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MASTER'S THESIS

AN INVESTIGATION ON REASONS OF STARTUP FAILURE: THE ROLE OF ENTREPRENEUR

BURCU IŞIKTAŞ

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Submitted by: **Burcu Işıktaş**

Approval of the Graduate School of Social sciences, Çankaya University

Prof. Dr. Mehmet YAZICI
Director

I certify that this thesis satisfies all requirements as a thesis for the degree master of Social sciences.

Prof. Dr. Mete DOĞANAY
Head of Department

This is to certify that we have read this thesis and that in our opinion it is adequate, in scope and quality, as thesis for the degree of master of social sciences.

Assist.Prof. Dr. İrge ŞENER
Supervisor

Examination Date: 15 September 2015

Examination Committee Members:

Prof. Dr. A. Kadir VAROĞLU (Başkent Univ.)

Prof. Dr. Mete DOĞANAY (Çankaya Univ.)

Assist.Prof. Dr. İrge ŞENER (Çankaya Univ.)

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Name, Last Name: Burcu IŞIKTAŞ
Signature:
Date: 21 October 2015

ABSTRACT

AN INVESTIGATION ON REASONS OF STARTUP FAILURE:
THE ROLE OF ENTREPRENEUR

Burcu IŞIKTAŞ

M.Sc. Business Administration

Supervisor: Assist. Prof. Dr. İrge ŞENER

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Entrepreneurship is very crucial for the development of the economy as a whole. Although there are many startups, most of them fail within a short-time of their establishment. In line with this fact, this research aims to find the startup failure reasons. The specific concern of the study is about the entrepreneurial reasons more than external factors. Effectuation theory was selected as the theoretical framework for this research. The motivations and problem solving logics of the entrepreneurs are investigated with narrative interviews. Eight entrepreneurs were interviewed for the research. Based on Effectuation principles, it was found that the entrepreneurs using Effectuation on their decision making process are more successful than the others who use more causal decision making during the initiation of the venture. The findings from the interviews were also supported by the secondary resource analysis.

Keywords: Effectuation, startup, entrepreneurship, innovation

ÖZET

YENİ GİRİŞİM (STARTUP) BAŞARISIZLIĞININ NEDENLERİ ÜZERİNE BİR ARAŞTIRMA: GİRİŞİMCİNİN ROLÜ

Burcu IŞIKTAŞ

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Girişimcilik bir bütün olarak ekonominin gelişmesi için çok önemlidir. Çok sayıda yeni girişim (startup) olmasına rağmen, pek çoğu kuruluşundan kısa bir süre sonra başarısız olmaktadır. Bu gerçek doğrultusunda, bu araştırma bu girişimlerin başarısızlık nedenlerini tespit etmeyi amaçlamaktadır. Çalışmada özellikle dış faktörlerden ziyade girişimcinin kendisi ile ilgili olan nedenlere odaklanılmaktadır. Arraştırmanın kuramsal çerçevesi olarak Effectuation kuramı seçilmiştir. Girişimcilerin motivasyon ve problem çözme mantıkları anlatı şeklinde mülakatlar ile araştırılmıştır. Araştırma için sekiz girişimci ile mülakat yapılmıştır. Effectuation kuramının önerilerine göre, girişimlerinin ilk zamanlarında Effectuation prensiplerini kullanan girişimcilerin nedensel karar verme süreçlerini kullananlara kıyasla daha başarılı olduğu tespit edilmiştir. Araştırma bulguları ikincil kaynak analizleri ile desteklenmiştir.

Anahtar Kelimeler: Effectuation, yeni girişim (startup), girişimcilik, inovasyon

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LIST OF ABBREVIATIONS

AÇEV	Mother and Child Education Foundation (Abbreviation in Turkish)
ADSL	Asymmetric Digital Subscriber Line
AKUT	Search and Rescue Association (Abbreviation in Turkish)
ATO	Ankara Chamber of Commerce (Abbreviation in Turkish)
CERN	European Organization for Nuclear Research
CFO	Chief Financial Officer
EDS	Electronic Data Systems
GEM	Global Entrepreneurship Monitor
HTML	Hyper Text Markup Language
KOSGEB	Small and Medium Enterprises Development Organization (Abbreviation in Turkish)
LCD	Liquid Crystal Display
MBA	Master of Business Administration
MENA	Middle East and North Africa
METU	Middle East Technical University
NASA	National Aeronautics and Space Administration
OECD	Organization for Economic Co-operation and Development
PhD	Doctor of Philosophy
R&D	Research and Development
TEV	Turkish Education Foundation (Abbreviation in Turkish)
TUBITAK	Scientific and Technology Research Council of Turkey (Abbreviation in Turkish)
UNICEF	United Nations Children's Fund
VLC	Visible Light Communication

WWF	World Wide Fund for Nature

CHAPTER I

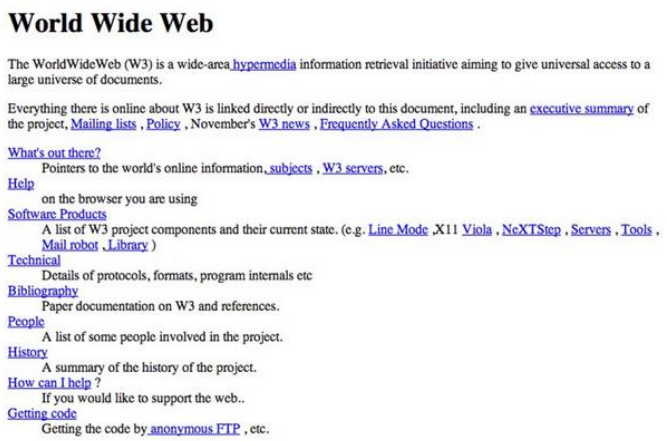
INTRODUCTION

We are living in an era of internet. Everyone has access to information easier than ever. Entrepreneurs from different countries with different levels of development have equal opportunities to sell their products via internet. Generation Y, who were grown up with a life surrounded by technology, is part of workforce now. In addition, dynamics of economy and corporate life are also shifting in a different direction with usage of technology much more than before.

Despite the roots of internet that begin to leaf out around 1970s when U.S. Advanced Research Projects Agency started to develop "network of networks", (Rouse, 2005) it took long time for households to own computers and access to internet connection. The computers were as large as a room, a visionary entrepreneur, Steve Jobs (co-founder of Apple Inc), saw the future of computing and convinced his friend Steve Wozniak (Isaacson, 2011) to commercialize his hobby project. Another visionary software coder, Bill Gates (founder of Microsoft), started to use a great licensing business model for his operating system. The operation system helped un-tech people to familiarize with computing. The chain was almost completed when a husband and wife from Stanford University, Sandy Lerner and Len Bosack (Bort, 2014), invented a device called router to make exchanging e-mails in different campuses possible in 1980s.

