically two streams of ideas how opportunities come to exist or are identified. The philosophical question is whether opportunities exist prior identification or are they created by the action of individuals. (Vaghely 2010) This is why it is difficult to structure these concepts as they are overlapping. If we assume that opportunities exist prior identification we are talking purely about identification and separately about factors affecting opportunity emergence. If we assume that opportunities are created the identification process is considered as a

part of opportunity emergence when we have to combine identification elements and external elements of external factors that affect opportunity emergence. Still I will next introduce the two main perspectives of entrepreneurial opportunity characteristics.

These streams of research and perspectives are heavily affected by Kirzners (1973) and Schumpeters (1942) original studies. Schumpeter suggested that opportunities are “created” and does not exist before an entrepreneurs engages activities to create it. Kirzner in the other hand represents the “discovery” school. Discovery theory explains that entrepreneurial opportunities do always exist independently from the entrepreneur and that they are then discovered. In other words Kirzner and Schumpeter disagreed whether the existence of opportunity requires new information or only new ways to access the information. Basically an example of a kirznerian opportunity would for example a gap between demand and supply. If there is a high demand for a grocery store in a neighbourhood we could say that the opportunity exists and just needs to be discovered. An example of a Schumpeterian view is for example a new technical innovation, for example a smart phone with a touch screen which instead of answering a demand it created a demand for itself. When examining how the market setting is related the Kirznerian opportunities are a result of market disequilibria where supply and demand are pursuing to go in to balance. Schumpeterian opportunities in the other hand could be considered a catalysator that puts markets in to disequilibria which further creates Kirznerian opportunities. I will discuss the market perspective more in later chapters.

In the next figure these two theories have been divided based on Shane (2000) analysis:

**Schumpeterian (Creation school)**

Disequilibrating

Requires new information

Very Innovative

Rare

Involved creation

**Kirznerian (Discovery school)**

Equilibrating

Does not require new information

Less innovative

Common

Limited to Discovery

Schumpeter underlined that opportunities require new information and are innovative. In Kirznerian opportunities it is the opposite. Kirznerian opportunities are less innovative and doesn't require new information but rather finding existing information. Even though these two main perspectives are dominant, some scholars have argued that these two perspectives co-exists and just represent different types of entrepreneurial opportunities (Shane and Venkataraman, 2000).

Ardichvili et al. (2003) also attended this debate and argued that:

“While elements of opportunities may be “identified,” opportunities are made, not found. Sensitivity to market needs and as well as ability to spot suboptimal deployment of resources may help an entrepreneur begin to develop an opportunity (which may or may not result in the formation of a business).”

He continues that instead focusing on “opportunity identification” the more important perspective and concept is “opportunity development” because just identification an opportunity doesn't turn itself into a business.

For an alternative perspective Sarasvathy et al. (2003) has argued that identification and creation of opportunities represent only different types of opportunities in different setting rather than one being the only right theory. Both of these views are seemingly just representing two different settings for opportunities to emerge. The characteristic of equilibrating and disequilibrating opportunities is relative to Sarasvathys theory where opportunities are categorized by their effect which sources from market settings. If an opportunity emerges from a market gap, for example supply doesn't respond to demand, exploiting an opportunity to fill this gap brings equilibrium to the market. Also when thinking of disequilibrating opportunities it could be thought of as market being in equilibrium but a creation of a radical innovation can give such a big shock to the market it switches to disequilibrium and opens up room for equilibrating opportunities.

Sarasvathy et al. (2003) contributed to the debate and studied the aspects of how opportunities emerge or are found/created. They continued the discussion about creation vs discovery and elaborate on these two views by adding a third one. They identified three different views of opportunities and they are 1. Recognition 2. Discovery 3. Creation. In this theory opportunities are categorized in these three views based on pre-conditions for their existence and more specifically how demand and supply in the markets are present. Instead of focusing on individuals cognitive aspects this theory relies only on external market factors.

These views represent the mechanisms how opportunities are found based on how supply or demand is present. The possibilities are both of the sources (supply and demand) are present, only one source is present or non of the sources are. Next the views are explained in simple fashion.

*Recognition* happens when both of the sources (supply and demand) are present and the opportunity can be recognized. After recognition implementation takes place and a good example of this kind of situation is a franchise venture.

*Discovery*: Only one of the sources is present. It can be either lack of demand or lack of supply but the lacking source needs to be discovered. An example where demand exists without supply is for instance a cure for disease. An application for a new technology can be thought as a situation where supply exists but there is no demand.

*Creation*: No supply nor demand is present. This requires several inventions to become a breakthrough innovation for it to create a whole new market with new sources of demand and supply. A good example is the internet or a mobile phone.

The question is not which one of these views are right but which view explains the most specific way different conditions of uncertainty. In conclusion there has been theories that entrepreneurial opportunities can be discovered or created (Kirzner vs Schumpeterian view), other scholars debated that both of the views represent

just different types of opportunities (Shane & Venkataraman, 2000) but Vaghely, (2000) didn't deny these views he argued that both views can be happen individually but entrepreneurial opportunities can also be constructed and identified at the same time.

Sarasvathy (2003) has a good example that all three views can happen in the same context chronologically. When Starbuck was founded they first only sold coffee beans. After customers requested that they could taste the different brews Starbucks shifted to become a coffee house. After this it became possible to anyone open up a coffee house through Starbucks franchise. This is a good example how opportunities are created, discovered and identified in the same context but in different times. This leads to a conclusion that when thinking about opportunities in time context identification of opportunities can't happen without creation of an opportunity as the creation of an opportunity is the mechanism that leads individuals to identify or recognize multiple ends of means for the original opportunity with specific goals and vision. This process could be thought as following applications for a new innovation.

In conclusion Kirznerian view and Schumpeterian views differ in the way information and knowledge fits the process and is the driver of an opportunity in the external market setting or is the entrepreneur part of the opportunities emergence/creation. In Kirznerian view new opportunities require new ways to view existing information and in Schumpeterian view new opportunities require new information/ knowledge. Sarasvathy in the other hand sees opportunities as a product of market changes and settings which doesn't exclude previous theories but rather takes a step back and views both opportunity views in a bigger picture where both are possible.

Furthermore the identification process is a complex combination of cognitive factors. Vaghely et al. (2010) argue that "information processing is a dynamic combination of algorithmic and heuristic information treatment." and "entrepreneurs use a trial-and-error type of information processing for sensemaking and opportunity construction; this they combine with patterns of

information based on their experience to identify opportunities.” This goes deep in the cognitive behavior and as expected there are tremendous amount of complexity how human cognition work. In opportunity identification context a simple way to explain the process is that the individuals use previous knowledge, current information and combine them with previously constructed frameworks. This frameworks can then be used in future situations to recognize similar patterns to exploit new opportunities (Baron, 2006). Next I will elaborate on the two main mechanics how opportunities can be approached.

### **2.3.1. Search Process - Alertness vs active search**

In academic literature it is a common topic how the identification phase ought to happen through specific action. The question is whether the information that leads to opportunity identification is found through “systematic search” or through coincidence which in this case is addressed as “individual alertness” or “entrepreneurial alertness”. For clearance: “Alertness is the capacity to possess keen insights into identifying entrepreneurial opportunities” (Nerine et al. 2014). The concept of “alertness” was first presented by Kirzner (1973) meaning the ability of an individual to notice useful information that supports the construction of a framework for a new opportunity.

Next figure is an illustration by Gaglio & Katz (2001) which walks us through how the cognitive process:

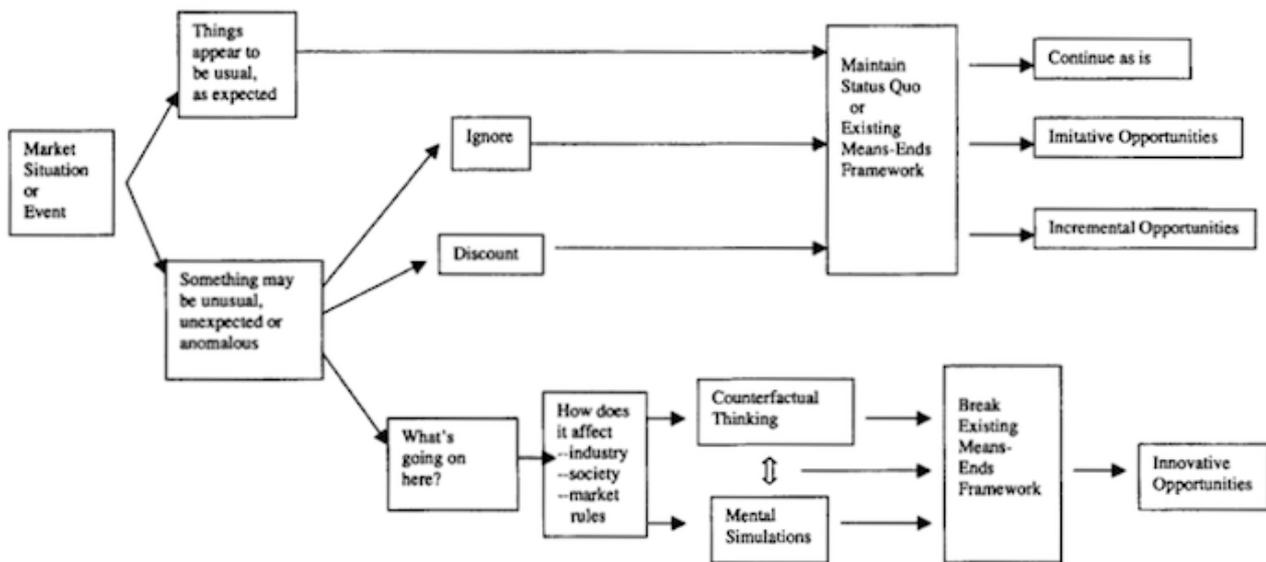


Figure 4. Alertness and the opportunity identification process

There are two main paths where an individual either identifies irregularities or not. These two paths lead to different kind of opportunities where identifying "irregularities" lead to innovative opportunities, which are in theory "created". The other stream of the process is when an individual doesn't identify new patterns it leads to other types of opportunities.

Gaglio & Katz (2001) Have underlined the importance of alertness and argue that "non-alert individuals fail to identify or create entrepreneurial opportunities because they misjudge their market environment and the kind of behavior demanded by the moment". Also Sarasvathy (2003) argued that whatever the situation is it requires individual ability and alertness to be able to identify opportunities in the first place. This can be understood that without individual alertness systematic search is not efficient. There has been some debate whether opportunities are found through systematic search or are they more spontaneous; a by-product of individual alertness. At the moment it can be said that both paths lead to opportunity identification but there are some empirical evidence to support the fact that systematic search increases the chances (Shane, 2003). Also Fiet et al. (2007) argue that systematic search for opportunities is a more effective way for discovering opportunities. Then again Vaghely et al. (2010) have taken a more

diplomatic perspective and argues that the key of successful identification is the ability to change between heuristic (alertness) and pragmatic (systematic search) perspectives because in different settings the other perspective works better than the other.

Still there is some good argumentation to support some of these conclusions Narine et al. (2014) discovered in their comprehensive article synthesis on the topic that there has been conceptual debate whether entrepreneurial opportunities are identified by systematic search or are they identified through individual alertness and they summarize their findings with a conclusions that there are very little empirical evidence to support any argument.

To illustrate the whole process I want to conclude this chapter with a fitting quote:

“in reality the process is like the collision of particles in the process of a nuclear reaction or like the spawning of hurricanes over the ocean. Ideas interact with real world conditions and entrepreneurial creativity at a point in time” Timmons (1999)

### **3. Drivers of Opportunity Emergence and Identification**

In this chapter I will focus on the two main elements of the research; the drivers and factors affecting opportunity emergence and identification. I will give insight where opportunities come from, what kind of settings generate opportunities and what are the main drivers that create opportunities. Previously we have assumed that opportunities can be “created” by an individual but in this chapter I will focus on the external factors and drivers that enable the setting for opportunities to be created or organically emerge to be identified.

The second part includes the elements that affect opportunity identification which helps us to answer the question why some people identify opportunities and others don't. I will review the current debate about which factors are considered critical in opportunity identification and can prominent factors be recognized and prioritized.

#### **3.1. External Drivers**

Normally when discussing about opportunity emergence scholars discuss about market changes that create the settings for opportunities but if the creation theory is considered also individuals can create the opportunities which again are not created by environmental factors. Like Holcombe (2003) addressed “Opportunities might arise as a result of the innovative activity of the potential entrepreneur, making the innovator the only one who is in a position to observe the existence of the opportunity.” I address the creation factors in later chapters and the focus of this chapter is the external forces and drivers.

Next I will be addressing how the market stages and cycle is a relevant aspect that work as a determinant factor but also as a variable factor in opportunity identification and emergence. After that I will present the drivers that create the environment for opportunities to emerge. In the third part I will elaborate on the specific aspects that ultimately is the reason opportunities come to existence as

change itself does not create opportunities but rather settings that generate opportunities. For elaboration environmental changes are the drivers that lead to information asymmetries and market gaps which then create opportunities. Information asymmetries and market gaps are examined in further chapters.

### **3.1.1. Market cycle**

Sarasvathy et al. (2000) introduced a perspective of neoclassical economy theory and its implication on opportunity identification. Sarasvathy argues, based on the theory of perfectly competitive markets, that when considering the allocative efficiency (which is achieved in perfectly competitive market) there are no opportunities when markets are in equilibrium because resources are optimally allocated. In the other hand perfectly competitive market works only in theory and in reality is always in certain level of disequilibria. When market goes to disequilibria opportunities emerge but also the market clears the imbalances and return to equilibrium relatively fast.

When considering discovery vs. creation perspective it is clear that market settings have an effect on what kind of opportunities emerge or are created and also how opportunities affect market balance. (Shane 2003; sarasvathy 2000) Market stage affects the setting in which opportunities emerge or are created but also the identification and creation of new venture affect the market development and again changes the setting and opportunity possibilities.

Based on this groundwork a cause and effect illustration can be drawn on how markets and opportunities behave:

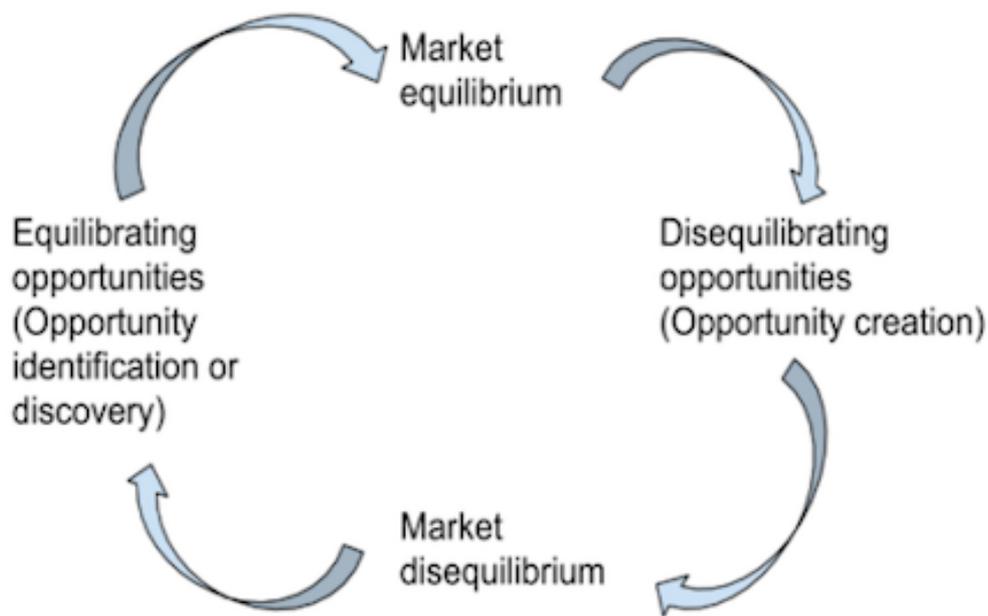


Figure 5. Market balance and opportunities

Market conditions provide settings for opportunities in two phases. When markets are in equilibrium small imbalances in demand and supply can create opportunities but the bigger source of opportunities are disequilibrating opportunities which are the result of radical and breakthrough innovations. Disequilibrated markets are then a fertile ground for multiple opportunities to be exploited as supply and demand are yet to be balanced. In other words opportunities are generated by market imperfections (Cohen & Winn 2007).

There are few examples and common strategies and activities how opportunities are exploited in different phases of market cycle and more specifically when different combination of demand and supply are present.

When the demand is high, economies of scale can be used to boost the value of opportunity. Then in a situation where demand exceeds supply, it creates possibilities to increase capacity (Drucker, 1985). Also in the situation where demand grows, the market grows with the customer base which will lead to creation of niche markets (Christiansen et al. 1996) and furthermore in

specialization of firms. (Geroski, 2001) Market size obviously has an effect and the larger market size the more opportunities emerge and firms are created. (Shane, 2003)

When considering schumpeterian and Kirznerian opportunities together with the market perspective is that opportunities and the markets are in two-way interaction with each other. It can be said that at the same time markets create opportunities but also opportunities affect markets. Although it is a matter of perspective it is still an important one. A very good argument by Holcombe (2003) addresses the dilemma of Kirznerian and Schumpeterian opportunities and their emergence. When markets go to disequilibria there should be a limited amount of opportunities to be identified and exploited and when entrepreneurs draw these opportunities from the limited “pool” of opportunities and eventually lead to equilibrium when all opportunities are exploited. But the main argument is that when an entrepreneur exploits an opportunity it can create new opportunities. So instead of thinking process as a simple cycle it is in fact a process where every identified opportunity can create its own cycle. In conclusion the markets, opportunity emergence and opportunity identification are in constant change which at the same time create and limit opportunities.

Now that the concept of market cycle and stage has been addressed we can proceed to the factors that affect the market setting and create the ground for opportunities to emerge and be identified.

### **3.1.2. The Main Drivers of opportunities**

In previous chapter I addressed how opportunities emerge in different market stages or force markets to change. Some drivers or factors put the markets in disequilibria but some drivers enable opportunities in theoretical equilibrium. In this chapter I will address more specifically the drivers that are behind these opportunities and changes.

There are several factors that generate opportunities and the shared aspect is that something needs to change or be acted upon (Holcombe, 2003; Shane 2003; Baron 2006). Understanding the drivers that push the market to a state which generates opportunities helps to answer one of the main research problems which is “where do opportunities come from?”. It is safe to say that this is a critical aspect of the entrepreneurial process and helps better understand the whole concept.

Like I stated before, there are limited amount of empirical evidence on this topic but in this specific issue there are some relevant studies. Bhide (2000) conducted an empirical study where he interviewed the founders of Inc. 500 companies (500 fastest growing companies in America) and the results were that half of the companies initiated their business venture in response to different external changes for example, technological changes, regulatory changes, fashion changes or other external factors. This was used as an example by Shane (2003) and based on this and other studies Shane have formed three main categories that lead to opportunity emergence and they are:

1. Technological changes
2. Political and regulatory changes
3. Social and demographic changes

The core idea is the efficient allocation of resources and the mechanisms how market changes create new opportunities and possibilities for new combinations of resources (Shane, 2003). For example before internet lots of resources were invested in telecommunications and when internet started booming more and more resources were re-allocated for example to web-applications. More novel example is the energy industry where more and more investments are moving to re-usable energy because the technology has developed enough to make the new energy form more efficient than older forms. Energy industry is also heavily affected by political and regulatory changes so in this case we can see opportunities can become existent also in combination of different changes.

There has been some evidence to support the argument that technology changes can be recognized as a source of opportunities but it is also argued that this proposal is not definitely a solid statement because there should have been a measurable increase in the quantity of entrepreneurs. (Shane, 2003). In general this is an issue hard to debate as there are no direct figures to measure so proxy measures has to be used. For example in Finland there were 250 gaming companies in 2014 and 70% were founded between 1999-2014. (TEKES, 2015) This fits the mobile boom and creation of application selling platforms which furthermore created potential opportunities. In this case it is quite easy to argue that the technology change in mobile phones accelerated the increase of companies found in gaming industry.

Political/regulatory changes are also an important source of opportunities. An example of regulatory changes are for example liberalization of monopoly which concretely opens the market and creates opportunities for entrepreneurs. Shane (2003) has pointed out that regulatory changes in general are sources of opportunities and not only deregulation. One good example of this is the new General Data Protection Regulation (GDPR) which forces companies to change their processes. But because it requires specific knowledge and know how to make the changes, services that provide consultant for this have emerged.

It is safe to say that any change, is a possible catalyst for entrepreneurial opportunities whether it is a regulatory change that creates a new market for everyone or a new extremely innovative technological breakthrough that is accessible only for the innovator. Also the size of a change does not matter. It was well pointed out by Casson (1982) who argued that information about local demand can lead to an opportunity as well as a technological breakthrough.