Rest of the story developed very fast. In a decade, first web site was on air: The World Wide Web Virtual Library (Figure 1). It was started by Tim Berners-Lee creator of HTML (Hyper Text Markup Language) and the World Wide Web itself, in 1990 at CERN (European Organization for Nuclear Research) in Geneva (Zhang, 2014).

Within couple of years, there were so many web pages available that two Stanford University students, Jerry Yang and David Filo, decided to categorize them. This personal hobby was ended as Yahoo in 1994 (Mccullough, 2015).



World Wide Web

The WorldWideWeb (W3) is a wide-area hypermedia information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary of the project, Mailing lists , Policy , November's W3 news , Frequently Asked Questions .

What's out there?
Pointers to the world's online information, subjects , W3 servers, etc.
Help
on the browser you are using
Software Products
A list of W3 project components and their current state. (e.g. Line Mode ,X11 Viola , NeXTStep , Servers , Tools , Mail robot , Library)
Technical
Details of protocols, formats, program internals etc
Bibliography
Paper documentation on W3 and references.
People
A list of some people involved in the project.
History
A summary of the history of the project.
How can I help ?
If you would like to support the web..
Getting code
Getting the code by anonymous FTP , etc.

Figure 1: The very first web site

With this new technology, small kids became entrepreneurs of fast growing companies with very limited initial investment. One of the most famous early internet startups, Napster, would be a good example for this trend. When Sean Parker was 15, he met 14-year-old Shawn Fanning over the Internet (Kirkpatrick, 2010). In the following years, Parker and Fanning cofounded Napster. Napster was music file sharing program for free. In June 1999, two friends launched Napster and their initial investment was $50,000 which was raised by Parker (Rosoff, 2011). Quickly they gained millions of users and became the fastest growing business of all time. Napster made a huge revolution in the music industry, and is considered as the precursor of iTunes. Due to many lawsuits of recording companies, they need to close the business at the end; however they were young millionaires of Silicon Valley.

This was the new gold rush of United States. Every new success story of an internet startup increased the confidence on future profitability of internet companies day by day. The tech startups were spending their money very fast and not very wisely while Venture Capital firms were willing to invest on tech startups. Venture capitalists saw huge rises in startup stock prices and therefore moved faster and with less caution than usual. The dream did not last forever, Dot-com bubble burst. On March 10, 2000, Nasdaq composite index hit over 5000 (Figure 2) and fall around %80 till October 2002 (Philips, 2015).

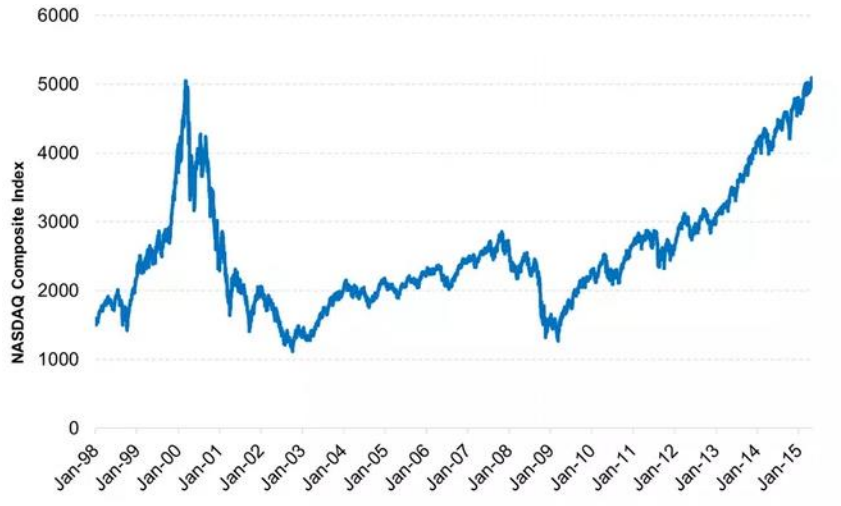


Figure 2: Nasdaq composite index during Bubble-Burst.

The period between 1995-2001 is referred as the Dot-com Bubble (Smith, 2011). Even after this huge economic crisis, some of the internet companies that were founded before or during the Bubble continued their successful business and even become industry giants. The most important of them were Amazon.com (founded in 1994), Google (founded in 1998) and eBay (founded in1995).

After this destructing period, second wave for internet companies started: Web 2.0. This new term was first introduced by Tim O'Reilly and Dale Dougherty during their presentation in the O'Reilly Media Web 2.0 Conference in late 2004 (O'Reilly, 2005). In a nut shell, the term covers user-generated content, usability and interoperability. Examples of Web 2.0 include social networking sites, blogs, video and photo sharing, and others. This was the match to start a new fire: Facebook, Twitter, Wikipedia, Google AdSense and the others began to be a part of people's daily life.

These interactive and social startups started a new trend in consumer habits. Being part of the workforce now, Generation Y doesn't seem to enjoy purchasing things. They rather share or lease. The Atlantic's article "Why Don't Young Americans Buy Cars?" explained about Millennials' tendency not to care about owning a vehicle (Weissmann, 2012). This research is aligned with the business models of successful startups. World's largest taxi company, Uber (founded in 2009), doesn't own any vehicles. World's most popular media owner, Facebook (founded in 2004), doesn't

create any content. World's largest retailer, Alibaba (founded in 1999), doesn't have any shops. Largest library of the world, Google Books (founded in 2005), doesn't have any physical books.

As these examples indicate, starting a company is easier than before these days. There is lots of free software that could be used in the initial phases of a company. With the development cloud technologies, companies don't need to purchase pricy computing systems or data centers but they could easily purchase "pay as you go (not a fixed fee but gradually increases by usage level)" services like Amazon Web Services. They could ask financial support from regular people for their projects via crowd funding portals like Kickstarter. Additionally, despite being more cautious this time, there are many venture capital firms available waiting for good projects.

Startups are fuel to economic growth for nations. According to data from the Kauffman Foundation and the US Census Bureau, majority of the jobs in United States were created by startups (Wiens et al, 2014) (Figure-3).

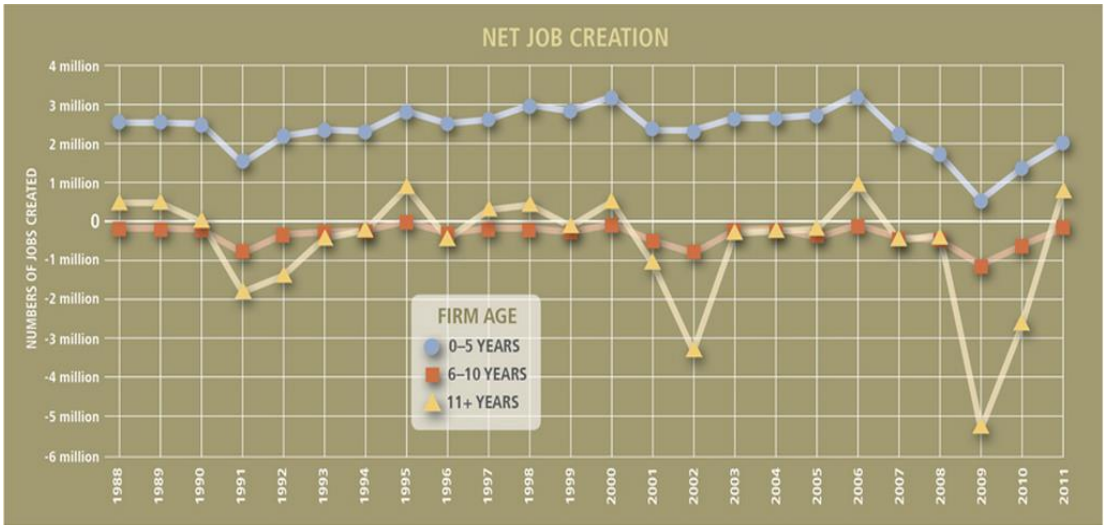


Figure 3: Net job creation over years in America

Despite all the advancement in technology, all of the emphasize on the importance of startups, all those lessons learned from the companies before Bubble-Burst, still 90% of the startups are failing. Accordingly, this study is developed with the aim of finding answer to this question: Why startups fail?

There exists a lot of analysis about startup failures. The most common reasons can be grouped under five categories: wrong team (lack of expertise, problems within team members etc.), bad timing (market is not ready, no market need etc.), funding problems, product idea problems and finally not being able to create a viable business model (Gross, 2015). On the other hand, there are very extreme success stories that show this basic classification is not accurate. The most important entrepreneur of the last couple of years is Elon Musk. He's the founder of Paypal, Tesla Motors and SpaceX. SpaceX is an aerospace manufacturer and space transport services company. Musk's vision for this company is to enable people to live on other planets (SpaceX website). If we think about the regular terms, there is no market need for living in other planets. The timing is not good as our world is still operational and we are not expecting an apocalypse in the near future, however the company is still a 12 billion $ company.

Additional to all of those known failure reasons, the most important factor is entrepreneur him/herself. The psychology of the entrepreneur, decision making steps, handling of uncertainty and difficulties must be very important and one of the key determinants of failure or success. Accordingly, this study focuses on entrepreneurial reasons of startup failure. With this study, it's expected to find a common pattern between successful and unsuccessful entrepreneurs.

Following this introductory chapter, in Chapter two the common startup failure reasons based on different research will be discussed. Chapter three will be dedicated to theoretical framework of the research. After providing the methodology in Chapter four, research findings and analysis results will be provided in Chapter five. Chapter six is the conclusion and discussion section which completes the research.

CHAPTER II

COMMON STARTUP FAILURE REASONS

2.1 What is A Startup?

To be able to define the frame of this study, first of all “startup” definition should be clear. Despite many different thoughts and definitions, still there's no single definition on which any two entrepreneurs or investors agree with.

Merriam Webster Dictionary defines startup as “a fledgling business enterprise”, while Oxford Dictionary defines it as “a company that is just beginning to operate”. Stanford Professor Steve Blank describes startup as "an organization formed to search for a repeatable and scalable business model" and he defines technological startup as “a startup that uses internet and software technologies to create and distribute its products, and to search for and execute its business model” (Blank, 2010). Warby Parker co-CEO of Neil Blumenthal has a similar definition: “A startup is a company working to solve a problem where the solution is not obvious and success is not guaranteed” (Blumenthal, 2013). Paul Graham, programmer, writer, and investor, defines startup related to growth rate in his blog (Graham, 2012). According to him, “a startup is a company designed to scale very quickly”. It is this focus on growth which is not measured by geographical dispersion that differentiates startups from small businesses.

Eric Ries, the writer of Lean Startup book defined startup as follows: “A human institution designed to deliver a new product or service under conditions of extreme uncertainty”. When the “risk premium” is known, we are not in startup land” (Ries, 2010). Business Insider’s Deputy Editor Alyson Shontell, primarily covers technology with a focus on startups, and creates a long and accurate definition as (Shontell, 2014):

“A startup is an emotional roller coaster that can either result in massive failure or success, after which one’s bank account total may either drastically increase or decrease. The person behind a startup is a founder, an often very bright, somewhat crazy person who finds a normal 9-5 job dull and is deluded into believing he or she can

change the world by working tirelessly in front of a computer screen. The relentless work has been known to shave a few years off a founder's life while adding premature gray hairs, but it can be very rewarding both emotionally and financially for those who pursue it."

This definition of Shontell emphasizes the uncertainty factor. She acknowledges that startups operate in the situations that cannot be modeled, not predictable, and where the risk is not necessarily large but it's not yet known.

In line with these definitions, the startups which will be investigated in this study have the following characteristic:

- Newly founded, younger than five years,
- Create a new product/service or bring an innovative way of doing a business,
- Does not only incur high risk but also has very high Knightian uncertainty,
- Self-funded by entrepreneur during initial stages,

According to all of these definitions, neither opening a restaurant nor making a franchise agreement of a big restaurant is a startup. Starting a new business that is an exact clone of an existing and already proven business with known business model, pricing, target customer, and product are all similar to restaurant example. Despite being an attractive economic investment, this kind of companies cannot be classified as startups as their success is only dependent on right execution.

2.2 Facts About Startup Failure

There is a famous statistic about startups, which is 90% of the startups fail. There have been many researches about startup failure rates and reasons. CB Insights, an information services firm, tracks private companies and their investors as well as private company merger and acquisition activity. They have been analyzing startups failure post-mortems to identify the top reasons of startup failure. Based on their research including more than 100 startups, they identified the top reason as "no market need" (CB Insights, 2014). The other highest rated reasons include running out of cash, not being able to create the right team, getting outcompeted, price or cost problems and the product itself (Figure 4).