Holcombe (2003) has an alternative view to the drivers of opportunities. He argued that there are three sources of opportunities

1. Factors that disequilibrate the market
2. Factors that enhance production possibilities
3. Activities of other entrepreneurs

As we can see he has separated the factors that put markets in disequilibria and distinguished the factors that generate opportunities without disturbing the markets. Factors that disequilibrate the markets includes mainly environmental changes, like the change of customers preferences, change in weather which destroys crops which furthermore forces markets to adapt or declining of energy sources like oil that forces the market to create alternative solutions for energy production. Although Holcombe doesn't directly include technological change in this section he addresses it in other context.

The second group is the factors that increase or enhance production possibilities. Holcombe (2003) points out that factors that enhance production possibilities can also disequilibrate markets. In other words it can be said that technological development and technological change affect the schema differently. He uses microprocessors and the Moores Law as an example. Moores law states that the power of microprocessors will double in every 18 months. This is a big change in a short time which should disequilibrate the market but because it is common knowledge everyone is prepared for this change so we can say that it is not disequilibrating although it creates opportunities. Holcombe gives another example about production enhancing change and explains how Henry Ford created the assembly line in his car factories and can definitely be addressed as a technological change. This created opportunities for the company to increase the capacity of their production and re-allocate resources for other activities.

Holcombe (2003) argues that Entrepreneurial activity is the most important source and driver of opportunities and he states that "When an entrepreneur takes advantage of a previously unnoticed profit opportunity, this creates new profit opportunities, allowing other entrepreneurs to act, and the process continues cascading through the economy creating additional profit opportunities.". This is strongly linked in the market perspective. The argument indicates that

entrepreneurial activities create new opportunities which can in fact happen in every market stage. Holcombe uses personal computers and computer mice as an example. Computer mice and other pointing tools were created only after the personal computer was developed. So after creating the mouse and other input devices it opened up a new pool of opportunities like the creation of cordless mice.

We have now recognized that external factors such as technological, political and other drivers create the base for opportunities. The other factors include individuals actions where identifying and exploiting opportunities is the mechanism and driver that creates more opportunities. The later one in fact being the minor perspective and the first one being dominant. (Alvarez & Barney, 2007).

## **3.2. Internal Drivers**

Returning to the main research questions “why some people identify opportunities better than others?”. One perspective is that the pertinent information some people have and others lack is the main differential factor between individuals that affects the ability to identify or create opportunities. In other words prior knowledge and information are the prominent factors. (Shane, 2003; Kirzner, 1973) I will first address the general concept of knowledge and information in opportunity identification and after that I will focus on the sources of knowledge and information.

### **3.2.1. Knowledge and information**

In the following figure Shane (2000) has illustrated the relationship between prior knowledge and opportunity identification/exploitation. The model explains how prior knowledge firstly affects the ability to identify opportunities in the first place and secondly it also highly affects the decision whether the opportunity should be exploited or not.

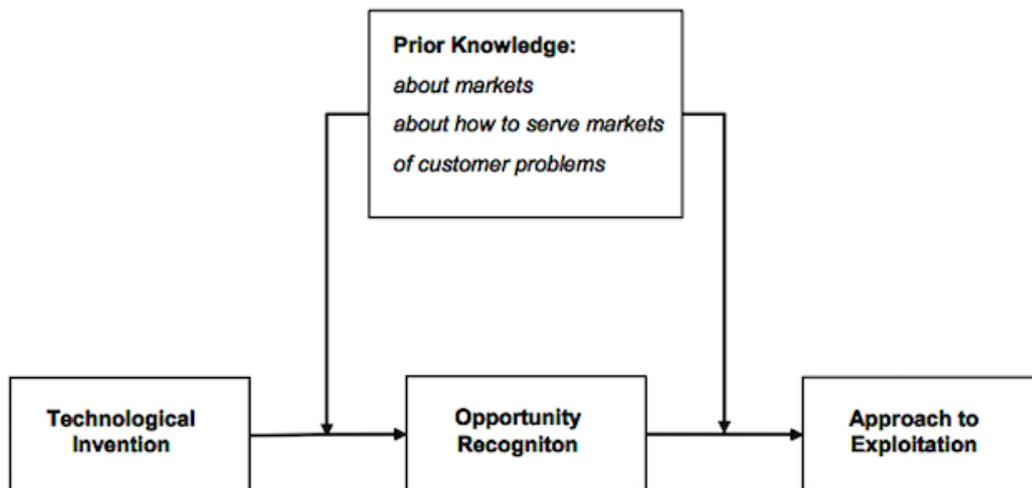


Figure 6. Conceptual model of knowledge

It is important to understand the difference of knowledge and information. Difference is that knowledge is considered “rich” information. This means knowledge is valuable information that is already applicable to decision making and action. Knowledge is further defined as follows: “information combined with experience, context, interpretation and reflection” (Vaghely, 2010). Therefore knowledge could be thought as superior but Hayek (1945) explained that information is divided in two types of knowledge; 1. scientific knowledge which is possessed by experts in their fields 2. Spread information that is linked to certain time and place which is then acquired by an individual and valued by the individual. This suggestion needs to be regarded when discussing the effect of education and randomly acquired knowledge and their effect on opportunity discovery. Vaghely (2010) also suggests that information reduces uncertainty and knowledge (rich information) is used to make sense of indistinct situations.

One could think that some information can be generally labeled more valuable than other and in some case it can be but it is difficult to reason before any results are achieved. Still it seems it doesn't matter if the information is from a new scientific breakthrough because equally potential can be information about local demand. (Shane, 2003; Casson, 1982) Other potential sources of information are

life experiences and especially job/work environments. (Venkataraman, 1997). Examples of access of information that opens an opportunity for an individual could be for example information that is acquired through his/her profession that is not public yet so it becomes a big advantage.

Referring to Sarasvathys (2003) theory of the three views of opportunity identification (recognition, discovery and creation) the information and its availability and distribution is the key factor that defines the identification of opportunities. (Vaghely et al. 2010) In the “recognition” setting information is perfect but unevenly distributed, in “discovery” setting information is imperfect and in “creation” setting the labeling factor is the absence of information.

The link between prior knowledge/information and opportunity identification/search process has been studied by Chandra et al (2009). They found out that the level of knowledge, in this case internationalization of a firm had an effect how the opportunities were found. Low level of knowledge tend to result in heuristic approach, in other words opportunity identification by alertness, while those who had a high level of knowledge in internationalization deliberately and actively searched for opportunities. It is interesting to examine how this proposal applies in the empirical part of this thesis.

### ***Absorptive capacity***

Prior knowledge works also as an facilitator to new information (Wesley et al. 1990; Shane 2000) and the absorptive capacity depends on individuals knowledge. Prior knowledge can be thought as an existing pool of information that widens the possibilities to process useful information that can lead to opportunity identification by combining old and new information. This is a general aspect and can be applied to many situations but one view is argued to be most important and that is knowledge about markets. Shane (2003) has studied this topic and found evidence in multiple research that individuals with superior market knowledge has higher ability to identify opportunities. In comparison with public information, different positions in the supply chain enable access to more private information that is once again considered as an advantage. For example a worker in a

company can acquire important information about current competitive situation or supplier can have a broad understanding of demand. Shane (2000) also found evidence that individuals with specific knowledge about certain area had higher rate to start a business in that area.

The significance of prior knowledge and information is addressed by all scholars. There are some variation which types of information and which sources of knowledge has bigger effect or which give a bigger advantage in opportunity identification. Next I will introduce the most common sources of information.

### **3.2.2. Sources of information**

The access of information is one of the core reasons why some people discover opportunities and other do not. According to Shane (2003) the general sources of knowledge and information are 1. Life experience (Jobs, education, other experiences etc.) 2. Social networks 3. Search processes.

#### **Life experience**

When discussing about life experience and what aspects have an effect on information accumulation and furthermore on the ability to identify opportunities the main factors that have empirical evidence are 1. Job functions 2. Number of jobs 3. Geographical mobility. In addition the variety of living experience is argued to have an effect on information and knowledge acquisition because the required knowledge for opportunity identification is constructed with pieces of different information and the variety and diversity of information increases the likelihood to acquire a missing piece of information required to identify a certain opportunity (Romanelli & Schoonhoven, 2001). Therefore it is possible to assume that any experience in life is a considerable source of useful information.

Jobs and job experience is a major source of information and knowledge that is used to identify entrepreneurial opportunities. Clearly some jobs and professions give a better premise to identify and discover opportunities. (Freeman 1982; Sane, 2003) For example research and development have been argued to give the

biggest advantage (Klepper et al. 2001). Shane (2003) concluded that in research and development people working specifically in development are more likely to identify opportunities. In the other hand like I addressed earlier Casson (1982) argued that information about local demand is as valid as a scientific breakthrough when considering information as the driver for opportunities. This is quite logical as it leans on the idea that information is valuable only in a suitable setting. Despite these arguments research and development most certainly gives access to information that others surely don't have and can lead to technological change which is one of the main drivers for opportunities.

Another example about advantageous jobs is marketing operations as marketing people are usually the first ones to get information about customer preferences (Johnson, 1986).

I want to underline the importance of customers as a source of information. Customers give relevant information not only about customer preferences but also it can be used to analyse current demand and supply.

As one could think diversity of life experience has a positive effect on the ability to identify opportunities. One explanation is that opportunity identification works more like a puzzle where pieces of information from different sources enable to identify a new opportunity (Shane, 2003). Therefore wide range of experience from different job functions and positions increase the chance to acquire relative information and furthermore are more likely to identify opportunities. This argument is backed with studies that show people with a higher number of jobs have higher rate for self employment (Evans et al 1989; Dolton et al. 1990).

The third aspect that increases the ability to identify opportunities through information acquisition is geographical mobility because people participating in multiple markets also have higher chance to access useful information (Shane, 2003). This argument is also backed with an empirical study (Davidsson, 2000) that shows evidence that people with higher geographical mobility has a higher rate of self employment.

**Knowledge of how to serve market:**

This in my opinion is one of the most advantageous types of knowledge an individual can acquire because this includes deeper knowledge about demand and customer needs. For example what products could be introduced to the market, how a product should be distributed, what resources are needed and how to supply them are questions and dilemmas which immediately gives an advantage to an entrepreneur if one has acquired knowledge on this matter. Also knowledge about customer needs and problems are important part that has a big effect on how an individual understands customers and how to serve them (Von Hippel, 1988). This kind of information affects individuals construction of new means-ends and especially understanding on production and organization (Shane, 2000).

There is also empirical evidence that previous jobs are the most common source of knowledge that leads to opportunity identification. (Cooper et al. 1990; Shane, 2000) This is quite understandable as establishing a business that is related to previous knowledge obviously has a positive effect on the success as the individual already has experience how this area of business works.