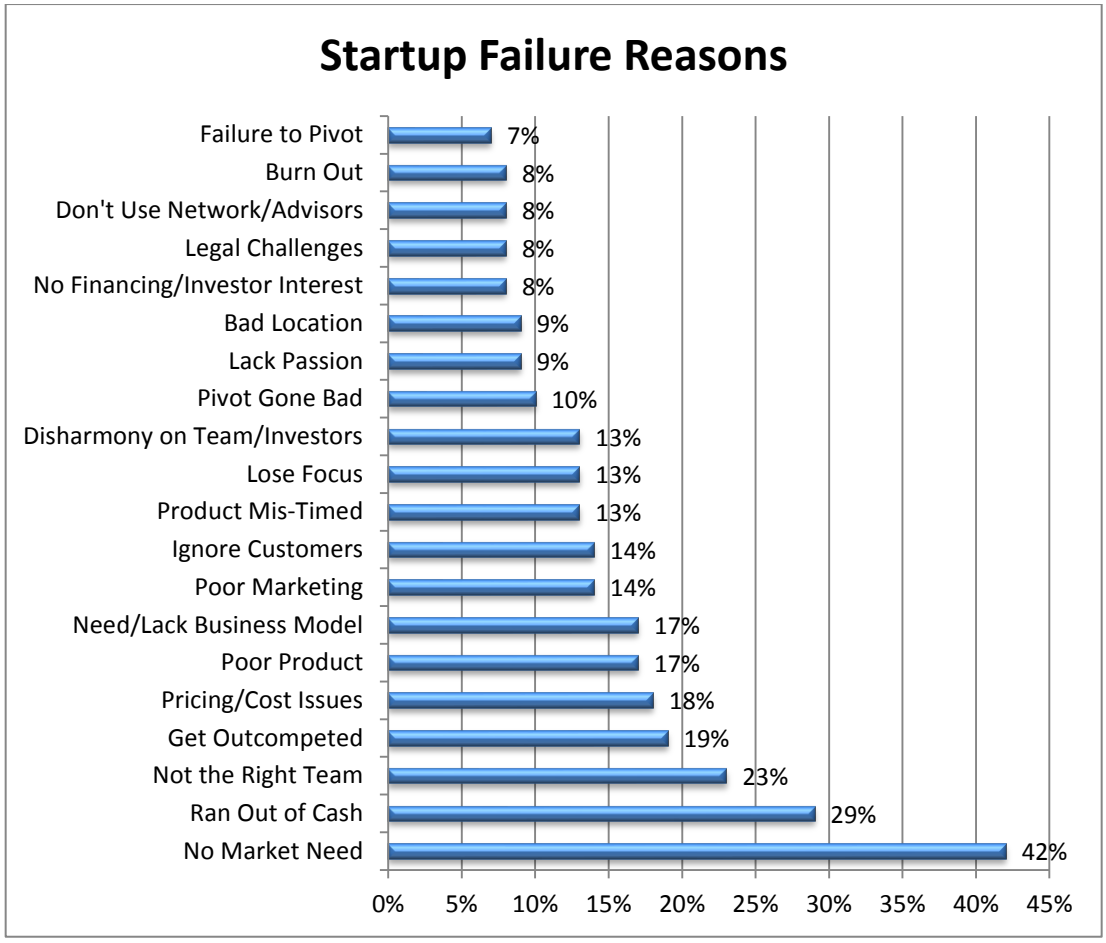


Figure 4: Startup Failure Reasons

Another important research project on startups is The Startup Genome project. Startup Genome is a non-profit organization backed by the Kauffman Foundation. They help local startup community builders by working together to map measure and grow their local startup community. It was founded by Shane Reiser and Dave Lerner in 2011 in United States. Their mission is to unite communities in a collective effort to understand and grow their local startup community (Startupgenome web site). They work via volunteer curators to add the new startups that launch in their city, work on classification of research data, pursuing community vision to continually improve upon free, locally-curated, up-to-date and accessible database of all the world's startup ecosystems and present it in useful, novel and beautiful ways. There are curators in hundreds of cities around the world, North America, Europe, Asia, Latin America,

Africa, Middle East, South Pacific and The Caribbean. Currently there is no curator listed from Turkey according to their website (Startupgenome web site).

One of the on-going research initiatives is to understand what makes startups succeed or fail. The research includes 3.200 high-growth technology startups. The findings of this project indicate that most startups failed mostly due to self-destruction which means premature scaling is the most common reason for startups to perform worse, causing them fail. Based on the research, 70% of startups scaled prematurely in at least of the following dimensions: customers, product, team, business model, or funding (Startupcompass, 2013).

The Startup Genome project is using a machine learning algorithm that assesses the behavioral and actual stage of a startup. Their team accessed startups with this algorithm and if the two metrics were not identical, they concluded that the company scaled some dimension prematurely. Some premature scaling examples from the study are:

- Spending too much on customer acquisition before product/market fit and a repeatable scalable business model.
- Investing into scalability of the product before product/market fit.
- Adding "nice to have" features.
- Hiring too many people too early.
- Raising too little money.
- Raising too much money.
- Focusing too much on profit maximization too early.
- Over-planning, executing without regular feedback loop.
- Not adapting business model to a changing market.

David Feinleib, co-founder of five startups and a Silicon Valley venture capitalist, is the author of book "Why Startups Fail: And How Yours Can Succeed" (Feinleib, D., 2011). He has seen both sides of the startup world as an entrepreneur and an investor. He had identified four main topics that caused failure:

- Market, Product, and Entrepreneur
- Sales and Marketing

- Execution
- Capital and Liquidity

Many failure reasons are somehow predictable without research. All the entrepreneurs could imagine they could run out of money and they would close their business. Companies make market research to understand the value of their product and how would they do in the market. These kinds of reasons are common and valid for every startup in every sector. The part which is hard to investigate in large scale is the failure reason related to entrepreneur him/herself. There is not much research on impact of entrepreneurial behavior in startup failure or success.

2.3 Overview of Startup Ecosystem and Start-ups Founded in Turkey

Startup ecosystem is formed by people working within startup and the people or institutions they are in interaction with. It's a very important factor that has high impact on the success or failure rates of the startups. Components of ecosystem are summarized in Figure 5.

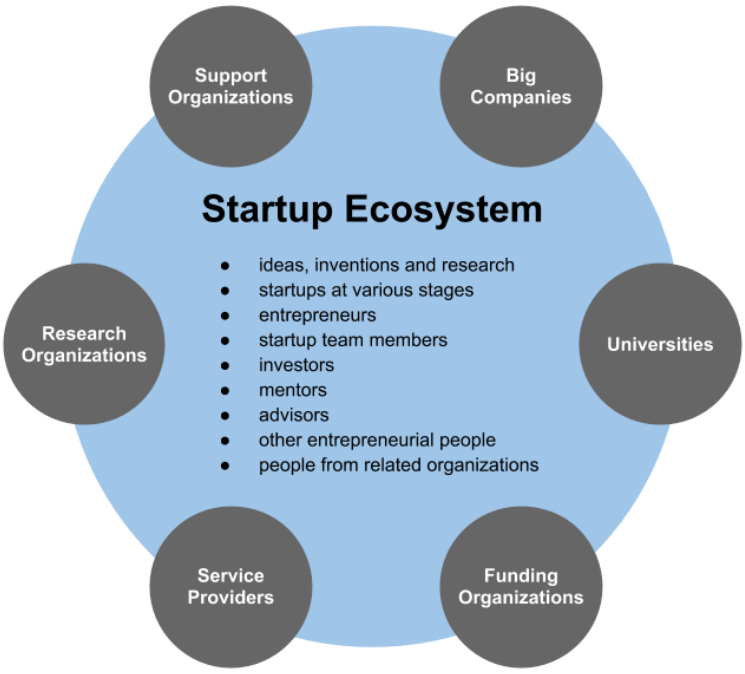


Figure 5: Components of Startup Ecosystem (http://www.startupcommons.org/)

Universities are the most important component of the startup ecosystem of Turkey. The techno parks (or techno polis called by some universities) are providing mentoring, office, tax advantages for many startups, these lead to overcome some of the startup costs for mostly inexperienced entrepreneurs. They are within the university campuses, which makes it easier to match the young graduate resources to the startups in need. Also they are arranging valuable contests with big companies with sector to find and support good ideas. These kinds of contests provide initial funding to many startups. On the other hand, support and research organizations should be considered under government institutions as private ones aiming to get some returns which make them funding organizations.

It's very hard to find healthy statistics about startups for Turkey. Based on statistics from Ankara Chamber of Commerce (Turkish Abbreviation: ATO) that cover 1923 to 2005 period, more than 90% of the companies in Turkey were established during last 20 years and the average life span of companies is 12 years (ATO, 2005). Another statistics about this topic is from World Bank, according to the organization, 80% of companies in Turkey cannot survive more than 5 years and 96% of them cannot continue their operations for 10 years (Capital, 2007).

In 2009, during the 4th Statistics Council Meeting, the right of disclosing information about companies and the statistics such as established and closed companies has been given to The Union of Chambers and Commodity Exchanges of Turkey as of the beginning of 2010 (The Union of Chambers and Commodity Exchanges of Turkey Web Site). Based on 2014 statistics, 126.635 new companies were established and 39.051 companies were closed (Table 1). This is not an indication of startup failure but it indicates a general overview of startups in Turkey for 2014. Majority of the companies established in 2014 was sole proprietorship. Another interesting statistics is that more cooperatives closed than opened. While open/close ratio of companies is 4,1, this ratio is 2,9 for sole proprietorship.

Table-1: Established /Closed company statistics for 2014

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Total
Newly established	**Company**	5.802	4.676	4.922	4.860	4.674	4.774	4.319	4.017	5.126	4.325	4.900	5.315	57.710
	Cooperative	114	95	104	99	94	77	75	50	80	72	74	71	1.005
	Sole proprietorship	20.216	6.297	5.386	4.793	4.116	4.022	3.579	3.059	3.942	3.215	3.636	5.659	67.920
Closed	**Company**	2.564	1.099	980	840	870	964	905	752	879	882	953	2.314	14.002
	Cooperative	328	82	93	97	98	156	231	122	116	120	130	247	1.820
	Sole proprietorship	3.240	1.956	1.509	1.330	1.241	1.429	1.767	1.103	1.183	1.576	2.657	4.238	23.229

Reference: Union of Chambers and Commodity Exchanges of Turkey

Small and Medium Enterprises Development Organization (Turkish Abbreviation: KOSGEB) is a government institution that aims to increase Small and Medium Enterprise's share in economic and social development by offering service and support. Under small and medium businesses supported by KOSGEB, there are also some startups so their statistics and reports will be also discussed here. KOSGEB defines the small/medium enterprise based on three factors. These factors are (KOSGEB, 2015):

- Number of employees should be less than 250,
- Net sales should be less or equal to 40 million Turkish Liras
- Financial balance should be under 40 million Turkish Liras

These three indicators could not be used as startup criteria. The institution is not taking into consideration the most important factors of a startup definition of this study like:

- Years of activity,
- Innovation, new product, service or business model.

However, general overview of Turkish small business ecosystem of the report is beneficial. KOSGEB report includes an analysis of Turkish Small Medium business. The factors related to this study are presented below.

Weaknesses are listed as four topics:

- Difficulties to access financial resources and qualified human resources,
- Not being open to partnership or corporation,
- Not being able to closely follow and apply the technological changes,
- Not having enough knowledge level for research and development activities.

Threats are listed as three topics:

- Young population cannot be educated based on sectoral needs,
- Lack of mentoring for right investments,
- Lack of collaboration between universities,

As all the businesses including two person restaurants to family farm counted as Small- Medium Business in KOSGEB reports, their analysis and data are not valuable for this study.

An important global research initiative is The Global Entrepreneurship Monitor (GEM). The Global Entrepreneurship Monitor was started in 1997 as a joint venture of Babson College and the London Business School. In 1999, first annual report was published (Karadeniz, 2010). The main questions that the report tries to find answers are:

- Does the type of entrepreneurial activity vary between countries?
- Are the differences in national entrepreneurial activity related to national economic growth?
- What national characteristics are related to differences in types of entrepreneurial activity?

Organization's web site includes reports for more than 100 countries including Turkey (Gemconsortium web site). The detailed report of Karadeniz is from 2010 and only covers data till 2010. This report includes some important information about entrepreneurial motivation and demographics. In the report, the motivation and income relation has been investigated (Karadeniz, 2010). The authors classified the income levels of households to three equal groups: lowest income group: 33%, middle income

group: 33%, and highest income group: 33%. Figure 6 shows that, entrepreneurs in lowest and middle groups start a business because of necessity. On the other hand, the entrepreneurs from highest income group tend to act as opportunity-driven.

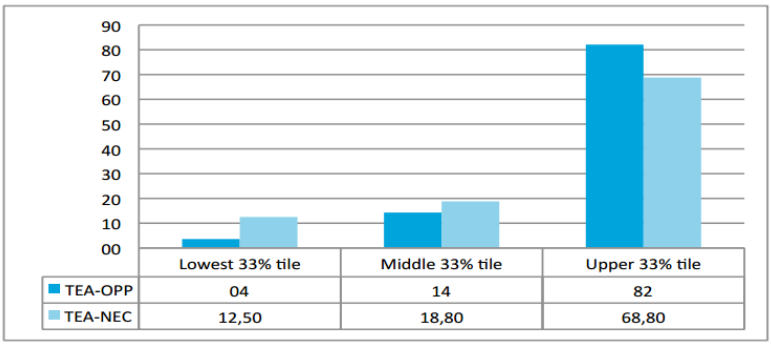


Figure 6: Income Level of Necessity and Opportunity-Entrepreneurs (%)

If the motivation is ignored and only income level and entrepreneurship relationship are considered, it was found that upper income level people tend to be more entrepreneurial (Figure 7).

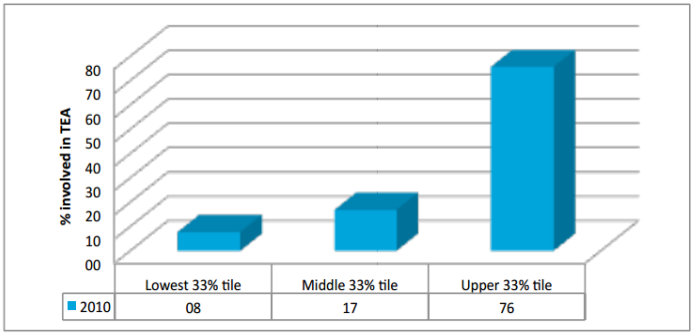


Figure 7: Income level / Entrepreneurship relation

In the same report, it was also shown that opportunity driven entrepreneurs want to grow faster and they contribute to economy more by creating more jobs (Figure 8).