### **Social Networks:**

Social networks are one of the three main sources of information and works as a facilitator for entrepreneurs to identify opportunities (Shane, 2003). Social networks consist relationships between individuals and these relationships consist of three elements (Zimmer, 1986) which are:

1. Communication content, or the passing of information from one person to another
2. Exchange content, or the goods and services that can be exchanged
3. Normative content, or the expectations individuals have of one another because of some special characteristics or attribute

Zimmer also presents the concept that determines the strength of these relationships or “ties” and the strength can vary between weak and strong. The

factors that affect the strength of the ties are the level, frequency and reciprocity of the relationship. All these factors can be assess in the weak-strong scale.

Other important factors Zimmer has focused on are the characteristics of networks and he has divided them in three categories which are:

1. Density
2. Reachability
3. Centrality

Zimmer has explained these factors in following way:

Density: *“The extensiveness of ties between persons and is measured by comparing the total number of ties present to the potential number that would occur if everyone in the network were connected to everyone else.”*

Reachability: *“The presence of a path between two persons, of whatever distance. Persons can be ranked by how many intermediaries a path travels before on person is indiretly linked with another.”*

Centrability: *“Centrality of a person in a network is determined by two factors: The total distance from a focal person to all other persons, and the total number of other person a focal person can reach”*

One of the main reason social networks are important in opportunity identification is that its the main source of private information. Also the main aspect that influences the efficiency of the social network is the diversity of social ties and the wide variety of people in the network (Zimmer, 1986). It is understandable that the more people there is in a network with variety of expertise and connections the more diverse information one can acquire.

Social network and ties seems to be one of the main sources of knowledge because all the previous sources of information fall in to the social network category. Previous jobs are social networks where individuals acquire information and previous education also includes the social ties with teachers and peers. Knowledge on how to serve markets sources from interaction with customers or information from people who have acquired information on how to serve customers. Only exception is if an individual innovates a new product in his own and identifies the opportunity for example from his own need of a better product. One example is the Finnish product Lever Axe (<http://www.leveraxe.com>) wich was created from the inventor's own need for a better axe. This opportunity was not sourced directly from information acquired from social network and ties.

## **4. Research Methods**

In this section I will assess the the empirical research methods and strategy for data collection. The main goal is to try to find answers to the research questions by interviewing entrepreneurs from different areas of business with different backgrounds.

### **4.1. Methods and data collection**

This study is a qualitative research and more precisely a case study with exploratory and descriptive research elements. The main objective in exploratory research is to find out 'what is happening'; to seek new insights; to ask questions and to assess phenomena in a new light (Robson, 2002). Yin (2009) describes the process that "investigates a contemporary phenomenon in depth and within its real-life context". In exploratory perspective I'm going to reflect the topic of entrepreneurial opportunities and also review the phenomenon of processing entrepreneurial opportunities. Robson also describes that the object of descriptive studies is to 'portray an accurate profile of persons, events or situations'. In

practice this is used to describe the research topic and this I will use to describe the theoretical perspective of the topic.

In the empirical section I will interview 5 Case companies/entrepreneurs with a semi-structured question set to collect data for the analysis. From the data I will pick the factors that are discussed in the theory basis and also bring up additional factors and aspects if found important or had major effect on the process of the case companies practices.

The main goal is to recognize the prominent factors that affected the identification of an opportunity. Furthermore focus is on a question that are some factors present in all cases and is there any similarities in external factors compared to the opportunities and overall setting prior opportunity identification.

The interviewees were carried mainly via telephone and face to face. The interviews lasted in average for 30 minutes. Anonymity was requested in some cases so I decided to anonymize all cases for impartiality.

## **4.2. Background of entrepreneurs**

### *Entrepreneur A*

Entrepreneur D has an MBA degree and after graduation he entered work life for few years. The first job was in a bank and in customer service department where was responsible first in sales and then customer service. The second job was in a multinational finance company where he worked as a key account manager. In this position Robocop was responsible for big international customers. Third job was in a global insurance company where he continued as a key account manager. After the insurance company Robocop became an entrepreneur. Entrepreneur D knew already when he was a student that he wants to become an entrepreneur and had interest in it. Right after graduating he felt he wasn't ready for entrepreneurship until after few years in work life. The company he founded provides a specific service for film production companies in the final stages of production. The

company has already operated for few years and has passed the growth stage and has captured the open market.

### *Entrepreneur B*

Entrepreneur B has a masters degree in mechanical engineering. Previously he had two different jobs where he acquired experience in engineering design companies. Both of these jobs were during his masters studies and he worked part time. In the other job he worked as a factory operator where he got experience on production. In the other job he acquired knowledge on engineering design in a corporate environment. Entrepreneur B formed the idea of entrepreneurship when he was a student. After graduation he started to search for a possible business opportunities and he actually had an idea of a product he designed. The company he founded provides purely engineering design services. At the moment he is provides the services in consultancy basis. Entrepreneur B has operated for 2 years.

### *Entrepreneur C*

Entrepreneur C didn't originally have a higher degree when entering work life. Later during one of his job he got a degree in business. First jobs were entry level positions in marketing and sales. He worked in multiple companies in marketing/sales department. At the same time he developed his all around skills in marketing and also specifically graphical/visual design skills. Later he acquired a job as a graphic designer where he got the majority of his experience and professional knowledge in graphic/visual design and more importantly a broad understanding on all areas of the company's operations. At this position he got a big amount of responsibility crossing many departments including marketing, sales, project management, logistics, HR etc. The company he founded provides marketing concept services varying from website design to commercial clips and social media marketing. Entrepreneur C has operated only for 1 year growing his operations in moderation.

### *Entrepreneur D*

Entrepreneur D doesn't have a higher degree and started his career as an entrepreneur in high school. He is a very experienced software coder and the knowledge and know how he acquired in his own practice and refined it through his social network of other coders. The first company founded was a game development company which wasn't his idea but rather the other partners. After trying developing games they started to develop B2B software for example web-pages, e-mail services and intranet solutions. Entrepreneur D then started couple of different ventures. First one was also B2B software company and the second was an independent computer data center. The company he founded provides multiple IT solutions varying from IT resources to different software products. The company consists of few people who together develop new products and services consistently. The company has operated for a decade but some operations has been fused with other companies in the process.

#### *Entrepreneur E*

Entrepreneur E has a BBA degree and started his business when he was still a student. His only experience in work life has been two different summer jobs in sales and marketing. First job was in a multinational everyday product firm and the second company was a marketing/sales consulting company. Later he entered software business. Although entrepreneur E didn't have any work experience in software business he had an interest in technology and IT which started many years before. In the first job he acquired the knowledge how big enterprises work and also how the end phases of sales process happens. In the last summer job he acquired knowledge and knowhow on the first phases of sales process. The position also gave him an access to very scarce information and knowledge about the specific software market. The company he founded provides a specific software for sales processes. The company has operated for 2 years and is entering a fast growth stage.

Every entrepreneur in this case had very different paths and backgrounds which I consider a very good thing for this research as this was the exact goal to find variable settings and draw conclusion based on different cases and connective factors. Summary of the background can be seen in table 2.

	Entrepreneur A	Entrepreneur B	Entrepreneur C	Entrepreneur D	Entrepreneur E
Job positions in total	3	3	10	0	2
Job positions related to business	0	3	4	0	2
Official education related to business	No	Yes	Yes	No	Yes
Prior knowledge on how to serve markets	No	Limited	Yes	Yes	Limited
Plan to become an entrepreneur before opportunity identification	Yes	Yes	Yes	Yes	No
Area of business	Film industry	Engineering and design	Marketing/visual design	Software	Software

Table 2. Background summary of entrepreneurs

## 5. Empirical Findings

In this section I have collected relevant information regarding how the entrepreneurs have identified the opportunity, what are the prominent internal factors affecting opportunity identification and what were the external drivers that enabled the opportunity.

### 5.1. Search Process and Identifying the Opportunity

This section contains the answers regarding the event of identification or creation of the opportunity. I will also include the search process in this chapter although it could be considered as an internal factor. The goal is to gather data on the process and characteristics of the different cases to help to answer, if possible, the question “which are they key factors affecting opportunity identification?”

#### *Entrepreneur A*

Entrepreneur A found two businesses almost at the same time. The first opportunity he identified was definitely luck and there was no active search for entrepreneurial opportunities. Robocop was reading a newspaper and noticed a small article about liberalization of a monopoly:

*“It was literally pure luck as I was enjoying my morning coffee and reading Kauppalehti (Finnish economic newspaper). I noticed an article about liberalization of a service in film industry. I immediately called the original monopoly company and asked about the details. After realizing the opportunity was real I founded my company almost the same day”*

In this case the government decided to liberate the monopoly which opened the market and giving the information out very quietly. Robocop identified the

opportunity immediately and acted upon it. We could say that Robocop created the supply as there was no regulation or competition/supply on the market.

### *Entrepreneur B*

Entrepreneur B is the only entrepreneur in this thesis who became an entrepreneur but didn't have a specific idea about business opportunities beforehand. He actively searched for opportunities from different perspectives. Entrepreneur B started to study entrepreneurship in his own time and after a while he got an idea of a specific product. It was a classical aha-moment when he discovered deficiency in a very specific product category:

*"I quit my job and basically started innovating. My goal was to create and design a new useful product. I brainstormed for some time and had few ideas which in the end weren't that good or were already patented. The last product or opportunity sourced from my own need of a better product. It was a specific gadget for guitar players and I developed it for some time. In the end there were too many obstacles to commercialize it."*

Entrepreneur B exploited the opportunity and developed the business idea and product design but came to conclusion that that the business opportunity is not profitable. After the discarding the first project he got an idea to provide his expertise in consultancy basis. He didn't remember the specific moment when he got the idea of become engineering design consultant. When he discarded the first project he decided to apply for jobs as he was out of business ideas and didn't identify any new opportunities. But as soon he started to search for jobs he identified the possibility to sell his know how as a consultant which would be much more profitable so he changed his plan and instead for applying for a job he sent offers as a subcontractor.

### *Entrepreneur C*

Entrepreneur C worked in his last job as a graphic designer and was responsible of other operations in the final months. Entrepreneur C didn't actively search for an

opportunity and in his opinion wasn't even too alert about opportunities. According to rocky he slowly started to understand that there is an opportunity:

*"While working in my last position I slowly constructed the idea of entrepreneurship and especially regarding the opportunity identification. I started to notice deficiencies in the production of our subcontractors to which we outsourced some of our marketing operations. Gradually I constructed the idea of providing these services myself with a better concept. Eventually I identified the demand and need for better services in terms of production and delivery"*

It took some time to construct the idea and link all the puzzles that eventually lead to the opportunity identification. This is opposite to Entrepreneur A as the he identified the opportunity in an instant without any prior framework while the other was constructed slowly in time. The first signals leading to identification of the opportunity were the information about how the subcontractors provide their services. The company outsourced some of the marketing projects and Rocky was many times responsible for the collaboration between the firm and the service providers. Entrepreneur C started slowly to develop a deep understanding how the service should be provided for better results and noticed that there is definitely a need for improvement for the these services. The combination of understanding the specific demand and lack of supply with accumulated knowledge Entrepreneur C realized it is a profitable opportunity that should be exploited.