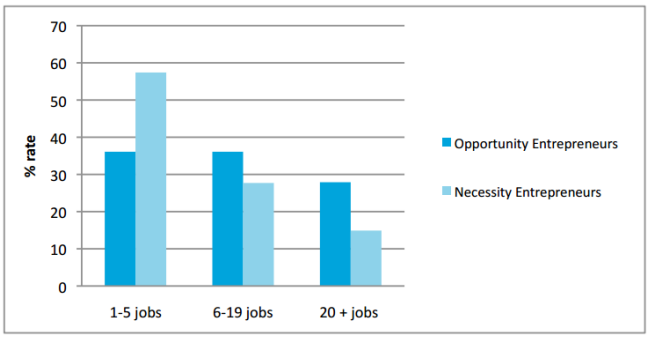


Figure 8: Growth Aspiration of Necessity- and Opportunity-Entrepreneurs (%)

Turkey 2010 report shows that for every 100 male entrepreneurs, there were only 28 female entrepreneurs. Majority of entrepreneurs were between 25 and 34 age group (Figure 9).

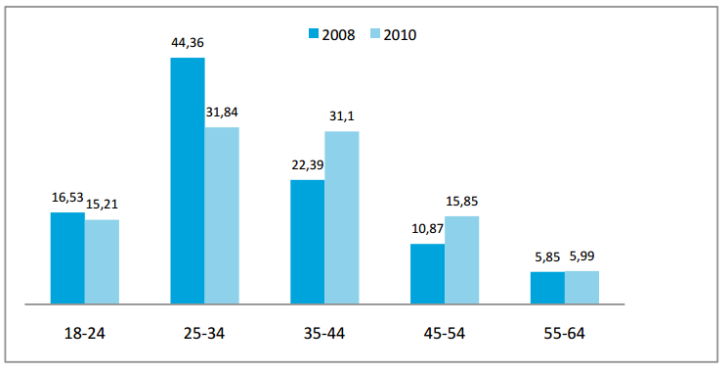


Figure 9: Age Distribution of Entrepreneurs in Turkey (%)

2010 report indicated another interesting statistics: Turkish people who don't have higher education degrees tend to start their own businesses as they don't have variety of good employment choices.

The importance of GEM for this study is that it examines the behavior and internal motivation of individuals with respect to starting and managing a business (Babson College Website). The following conceptions regarding to entrepreneurship are measured by GEM (Karadeniz, 2010):

- Starting business is a good career choice;
- Starting a new business gains a high level of status and respect;

- Media publicity is important for a new business.

Detailed report of Karadeniz includes data till 2010 and the country profile in the GEM web site includes some updated comparisons with 2000-2010 periods to 2010-2012 periods (GEM Turkey profile, 2012). The updates show a positive entrepreneurship portrait for Turkey based on the general trend. During years 2006 to 2008, the average level of early stage entrepreneurial activity was reported as 5,9% while it was 10,9% for the period 2010-2012. These percentages are calculated as ratio of a country's adult population who started their business or operating new businesses. The other highlights about Turkey are as follows:

- There is an increase on number of women entrepreneurs during 2010–2012 periods.
- The entrepreneurship age and education level were also increased relatively.
- Product, business and technological innovation was higher in 2010–2012 periods.
- Established Business Ownership: 8,7% (owning and managing a running business that has paid salaries, wages, or any other payments to the owners for more than 42 months)
- Perceived Opportunities: 40% (who see good opportunities to start a firm in the area where they live)
- Perceived Capabilities: 49% (who believe they have the required skills and knowledge to start a business)
- Entrepreneurial Intention: 14,7% (latent entrepreneurs and who intend to start a business within three years)
- Fear of Failure: 30% (fear of failure would prevent them from setting up a business)

In general, based on GEM reports, conditions for entrepreneurship in Turkey improved in 2006–2012 period.

The last statistics of the section is the ratio of research and development spending to national income, Turkey compared to OECD (Organization for Economic Co-operation and Development) (OECD, 2015). According to OECD data, the amount spent in Turkey for research and development is very low when compared to OECD countries as a whole (Figure 10).

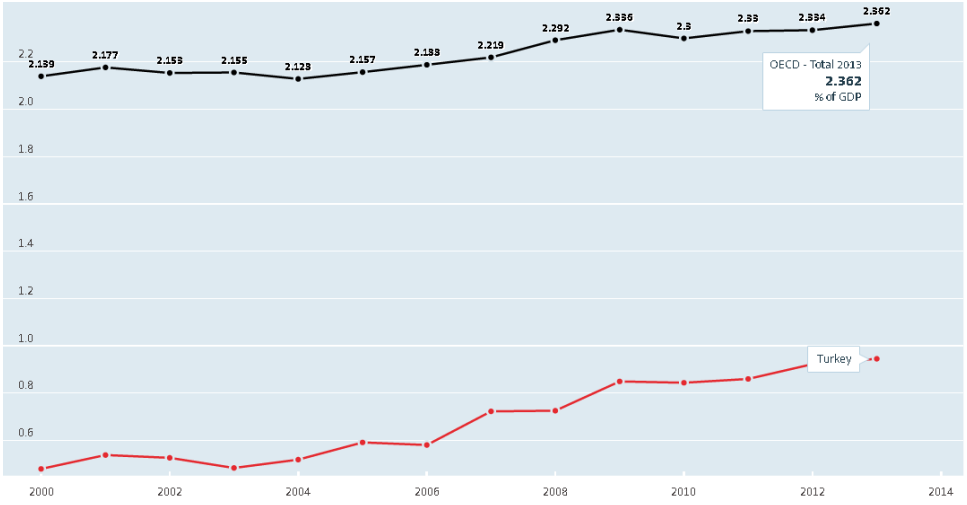


Figure 10: Gross domestic spending on R&D Total, % of GDP, 2000–2014

These statistics and reports indicate the general entrepreneurship trend of Turkey. The low values of research and development budget show a parallel result of Turkey's position in high technology market.

CHAPTER III

THEORETICAL FRAMEWORK

3.1 What is Entrepreneurship?

The entrepreneur is the person who starts his/her own business, taking on financial risks in the hope of profit. There have been many different theories created over years to define "entrepreneurship" concept. In this chapter, the main entrepreneurial theories will be investigated.

3.1.1 Early Theories of Entrepreneurship

Richard Cantillon (1680s-1734), is an Irish-French economist. He is best known with being the author of 'Essai sur la Nature du Commerce en Général' (Essay on the Nature of Trade in General). He defined the entrepreneur "as a risk-bearer and a person who buys products at certain prices to combine them into a new product". From these two main approaches, he could be the one who introduced innovation and risk concepts to entrepreneurship.

Jean Baptise Say (1767-1832) made some additions to Cantillon's definition and he's the one who introduced the "entrepreneur" term and defined it as "the entrepreneur shifts economic resources out of an area of lower and into an area of higher productivity and greater yield" (The Economist, 2009).

Alfred Marshall (1842-1924), one of the most influential economists, introduced land, labor, capital, and organization as the four factors of production in his book, 'Principles of Economics' (1890). The role of entrepreneur is defined as the driving factor that brings these four factors together. His entrepreneur definition has four characteristics: good understanding of the industry, leadership skills, prevision on demand and supply changes and the willingness to act on such risky foresights.

Max Weber (1864-1920) is well known with his books 'The Protestant Ethic' and 'The Spirit of Capitalism' (1905), he focused on religion as the major motive of

entrepreneurship, and emphasized on the spirit of capitalism, which highlights economic freedom and private enterprise.

3.1.2 Frank Knight's Risk Bearing Theory

Frank Knight (1885-1972) focused on the difference between risk and uncertainty. Businessdictinary.com defines risk as "a probability or threat of damage, injury, liability, loss or any other negative occurrence that caused by external or internal vulnerabilities, and may be avoided through preemptive action". The fact that someone's house could get robbed is a risk. If the house is robbed, possible loss could be calculated. To mitigate this kind of risk, people might purchase insurance or basically accept the risk if they are living in a very safe area. Here the factor of possibility comes into place. Based on possibility of the risk to happen and possible loss if the risk happens defines the possible actions that could be taken. These are: Risk avoidance, Risk reduction and Contingency planning (Mulcahy, 2013).

On the other hand, Knightian uncertainty is a situation where risk is immeasurable, impossible to calculate. With this differentiation, he made a major contribution to the theory of the uncertainty-bearing entrepreneur in his PhD (Doctor of Philosophy) research: Risk, Uncertainty and Profit (Knight, 1921). In this theory, the uncertainty is considered production factor, and the main function of the entrepreneur was associated with forecasting the future events. Knight (1921: 299) states, "the entrepreneur… takes over all the uncertainty of the business along with control over it." According to Knight, "the inseparability of the uncertainty problem and the managerial problem is especially important in the discussion of entrepreneurship." (p.259) and "true uncertainty… accounts for the peculiar income of the entrepreneur" (p.232). As a result, the entrepreneur earns profit as a reward for taking such risks.

Adachi et al. (2011) suggested a model on entrepreneurial choice and Knightian uncertainty and analyzed the effects of ambiguity on entrepreneurial choice. They showed that, ambiguity-averse individuals are less likely to become entrepreneurs. It was also shown that increase of ambiguity decreases the level of investment.

Knightian uncertainty consists of the 'unknown unknowns' that cannot possibly be predicted in advance. This type of uncertainty is seen in the early-stage of

entrepreneurship. When the definition of startup for this study is considered, it is especially the case when dealing with new-market creation where the entrepreneur is faced not only with the uncertain, complex and dynamic environment of rapidly changing consumer preferences and demand, but also actively attempts to create this environment.

3.1.3 Friedrich Hayek

Friedrich Hayek (1899-1992) is an Austrian-British economist and philosopher. He is a defender of classical liberalism. Hayek is also awarded with Nobel Memorial Prize in Economic Sciences (sharing the price with Gunnar Myrdal) with his "pioneering work in the theory of money and economic fluctuations and ... penetrating analysis of the interdependence of economic, social and institutional phenomena" (Nobelprize.org).

Hayek does use the term “entrepreneur” in his writings on socialist calculation (Hayek, 1996) and capital theory (White, 2007). His entrepreneur is more like a “businessman,” and does not distinguish the entrepreneurs, managers, capitalists, and other business professionals from each other. Jürgen Backhaus explains Hayek’s entrepreneurship view as follows (Backhaus, 2005):

“Hayek’s focus is more on evolutionary mechanism of the competitive coordination of dispersed knowledge. It is usually argued that Hayek dismissed the matter of entrepreneurship, for he neglected theorizing on individual behavior in favor of the analysis of rules and institutions. Hayek’s theory of cultural evolution is based on a conceptualization of entrepreneurial activities which is decisive for the related concept of institutional change. The evolutionary role of entrepreneurship in the market process pinpoints the matter of search, experimentation and discovery. Despite it’s rather implicit character in Hayek’s theorizing, entrepreneurship provides Hayek’s theory of cultural evolution with constitutive arguments on the interplay of individuals, groups and institutions in the evolutionary process of economic development”.

3.1.4 Joseph Schumpeter’s Innovation Theory

Joseph Schumpeter (1883-1950), Harvard University professor. He was the author of one of ‘Capitalism, Socialism and Democracy’ (1942) and a very influential economists lived in 20th century. In his book, he described the “creative destruction”. He defined the process as the opening up of new markets, foreign or domestic, and the organizational development [...] illustrate the same process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the

old one, incessantly creating a new one. After this analysis of capitalism, he also made analysis with an aim to understand how businesses could be in a better position for innovation. He defines the most important element of innovation as company size, small companies should innovate better due to their flexibility. Later he changed his view on this and state larger corporations with monopolistic power would have an advantage which includes market power and better resources. In his innovation theory, he defines an entrepreneur with three major characteristics: innovation, foresight, and creativity.

Despite his theory seems to be complying with today's startup environment, the theory doesn't include two important aspects of an entrepreneur: ability to take risk and organizational skills.

3.1.5 McClelland's Theory of Achievement Motivation

David McClelland (1917-1988) is American psychologist, noted for his work on Need Theory. McClellands Theory of Achievement Motivation says that people have three different motivations for accomplishing things. These are: the need for achievement, need for affiliation, and need for power. Need for achievement and need for power are the drivers of entrepreneurship.

In this theory, McClelland (1961) correlates entrepreneurial behavior with achievement need. Entrepreneurs are defined to be more satisfied with achieving big things (or dreaming of it) instead of monetary gains or other external incentives. He also talks about entrepreneur characteristic to make decisions in times of uncertainty. This two important psychological characteristic of entrepreneurs, handling uncertainty and overpowering achieving big things to monetary outputs, will be the most important aspects of this study. The investigation of successful startups like Google, Facebook, and others, reveal that entrepreneurs have the same mind set.

Collins et al. (2004) show the relationship between the motivation to achievement motivation and entrepreneurial behavior. Their findings showed that choosing a career in entrepreneurial field and entrepreneurial performance are correlated with achievement motivation.

3.1.6 Mark Casson's Economic Theory

Mark Casson (1945-) is the professor of University of Reading. He leveraged the theories of Joseph Schumpeter, Friedrich Hayek and Frank Knight and developed his modern economic theory of entrepreneurship. This theory is being analyzed in his book 'Entrepreneurship, an Economic Theory' (1982). He defends that entrepreneurship is a result of supporting economic conditions; successful entrepreneurs can make good judgments while dealing with risky innovations. The economic conditions that were mentioned includes government policies on taxes, industrial policy, ease of access to raw materials and technology, access to finance resources and similar others.