#### *Entrepreneur D*

Entrepreneur D first founded a company with his friends in high school and the idea was to make computer games. The company was founded more in a hobby perspective and developed games for fun but in the same time had the possibility to sell these games. Only later he identified the potential in B2B software when internet started to become the network we know today. At the time when they started to develop for example email-services and websites there was not demand because it was such a new market and people were still trying to figure out what internet will become. Basically Entrepreneur D and his partners created the demand by developing new web solutions and were selling them before there

even was any demand. Entrepreneur D wasn't sure what was the exact moment when he identified the opportunity and actually said that every business venture he has founded was a result of general development and opportunities sourced from the development and innovation:

*"I never actively searched for opportunities and always had an approach that developing new solutions provides potential commercialisable products and services as by products. Everything started as a hobby. First we developed games which in the end was too early for the developing and small markets. Later we started to develop different B2B solutions and some of them became profitable and some were put back in the shelf. All solutions I have developed and created have been more of enabling pieces and tools that open up more opportunities which can be combined or used in future development and ventures."*

Entrepreneur D underlined the importance of entrepreneurial alertness or mindset. He said that the more development and tools you have in the "tool box" the more ready you are when an opportunity arises. This view was also underlined by entrepreneur A and what they have in common compared to the other three entrepreneurs is the longer experience as entrepreneurs.

#### *Entrepreneur E*

Entrepreneur E underlined that he didn't have any plan of becoming an entrepreneur in the first place and wasn't searching for business opportunities. He was working in a company where they used a specific software in everyday use. The company had problems with the software which resulted in very inefficient use of time:

*"It wasn't too long on the position when I realized deficiencies in the software which we were using in the company. I understood quite fast how the software should be developed to give a huge efficiency boost for the users. Meantime I researched the market and found out that the competition was almost non*

*existent. This was kind of the last piece of information which turned the idea in to an opportunity”*

Entrepreneur E didn't have prior knowledge of the specific area of business but he discovered the opportunity by noticing the deficiencies while using the product and eventually by discovering a gap between demand and supply. The process of identification happened relatively fast and was more like an “aha”-experience.

Only in two cases the entrepreneurs deliberately searched for opportunities which was rather surprising. In the other hand the importance of entrepreneurial alertness was underlined in the theoretical framework so as we can see it was present in almost every case. I wanted to add the innovation element in the search process because it can be count as an approach to find or create an opportunity. In three cases innovation was a part of the opportunity identification.

Search process	Active search	Alertness	Innovation
Entrepreneur A		x	
Entrepreneur B	x		x
Entrepreneur C	x	x	
Entrepreneur D		x	x
Entrepreneur E		x	x

Table 3. Summary of the search process

## 5.2. Internal factors

In this section I have gathered answers from the entrepreneurs regarding their internal factors that could have affected the identification of the opportunity. These factors which I'm going to map includes prior education, prior knowledge in general, work experience and other factors if relevant. I will also include the entrepreneurial mindset in this section as it can be also regarded as an internal factor in addition that it is related to the search process category. The findings from this section provides the final needed elements and factors to possibly draw conclusions to answer the first research question.

### *Entrepreneur A*

In this case most of the theoretically prominent factors didn't apply. The knowledge Entrepreneur A acquired was from the finance and key account management positions and the knowledge had no crucial role in the identification of the opportunity. Also the social networks had no role in the identification of the opportunity. The main factor was the critical information acquired from a newspaper and the his cognitive framework which was sensitivity for opportunity identification in this case.

*"To be honest my experience and knowledge acquired from previous jobs didn't help me at all when I identified the opportunity. I didn't utilize my social network or anything like that. It was pure luck and I feel that the alertness and motivation to seize an opportunity if one occurs was the reasons I identified it. Still I feel like social network is the number one source and enabler of opportunities"*

Entrepreneur A still agreed that the experience and education definitely have had influence in his thinking and how he understands business but didn't directly affect identification of the opportunity. Although entrepreneurial mindset can be thought as a part of the search process entrepreneur A still underlined that from internal factors entrepreneurial alertness or entrepreneurial mindset had the biggest effect.

### *Entrepreneur B*

In entrepreneurs B case the first and most effective factor was that he very actively searched for an opportunity. But what affected his cognitive framework and ability to identify opportunities are heavily related to his specific knowledge in engineering:

*"I believe that my education and knowhow in engineering was the key factor when I started to develop and innovate new products and finally identify opportunities. Also the knowledge about engineering processes acquired from my previous jobs*

*had an effect on the identification. Im really not sure what were the reasons I identified the opportunity to become an engineering design consultant.”*

Clearly the professional know how on research and development of engineering projects were the prominent factor. This includes prior education and work experience in a specific field of expertise.

#### *Entrepreneur C*

Entrepreneur C felt that the most important factors that affected his ability to identify the entrepreneurial opportunity he pursued were life experience in general, job experience and knowledge/knowhow acquired through his life:

*“I think the whole journey through different jobs and life experience in general affected my ability to identify the opportunity. I acquired so much knowledge from different areas which kind of helped to build my entrepreneurial mindset and understanding of business which then lead to the identification. I think that all pieces of information and knowledge have been important regarding my ability to identify opportunities. The degree in business helped me to acquire specific knowledge in business but also my father was little bit of a mentor to me”*

Entrepreneur C acquired lots of information and knowledge through his job experience but also from his other social ties in which he brought up his family and especially his father. In this case prior education didn't have that much effect, although later during his last job he acquired a degree in business which helped him with certain skills to operate a venture. Also during his last job he acquired the needed knowledge on how to serve markets as he learned the majority of the processes in the company and especially the marketing processes which was the main reason he identified the opportunity.

#### *Entrepreneur D*

Entrepreneur D is a very skilled and experienced coder and programmer. Compared to the other cases he didn't feel that a school degree would matter

because he could acquire all skills needed in entrepreneurship in his own and through his social networks.

*“My ability to identify opportunities is mostly based on my technical know how and skills combined with my social network. I feel that a degree in programming and software development would just be a slow down. The information about potential opportunities mostly come from being in touch with my social network. Also the experience as an entrepreneur develops the entrepreneurial mindset which is one of the most important internal factors an entrepreneur can have.”*

Entrepreneur D continued about the irrelevancy of a degree by saying that is mainly an industry specific factor. Clearly the most prominent factors are the knowledge acquired through his own development projects and his social networks.

#### *Entrepreneur E*

Main internal factors that played an important role in the opportunity identification was the knowledge about customer needs and also a certain understanding how markets in general works regarding supply and demand. To a certain point he felt that his prior education had an effect on his ability to identify the opportunity but in the end the information acquired from his job was the main factor:

*“The most important factor was definitely the experience I acquired from my last job position. I acquired knowledge about specific sales operations and how the softwares support these operations. I would say that this was the main factor I identified the opportunity. Of course studying business helped me to understand the opportunity better because it actually became a real opportunity when I noticed the gap between supply and demand. In general I feel that it helps to understand how markets work so knowledge about business and economics definitely helps in every area of entrepreneurship.*

In this case job experience and knowledge in business and economics can be identified as the key factors that enabled the opportunity identification.

All of the cases were different and the presence of prominent factors varied. Although in some cases a factor was the critical one in other cases they were totally irrelevant. Still on factor was considered to be important in almost every case and it is the “entrepreneurial mindset”. Also job experience was strongly present in 3 cases. Education and more specifically higher education had a major effect only in one case and moderate effect in two cases. Social networks were agreed to be important or very important in every case although it had a big impact on opportunity identification only in two cases.

	Job experience	Education	General life experience	Social networks	Market knowledge	Entrepreneurial mindset
Entrepreneur A						x
Entrepreneur B	x	x				
Entrepreneur C	x	x	x	x	x	x
Entrepreneur D			x	x	x	x
Entrepreneur E	x	x				x

Table 4. Summary of internal factors

### **5.3. External drivers and sources of opportunities**

#### *Entrepreneur A*

Entrepreneur A case is exceptional and a good case to study regarding external factors. In theoretical perspective political/regulatory change acted as a driver that put the market in disequilibrium and the opportunity emerged in that exact moment. Furthermore leaning on neoclassical economy theory when market goes into disequilibrium it fixes itself quickly back to equilibrium and this case is a prime example how fast the gap between demand and supply can be filled. It was basically the same day the information about the liberalization became public.

#### *Entrepreneur B*

In Entrepreneur B case Shanes (2003) model general drivers doesn't apply that well because entrepreneur B was the innovator in the first opportunity and was basically creating the opportunity by innovating. In the consultant business the opportunity was simply a gap between demand and supply as there was more demand for engineering designers than there was providers. So in the end the opportunity emergence in this case can be explained purely as a byproduct of developing market where demand and supply was in disequilibria.

#### *Entrepreneur C*

According to entrepreneur C the market in his business is highly competitive and supply and demand are both on a high level. The market can be divided to couple of clear segments which are the big enterprises where marketing budgets are in millions and the second group is the smaller companies which is the majority and there is not as much competition as the biggest competition is about the big customers. Although there was already a wide range of service providers he did notice a shortage in the supply. His previous company outsourced some projects and entrepreneur D noticed that many service providers couldn't answer the demand as nimbly as they should have. In theoretical framework the emergence of

the opportunity was driven by the change of a growing market where new customer segments and needs were emerging.

#### *Entrepreneur D*

The first legit venture on B2B software market was an interesting case as the internet world was only starting to grow. Entrepreneur D said that they basically had to create the market and demand as there was very little internet service providers and also the demand was very limited because firms didn't have knowledge or awareness about internet services in general. Although the opportunities were created from his own projects still the effect of technological change is a critical part of the opportunity emergence because the technical development has been rapid in terms of what is possible to create with different standards in different times. In this case the entrepreneurs actions was a driver of opportunities but in addition it is important to include the general technological change as the technological standards have been developed rapidly which means the more developed technological standards become the more opportunities it creates.

#### *Entrepreneur E*

The market was in a stagnant situation as basically one provider had acquired the whole market. The situation was almost a monopoly like as competitors had very limited chance to compete. One reason for low competition or low supply could be that the market was relatively new and only few companies have entered the market. In theoretical perspective technological change was a driver that affected the The software gave an advantage to customer companies which lead all the firms to incorporate the same tool.The other factor was high technological threshold which was mainly because the innovation was new and it takes time for companies to replicate a service. In a nutshell the market leader made an a breakthrough innovation and acquired the market while creating the demand and supply. After this Rocky exploited the opportunity to respond to unanswered demand which formed from the lack of competition and supply.

	Entrepreneur A	Entrepreneur B	Entrepreneur C	Entrepreneur D	Entrepreneur E
Level of market disequilibrium	High	Low	Low	High	Medium
Market stage	New market	Mature market	Growing market	New market	Stagnant market
Demand vs supply	High demand / No supply	High demand / Limited supply	High demand / High supply	Limited demand / Limited supply	Steady demand / Low supply
Other drivers	Political change	-	-	Technological change	Technological change

Table 5. Summary of external factors

The first perspective I want to address is the market perspective. Is the market in balance or in heavy disequilibria. In two cases the market were in under heavy change. First one was the liberalization of a market which literally opened a full market for competition. The second one was the forming market of IT solutions where technological development was extremely fast and effective which resulted in heavy disequilibria where demand and supply were just starting to grow. In other cases the markets were already exploited but still open for opportunities. In case C the marketing business was growing steadily and was already large which means new opportunities will emerge as new sub-segments form inside the market. In case E the market was almost a monopoly because of the lack of competition. Still there was demand for a better product which in the other hand required high level of technical know how and knowledge on how to serve markets which was the reason why there were no competition.

In three cases Shanes (2003) model of main drivers (1. Technological change 2. Political and regulatory change 3. Social and demographic change) could be identified. In cases B and C the theory couldn't be used as the opportunities didn't directly belong in any of these categories.

## **5.4. Summary**

The cases examined were definitely useful and gave insight how different things affect in different settings and individuals when identifying and finding entrepreneurial opportunities.

Based on these cases it is possible to make some conclusions but the sampling is too small to make solid arguments.

The sampling was surprisingly variable and all the cases differed a lot from each other, which in this case was a positive thing. The wide variety of how the entrepreneurial process progressed in each case gave good insight of different possibilities and settings and some insight on which factors and drivers are important in specific cases and settings.

Few things that already were addressed in the theory part got confirmation. Basically all prominent factors were present at least in one of the cases. From internal factors life experience, job experience and accumulated knowledge were important factors in most cases that enabled the opportunity identification. Social networks wasn't that significant in these specific cases but the general opinion among the interviewees were that social networks have been critically important in their later ventures and opens doors to multiple opportunities.

The concept of time is important to underline in the theory of opportunity identification. This is generally not discussed in the literature but Ardichvili (2003) addressed the fact how opportunity identification happens in time and based on my findings the process can be very slow or very quick. From some theories it is possible to assume that the identification phase is an instant "aha!"-moment but it

can rather be a very slow process where it is even hard to pinpoint when the opportunity was identified.

External settings do matter in some cases but in other cases the reason one identifies an opportunity can be driven by internal factors, like the motivation to work for themselves or the general entrepreneurial mindset that is affected by social environment. In some cases external settings provide an aha-moment and an opportunity like in case case A but for example in case C the market was saturated and the opportunity required deeper understanding of how to serve the market to acquire the needed competitive advantage to enter the market.

Market changes and development can create openings and gaps between demand and supply or create new markets that furthermore create new opportunities. Scarce information is also important element because if an individual has access to information that others don't it can be a huge competitive advantage and an exclusive opening for an opportunity. If there are no external factors that create the foundation for opportunities then it is possible to create an innovation that will in the same time create a demand for it and a new market with more opportunities which happened in case D.

The market condition varied in all cases. In case A market went from perfectly closed market to a perfect disequilibrium which opened multiple possibilities for opportunities. In case C the market was relatively saturated but like Christiansen et al. (1996) argued; when markets become large enough niche segments are created which then spawns opportunities and new demand to supply.

In these cases one form of opportunity has not been addressed in the literature and it is becoming a consultant. The change from being an inhouse professional and selling the accumulated knowledge seems to be an opportunity that always exists. Only thing that changes is the employee-employer relationship which changes to a customer-service provider relationship but in practice the operational level can be very similar depending on the contract. This is important to discuss because it is a legit form of entrepreneurship but lacks characteristics of common theories and definitions.

Based on this study it is impossible to say that one theory is valid in every case. What is possible to conclude is that every case varies so much that it is very hard to build a general guidelines or a model to illustrate a winning formula for successful entrepreneurial process or what factors are clearly more effective than others. Rather it is clear that many different factors can be important in some cases and very irrelevant in other cases.

If some individual factors should be chosen I would say that the entrepreneurial mindset, variable information sources combined are the foundation of opportunity identification. There could be the most profitable opportunity in front of an individual with all the required information but the opportunity could be ignored because of the alien thought of entrepreneurship.

In theoretical framework education was also stated as an important source of information that helps in opportunity identification. It is possible to say that education has effect on the entrepreneurs ability to identify opportunities and start a business but not in all cases. Based on the findings education is especially relevant if the expertise is used in the same area of business. For example doctors doing medical innovations or mechanic engineers designing new production devices. Then again in case A it seemed that education didn't have anything to do with the identification of the opportunity

#### **5.4.1. Opportunity characteristics**

The opportunities in these cases were different from each other in definition and when reflecting theory. Some of the opportunities were purely Kirznerian and others Schumpeterian, meaning others emerged because of external market drivers and others were created. Considering the definitions of "entrepreneurial opportunity" the most fitting to all cases was from Grégoire & Shepherd (2012: 756):

“Situations that are relevant for introducing new or improved products, services, or ways of doing business to better serve the needs of consumers in one or more markets.”

When discussing more specific forms of opportunities Shane’s (2003) categorization of opportunities (1. New products or services 2. New geographical market 3. New raw material 4. New methods of production 5. New ways of organizing) applied fully in two cases which included the creation element of an opportunity.

In case A the opportunity that emerged from liberalization of a monopoly was a great example of the opportunity identification that didn’t require any innovation or creation. Nothing new was basically created, only the market gap was filled because there were no immediate suppliers who could serve the markets because of information asymmetry. Same applied to cases B and C. For comparison case D clearly was more of a schumpeterian opportunity including almost all forms of opportunities. Case E was interesting because it consisted elements from both main vies. It included identification of a market gap but also creation/development of a improved product to a certain point. This was an important example because based on this it is possible to say that one opportunity can have elements from both views.

In case B the original opportunity was to create new products to serve market which requires innovation and falls in the opportunity creation category. Although a venture was not founded, the final opportunity was again the market gap between supply and demand and a better way to serve markets. This falls mainly in the opportunity identification category. It is possible to think that it was also a new way to serve the market as he offered a new way to organize firms resources. Reflecting Shanes model, the original opportunity was clearly categorized as a new product but the later one doesn’t fit to the Schumpeterian view.

The opportunity in case C was similar to case B. The opportunity was the demand and customer needs that he identified. Furthermore it was more of a new way to serve markets so at the same time the opportunity has both of the characteristics of created opportunities and identified opportunities in terms of value capture and creation. Using Shanes characterisation the opportunity was to a certain point a new method

Opportunities in case E were clearly more characterised by the innovative aspect and creation of new products and services which didn't have clear demand at the time. Especially when he wasn't sure about the possible profitability he still believed that innovation leads to good products and services that can become profitable. The opportunities fall in to many categories of Shanes model. The opportunities were primarily new products and services but also has the characteristics of a new way of production and a new way of organizing.

In case E the opportunity was the need for better products and services in the markets. One way to think the opportunity is that there was a lack of understanding on how to serve the markets and customers. This can be put in to both creation and identification categories. The demand was present but with no clear specifics so innovating was required to make a product that could at the same time answer and create demand. Using Shanes characterization the opportunity was partly a new product/service with some resemblance of new production methods and ways of organizing.

Opportunity	Entrepreneur A	Entrepreneur B	Entrepreneur C	Entrepreneur D	Entrepreneur E
New product or service				x	(x)
New geographical markets				x	
New raw materials					
New methods of production			(x)	x	x
New ways of organizing				x	
Schumpeterian vs Kirznerian	Kirznerian	Kirznerian	Kirznerian	Schumpeterian	Kirznerian/Schumpeterian

Table 6. Elements from Shanes model

In the previous table I have illustrated which opportunities had elements that could be categorized with shanes opportunity forms. In case C and E it is arguable if the opportunities could be categorized in this figure so I have added them as an option.

It seems that the more innovation and creation an opportunity requires the more elements of opportunity characteristics from Shanes (2003) mode are present. This could be explained by creation theory where new created opportunities requires changes in multiple aspects of the business including the product, service and processes. The explanation would be that this model has the view of Schumpeterian opportunities where opportunities require innovating and are more results of creation than just identification.

When examining the elements and characteristics of these opportunities it can be said that all the opportunities had elements of Kirznerian opportunities meaning

the opportunity emerged from external factors and drivers and only in two cases there were clear creation elements. I have illustrated this in the following table.

Opportunity	Entrepreneur A	Entrepreneur B	Entrepreneur C	Entrepreneur D	Entrepreneur E
Kirznerian	x	x	x	x	x
Schumpeterian			(x)	x	(x)

Table 7. Kirznerian and Schumpeterian characteristics

#### 5.4.2. Importance of the search process

Every case differed from each other and it is already safe to say that opportunities can be found through entrepreneurial alertness and active search. I have examined the process how the entrepreneurs approached the opportunities. Was it an “aha”-moment, a result of a long active search or something between. I also try to make conclusions which approach is more important in terms of successful opportunity identification.

I also want to address the time element in the identification process. As Ardichvili (2003) stated the opportunities has to put in the context of time. It is an important element and helps to understand how the opportunities were found/constructed/created.

Entrepreneur A didn't have any prior knowledge about the business field and was purely identified from a peace of public information. We could argue that an active search for this specific opportunity would have been impossible because at the moment when he acquired the information it was the same moment when the opportunity emerged as the market didn't exist prior identification. Also an important characteristics was that it was a real “aha”-moment which happened in seconds. Entrepreneur B was an exception and he actively searched for opportunities but it is arguable if the opportunity was found because of the active

search or in the end because he was alert for opportunities. In case C the opportunity was rather identified through alertness than through active search. Also in this case it took a long time to construct the idea and put together the pieces that lead to the identification of the opportunity. In case D the entrepreneur didn't actively search anything but rather work on random projects of interest and if he noticed there was an opportunity to sell something or build a venture he took it. Some of the opportunities were the result of a long development we can say that it took a long time to create the opportunities. Some of the opportunities in the other hand were constructed with previous inventions and the process to put together the pieces of inventions to create a new opportunity didn't take that long. Entrepreneur E identified the opportunity purely via alertness and didn't even consider entrepreneurship before identifying the opportunity. The time to identify the opportunity wasn't purely an "aha"moment but didn't take that long compared to cases B or C.

In the next table I have illustrated the search process of these cases based on their characteristics:

Search process	Entrepreneur A	Entrepreneur B	Entrepreneur C	Entrepreneur D	Entrepreneur E
Alertness	x	x	x	x	x
Active search		x			
Identification process time	Short	Long	Long	Short/Long	Short

Table 6. Search process

An important notification was made in this section; if an opportunity doesn't exist beforehand it is impossible to actively search from them. These opportunities need alertness and the right cognitive framework to identify them when the required external factors enable the opportunity. When examining opportunities which have creation elements it is hard to determine if the innovation process counts as

search for an opportunity or is the mechanism more of an identification of the opportunity after a new product or service is created.

#### **5.4.4. Knowledge and information**

In this section I will examine the relevant knowledge and information factors in these cases. I will address how private and public information had an effect in the identification process. In addition I will examine how education affected the opportunity identification process and more specifically was the official education more relevant than knowledge acquired through entrepreneurs hobbies/interests.

Based on this study I will argue that knowledge and information was very critical in all cases in different ways. Information can be divided in to private and public information and in these case both could be found to be important regarding opportunity identification/creation. In case A public information was the key factor that made it possible to identify the opportunity. No other factor had a major effect. In Entrepreneur B case the private information acquired through job positions were important but the most important factor was his education in mechanic engineering as the opportunity was based on his expertise in engineering.

In case C the information acquired from his job positions can be categorized as private information and was a critical factor regarding opportunity identification. Entrepreneurs C also acquired critically important part of his knowledge and knowhow from his hobby and interest in visual design and production. In entrepreneur D case the major factor was his hobby and interest in computers and programming. This was the cornerstone of the opportunity identification. It was also clear that he acquired supporting information from his social network which can be categorized as private information. In case E the major factor was private information acquired from his job position combined with public information.

I have illustrated the factors in the following figure:

Knowledge and information	Entrepreneur A	Entrepreneur B	Entrepreneur C	Entrepreneur D	Entrepreneur E
Private information		x	x	x	x
Public information	x				(x)
Education relative to opportunity		x			
Hobbies relative to opportunity			x	x	

Table 7. Knowledge and information factors

Based these cases it is safe to say that private information was the major factor in 4 out of 5 cases. Only case a was founded solely with public information. Other cases required private information to construct the understanding of the situation that involved an opportunity. It seems that it doesn't matter how the know how and expertise is acquired. A good example is entrepreneur D. He doesn't have any official education and acquired his skills through his hobby in programming.

#### 5.4.4. Main drivers and factors

All in all different factors and drivers were relevant in each case. It is impossible to put them in order of importance but I will summarize every case in the following figure:

	Internal factors	External drivers
Entrepreneur A	Public information, alertness, luck	Market liberalization creating a new market
Entrepreneur B	Education, active search, alertness	Demand over supply
Entrepreneur C	Private information, knowledge, alertness	Need for better service
Entrepreneur D	Innovation, knowhow, alertness	Technological change creating new markets, supply and demand
Entrepreneur E	Private information, knowledge, alertness	Monopoly like market with limited supply, demand for better products

Table 8. Summary of main drivers and factors

As we can see every case was quite different from each other. It also shows the complexity of the whole subject and this could explain the lack of empirical research on this field. It is possible to state that all these factors and drivers can be critical in terms of opportunity identification or emergence but none of them can be said to be important in general. Although it is possible to argue that some of the factors and drivers have bigger effect than others. For example alertness for opportunities or “entrepreneurial mindset” can be argued to be more effective than active search because basically it is impossible to identify an opportunity through active search if an individual can’t put the required pieces together to identify the opportunity.

## 6. Conclusions and discussion

This study examines the drivers and factors affecting opportunity identification and emergence. The research field has been widely studied from many perspectives but has been mainly theory building and theoretical debate (Nerine et al. 2014). Also more specific questions regarding the prominent factors and drivers of entrepreneurial opportunities are lacking empirical research, for example which drivers provide more opportunities or how does the search process affect opportunity identification. (Nerine et al. 2014; Shane 2003)

The main goal was to give more insight on which factors and drivers really are prominent regarding opportunity identification and emergence. The study was based on theoretical review which was then compared with empirical findings.

After reviewing the theoretical framework of entrepreneurial opportunities and the identification process it is the complexity of the whole concept that labels the research problems and discussion. Also the variety of studies and multiple perspectives on this topic reflects itself the complexity of the concept. There are so many variables when examining reality that it is reasonable to argue that there should be as many theories as there are entrepreneurs as all variables change in every case. Also because of the cognitive factors it is also quite challenging to address prominent and generalizable factors that could be said to have the biggest effect.

This study makes it clear how complex the concept of opportunity identification and opportunity emergence is, not to mention the drivers and factors behind them. None of the theoretical frameworks explained all the cases alone so multiple perspectives had to be used to define the cases and to explain different elements. There are possibly two explanations for the lack of generalizable model: either it needs more empirical research or the concept is too complex to generalize. I cant portray my conclusions better than Timmons (1999):

“in reality the process is like the collision of particles in the process of a nuclear reaction or like the spawning of hurricanes over the ocean. Ideas interact with real world conditions and entrepreneurial creativity at a point in time” .

## **6.1. Theoretical contributions and implications**

The whole theoretical framework is constructed basically with two streams of theories which source from Schumpeters (1942) and Kirzners (1973) theories. It has been recognized that both streams of theories explain specific opportunities which have different premise. Schumpeterian view argues that opportunities are created and Kirznerian view argues that opportunities emerge from markets and are then identified. In later studies for example Sarasvathy (2003) had good examples how opportunities can be identified and created at the same time. This was also confirmed in one case where an opportunity was partly identified and partly created.

Regarding the search process Gaglio & Katz (2001) argued that entrepreneurial alertness is one of the most important factors in opportunity identification and based on these cases it got confirmed. It seems that without alertness and sensitivity to opportunities it would be hard to identify any opportunities even if the opportunities are searched actively.

It was challenging to determine prominent drivers that affect opportunity emergence and factors that affect opportunity identification and one reason is the fragmentation and heterogeneity of the research field. This was underlined by Nerine et al. (2014).

Shane (2003) argued that different external changes are the drivers of opportunities. This view explained some of the cases but not all. In 3 cases it is possible to say that the markets were more or less in stagnant mode and the opportunity was purely a market gap between demand and supply. Holcombe (2003) in the other hand underlined the effect of entrepreneurial action which firstly creates an opportunity that furthermore creates more opportunities as a by-product. This was confirmed in one case.

The importance of knowledge and information was underlined by many scholars (Shane, 2003, Vaghely, 2010, Venkataraman 1997, Baron 2006). It is clear that

knowledge and information are the foundation that enables opportunity identification. Some more specific conclusion had been made by scholars regarding the importance of different sources of information and knowledge. For example Shane (2003) article synthesis he found out that superior market knowledge is an advantage in opportunity identification. This is self explanatory but doesn't always apply. For example case A the entrepreneur didn't have any prior knowledge about the market. For conclusion I want to underline the fact that information is valuable only in a suitable setting. Information cant be used if other required pieces are missing.

Social networks has been argued to be an important factor in opportunity identification because they can provide critical and required information for identification (Zimmer, 1986; Shane, 2003). It is interesting that in all cases social networks didn't have a big role in these specific cases but the more experienced entrepreneurs underlined that one of the main sources of opportunities are the social ties/social networks.

## **6.2. Limitations and directions for further research**

Both external factors and internal factors can work as drivers for opportunity emergence/creation either individually or as a combination. It would be interesting to study the relationship more and determine which drivers and factors provide more opportunities. Also as it was underlined by many scholars, the topic needs more empirical research to better understand which drivers and factors are prominent or is it even generalizable.

This study was limited to only 5 cases to get a general understanding how well the theoretical frameworks explain the process in practical level. Next it would be interesting to approach the research questions with bigger sampling and in quantitative way. This is essential to make any solid arguments and conclusions considering the research questions.

# References

Alexander Ardichvili, Richard Cardozob, Sourav Rayc (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing* 18 (2003) 105 – 123. Available at: <http://www3.uma.pt/filipejmsousa/emp/Ardichvili%20et%20al.%202003.pdf>

Sharon A. Alvarez, Jay B. Barney (2007). Discovery and creation: alternative theories of entrepreneurial action. *Organizações em contexto*, Ano 3, n. 6, dezembro 2007. Available at: [http://www.econ.mpg.de/files/2005/egpsummerinst05/papers/salvarez-discovery\\_and\\_creation.pdf](http://www.econ.mpg.de/files/2005/egpsummerinst05/papers/salvarez-discovery_and_creation.pdf)

Barbaroux P. (2014) From market failures to market opportunities: managing innovation under asymmetric information. *Journal of Innovation and Entrepreneurship* 2014 3:5. Available at: <https://innovation-entrepreneurship.springeropen.com/articles/10.1186/2192-5372-3-5>

Robert A. Baron (2006). Opportunity Recognition as Pattern Recognition: How Entrepreneurs “Connect the Dots” to Identify New Business Opportunities. *Academy of Management Perspectives*. February, 104-119. Available at: [http://www.chsieh.com/uploads/4/4/7/9/4479813/how\\_entrepreneurs\\_connect\\_the\\_dots.pdf](http://www.chsieh.com/uploads/4/4/7/9/4479813/how_entrepreneurs_connect_the_dots.pdf)

Bhide, A. (2000), *The Origin and Evolution of New Businesses*, New York, US: Oxford University Press.

Caglio C.M (1997). *Advances in Entrepreneurship, Firm Emergence and Growth*, Volume 3, pages 139-202. Available at: [https://www.academia.edu/16609725/Opportunity\\_Identification\\_Review\\_Critique\\_and\\_Future\\_Directions](https://www.academia.edu/16609725/Opportunity_Identification_Review_Critique_and_Future_Directions)

Caglio & Katz (2001). The Psychological Basis of Opportunity Identification: Entrepreneurial Alertness. *Small Business Economics* 16(2):95-111. Available at: [https://www.researchgate.net/publication/5158064\\_The\\_Psychological\\_Basis\\_of\\_Opportunity\\_Identification\\_Entrepreneurial\\_Alertness](https://www.researchgate.net/publication/5158064_The_Psychological_Basis_of_Opportunity_Identification_Entrepreneurial_Alertness)

Casson, M (1982). *The Entrepreneur*. Totawa, NJ, US. Barnes and Noble books.

Christiansen, C. and J. Bower (1996), 'Customer power, strategic investment, and the failure of leading firms', *Strategic Management Journal*, 17,197-218. Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.461.7572&rep=rep1&type=pdf>

Cohen, B., & Winn, M. I. 2007. Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22: 29-49. Available at: <https://www.sciencedirect.com/science/article/pii/S0883902605000571>

Dolton, P. G, Makepeace. (1990) Self Employment Among Graduates. *Bulletin of Economic Research*, 42(1), 35-53. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8586.1990.tb00290.x/abstract>

Eandal G. Holcombe (2003). The Origins of Entrepreneurial Opportunities. *The Review of Austrian Economics*, 16:1, 25–43, 2003. Available at: [http://www.gmu.edu/depts/rae/archives/VOL16\\_1\\_2003/2\\_Holcombe.pdf](http://www.gmu.edu/depts/rae/archives/VOL16_1_2003/2_Holcombe.pdf)

Evans, D. L, Leighton. (1989). Some Empirical Aspects of Entrepreneurship. *American Economic Review*, 79, 519-35. Available at: [http://www.edegan.com/pdfs/Evans%20Leighton%20\(1989\)%20-%20Some%20Empirical%20Aspects%20Of%20Entrepreneurship.pdf](http://www.edegan.com/pdfs/Evans%20Leighton%20(1989)%20-%20Some%20Empirical%20Aspects%20Of%20Entrepreneurship.pdf)

Fiet, J. O. 2007. A prescriptive analysis of search and discovery. *Journal of Management Studies*, 44: 592-611. Available at: [https://www.researchgate.net/publication/236843165\\_A\\_Prescriptive\\_Analysis\\_of\\_Search\\_and\\_Discovery](https://www.researchgate.net/publication/236843165_A_Prescriptive_Analysis_of_Search_and_Discovery)

Freeman, J (1982). Organizational Life Cycles and Natural Selection of Processes. Research in Organizational Behavior, 4, 1-32.

Geroski, P. (2001), 'Exploring the niche overlaps between organizational ecology and industrial economies', Industrial and Corporate Change, 10(2), 507-40.

Grégoire, D. A., Barr, P. S., & Shepherd, D. A. (2010a). Cognitive processes of opportunity recognition: the role of structural alignment. Organization Science, 21(2), 413–431. Available at: [https://mycourses.aalto.fi/pluginfile.php/417876/mod\\_folder/content/0/Gregorie%20et%20al%202010\\_OrgSci\\_Cognitive%20Processes%20of%20Opportunity%20Recognition%20The%20Role%20of%20Structural%20Alignment.pdf?forcedownload=1](https://mycourses.aalto.fi/pluginfile.php/417876/mod_folder/content/0/Gregorie%20et%20al%202010_OrgSci_Cognitive%20Processes%20of%20Opportunity%20Recognition%20The%20Role%20of%20Structural%20Alignment.pdf?forcedownload=1)

Hayek (1945). The use of Knowledge in Society . The American Economic Review, Volume 35, Issue 4, September 1945, 519-530. Available at: <http://home.uchicago.edu/~vlima/courses/econ200/spring01/hayek.pdf>

Hansen, D. J., & Shrader, R. 2007. Opportunity: An 11-letter word. Paper presented at the 2007 Babson College Entrepreneurship Research Conference, Madrid, Spain. Available at: <http://digitalknowledge.babson.edu/fer/vol27/iss17/3/>

Ireland, Hitt, Sirmon, (2003). A Model of Strategic Entrepreneurship: The Construct and its Dimensions. Journal of Management 2003 29(6) 963–989. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1342534](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1342534)

Kirzner, I. (1979). Perception, opportunity, and profit. Chicago: University of Chicago Press.

Kirzner, I. M. (1973). Competition and entrepreneurship. Chicago: University of Chicago Press.

Kirzner, I., 1997. Entrepreneurial discovery and the competitive market process: an Austrian approach. *J. Econ. Lit.* 35, 60 – 85.

Klepper, S. S, Sleeper. (2001) Entry By Spinoffs. Working Paper. Carnegie Mellon University, USA.

Long, W., & McMullan, W.E. (1984). Mapping the new venture opportunity identification process. In J.A. Hornaday, F. A. Tardley, J.A. Timmons, & K.H. Vesper (Eds.), *Frontiers of entrepreneurship research* (pp. 567-591). Wellesley, MA: Babson College.

Nerine Mary George, Vinit Parida, Tom Lahti, Joakim Wincent (2014). A systematic literature review of entrepreneurial opportunity recognition: insights on influencing factors. *Int Entrep Manag J* (2016) 12:309–350. Available at: <https://link.springer.com/article/10.1007/s11365-014-0347-y>

Romanelli, E. and K. Schoonhoven (2001), 'The local origins of new firms', in K. Schoonhoven and E. Romanelli (eds), *The Entrepreneurial Dynamic*, Stanford, US: Stanford University Press, pp. 40-67.

Sarasvathy, N. Dew, S.R. Velamuri and S. Venkataraman (2003). Three Views of Entrepreneurial Opportunity. Z.J. Acs and D.B. Audretsch (eds.), *Handbook of Entrepreneurship Research*, 141–160. Available at: [http://www.effectuation.org/wpcontent/uploads/2016/06/three\\_views\\_of\\_opportunity-1.pdf](http://www.effectuation.org/wpcontent/uploads/2016/06/three_views_of_opportunity-1.pdf)

[Schumpeter, J. \(1942\). \*Capitalism, Socialism and Democracy\* \(5th ed.\). London: Allen & Unwin.](#)

Shane, Scott (2003). *A general Theory of Entrepreneurship: The Individual-Opportunity Nexus*. Edward Elgar Publishing Limited, Cheltenham, UK.

Shane, S. (2000). "Prior knowledge and the discovery of entrepreneurial opportunities." *Organization Science* 11: 448-469.

Shane, Venkataraman (2000). Entrepreneurship as a field of research: a response to Zahra and Dess, Singh and Erikson. *Academy of Management*, 26(1), 13-16.

Ivan P. Vaghely, Pierre-André Julien (2010). Are opportunities recognized or constructed? An information perspective on entrepreneurial opportunity identification. *Journal of Business Venturing* 25 (2010) 73–86. Available at: <http://www.isihome.ir/freearticle/ISIHome.ir-23012.pdf>

Shane, S., Venkataraman, S., (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review* 25, 217–226

Shane, S. (2000). "Prior knowledge and the discovery of entrepreneurial opportunities." *Organization Science* 11: 448-469.

Short, Ketchen, Shook, Ireland (2010). The Concept of "Opportunity" in Entrepreneurship Research: Past Accomplishments and Future Challenges. *Journal of Management*, Vol. 36 No. 1, January 2010 40-65. Available at: [http://journals.sagepub.com/doi/abs/10.1177/0149206309342746?](http://journals.sagepub.com/doi/abs/10.1177/0149206309342746?journalCode=joma)  
[journalCode=joma](http://journals.sagepub.com/doi/abs/10.1177/0149206309342746?journalCode=joma)

Stevenson, H.H., Roberts, M.J., Grousbeck, H.I., (1985). *New Business Ventures and the Entrepreneur*. Irwin, Homewood, IL.

TEKES, 2015. 5 Facts about startups in Finland. Available at: <https://www.tekes.fi/en/funding/startup/startup-in-finland/>

Timmons, J.A., 1999. *New Venture Creation*. Irwin McGraw-Hill, Boston, MA. U.S. Bureau of the Census, 2000a. *America's Families and Living Arrangements: March 2000*. U.S. Bureau of the Census, Washington, DC. *Current Population Reports*, Series P. 20-537.

Venkataraman (1997). The distinctive domain of entrepreneurship research: An editor's perspective. *Advances in Entrepreneurship, Firm Emergence, and Growth*, 3, Greenwich, CT, US: JAI Press, pp. 119-38. Available at:

[https://www.researchgate.net/profile/Sankaran\\_Venkataraman/publication/228316384\\_The\\_Distinctive\\_Domain\\_of\\_Entrepreneurship\\_Research/links/0c96052e7ccb98aa7e000000/The-Distinctive-Domain-of-Entrepreneurship-Research.pdf](https://www.researchgate.net/profile/Sankaran_Venkataraman/publication/228316384_The_Distinctive_Domain_of_Entrepreneurship_Research/links/0c96052e7ccb98aa7e000000/The-Distinctive-Domain-of-Entrepreneurship-Research.pdf)

Von Hippel (1988). *The Sources of Innovation*. Oxford University Press, New York, US. Available at: <http://web.mit.edu/evhippel/www-old/books/sources/Sofl.pdf>

Wesley M. Cohen; Daniel A. Levinthal (1990). Absorptive Capacity: A New Perspective on Learning and Innovation *Administrative Science Quarterly*, Vol. 35, No. 1, Special Issue: Technology, Organizations, and Innovation. (Mar., 1990), pp. 128-152. Available at:

<http://links.jstor.org/sici?sici=0001-8392%28199003%2935%3A1%3C128%3AACANPO%3E2.0.CO%3B2-5>

Zimmer, C. (1986). Entrepreneurship through social networks. *The art and science of entrepreneurship*. Ballinger, Cambridge, MA, 3-23. Available at:

[https://s3.amazonaws.com/academia.edu.documents/32500636/Aldrich\\_and\\_Zimmer\\_entshp\\_thru\\_social\\_networks\\_1986.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1517577812&Signature=SsB%2BE1Wx3%2FV442aRTwxY8Rxtelo%3D&response-content-disposition=inline%3B%20filename%3DEntrepreneurship\\_through\\_social\\_networks.pdf](https://s3.amazonaws.com/academia.edu.documents/32500636/Aldrich_and_Zimmer_entshp_thru_social_networks_1986.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1517577812&Signature=SsB%2BE1Wx3%2FV442aRTwxY8Rxtelo%3D&response-content-disposition=inline%3B%20filename%3DEntrepreneurship_through_social_networks.pdf)

# Appendices

## Appendix 1.

Following questions worked as a base for the interview and we carried out a free conversation depending on the case which factors were important to discuss.

1. Prior education
2. Prior work experience (number of positions/ventures and years)
3. When did you decide you want to become an entrepreneur
  - Prior or after opportunity?
4. What was the opportunity you recognized
5. Was the identification an aha-moment or more of a slow construction of an idea over time.
6. Was the opportunity search systematic and intentional or unintentional and coincidental
7. Where did the idea come from
8. How was supply and demand present on the markets prior identification

\* Put below factors in order (most important first regarding opportunity identification):

- Knowledge
- Luck
- Social networks
- Job experience
- Life experience
- Rare information

- Favorable market setting
- Entrepreneurial mindset