3.1.7 Israel Kirtzner's Theory of Entrepreneurship

Israel Kirzner (1935-), professor of economics at New York University, defines the important role of entrepreneur in his book 'Competition and Entrepreneurship' (1978). In 2006, he won the Global Award for Entrepreneurship Research "for developing the economic theory emphasizing the importance of the entrepreneur for economic growth and the functioning of the capitalist process" (Henrekson, M. et al 2009).

His entrepreneurship model holds (Bosire et al, 2013):

1. The entrepreneur subconsciously discovering an opportunity to earn money by buying resources or producing a good, and selling it,
2. Entrepreneur financing the venture by borrowing money from a capitalist,
3. Entrepreneur using the funds for his entrepreneurial venture,
4. Entrepreneur paying back the capitalist, including interest, and retaining the "pure entrepreneurial profit."

3.1.8 Leibenstein's Theory of Entrepreneurship

Harvey Leibenstein (1922-1994) is an American economist whose most important contributions to economics was the concept of x-efficiency. X-inefficiency is the difference between efficient behavior of businesses assumed or implied by economic theory and their observed behavior in practice. It occurs when technical-efficiency is not

being achieved due to a lack of competitive pressure (Harvey, 1966; Harvey, 1997; Stigler, 1976).

In his theory, he consider entrepreneur as gap-fillers who recognizes market trends, develops new goods and determine profitable activities.

3.1.9 Peter Drucker's Theory of Entrepreneurship

Peter Drucker (1909-2005), American management consultant, educator and author, best known with his invention of 'Management by Objectives' concept (Drucker, 1992). His early influencer was Joseph Schumpeter, who was a friend of his father (Beatty, 1998) and he influenced Drucker on importance of innovation and entrepreneurship. They key aspects of his entrepreneurship are innovation, resources, and an entrepreneurial behavior. According to his theory, entrepreneur creates or increases the value or customer satisfaction by using already available resources in a more productive way.

3.1.10 Lean Startup Concept

Eric Ries defines startup as an organization aims to create a new product or a new service under the pressure of a lot of uncertainty. Entrepreneur focuses on how cope with this uncertainty while developing an efficient business with his concept inspired by lessons from lean manufacturing (Ries, 2011).

Instead of spending a lot of time to create and analyze business plans, The Lean Startup concept suggests entrepreneurs and the corporate employees working on new product development to test and verify their vision continuously on each and every phase and apply the required changes before it's too hard to apply (Ries, 2011). The lean startup model focuses on getting a minimum viable product to the market as early as possible. Ries emphasizes the importance of getting customer feedback as early as possible and continue to get it along the way. This action helps to improve the product and makes it easy to pivot (take a new approach) when needed (Ries, 2011). This approach may seem wrong if it's compared with the classical way of doing business where a product is launched when it's fully functional and the validity of the product is confirmed with extensive market research. There are many famous pivot examples on business model and product.

Twitter pivot story: Today's one of the most important social networking platform Twitter was pivoted from Odeo which began as a network that helps people to find and subscribe to podcasts. When iTunes became popular day by day and took over the podcast business, the founders feared and decided to pivot. They asked the employees to come up with new ideas in two weeks to come up with new ideas. The company decided to make a big change and adopted the idea of becoming a micro blogging platform for status updating. The comments of early Odeo employee Blaine Cook is in a way confirming the theories of Lean startup theories: *"We built [Odeo], we tested it a lot, but we never used it."* (The Real History of Twitter, 2011)

Instagram pivot story: Instagram, the most widely used photo application for smart phones began as Burbn, a check-in application like Foursquare. At the beginning the portal was also including gaming components besides the photo elements. The founders worried Burbn is complicated may never gain the attraction they were targeting. So they decided to eliminate complication via removing all the elements but one: photos. They built a new version of the product which only focused on photography and after this pivot they gain a huge momentum (Love, 2011).

3.1.11 Saras Sarasvathy's Theory of Effectuation

Effectuation is "logic of thinking that serves entrepreneurs in starting businesses"; it provides a way to control a future that is inherently unpredictable (Effectuation web site). This theory of entrepreneurship acknowledges the Knightian Uncertainty and accepts it is not possible to predict the future. Its' principles are also in parallel with Lean Startup and Agile development methodologies.

Effectuation has been suggested as opposite of causation by Dr. Saras Sarasvathy in 2001 as a result of her research about entrepreneurial thinking logic and decision making mechanism for early startup decisions. Causal reasoning is the process where entrepreneurs will determine goals to achieve and look for the resources to reach those goals. Effectuation on the other hand, is a process of determining the goals according to the resources in their possession (Figure 11).

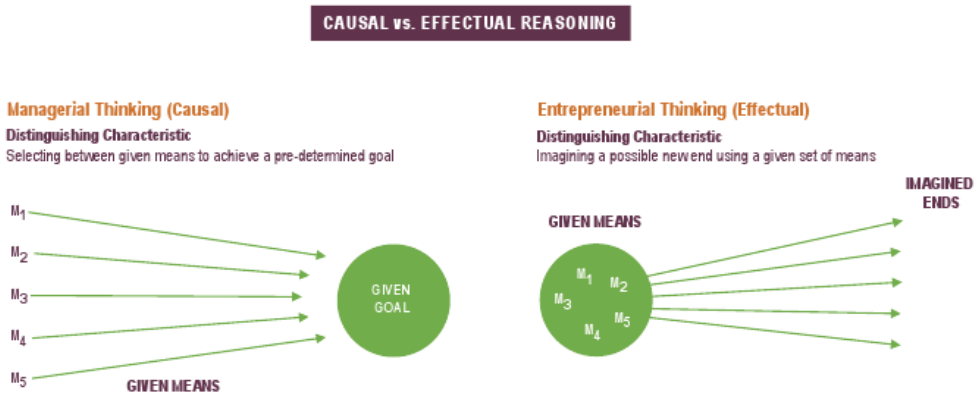


Figure 11: Causal vs. Effectual Reasoning

(Reference: Effectuation website)

Effectuation logic is not aligned with traditional business management logic which is causal or predictive logic. Causal logic starts with a predetermined goal and decision makers, which is entrepreneur in our case, already know the customer, company, industry, market, economy and tries to identify the optimal – the "fastest, cheapest, most efficient, etc. – alternative to achieve the given goal" (Sarasvathy, 2008:1). Causation takes "a particular effect as given and focus on selecting between means to create that effect" (Sarasvathy, 2001: 245). Production decisions like make or buy, marketing decisions like selecting the target market to operate based on highest potential return, financial decisions like investing on a portfolio which has the lowest risk, human resource decisions like amount and skills of candidates to hire are all examples of problems of causal reasoning (Table 2).

Table 2 – Contrasting effectual against causal reasoning

Issue	Causal Position	Effectual Position
View of the future	Prediction. The future is a continuation of the past; can be acceptably predicted.	Design. The future is contingent on actions by willful agents.
Givens	Goals are given	Means (Who I am, what I know, and whom I know) are given
Decision agenda	Resources. What resources ought I to accumulate to achieve these goals?	Effects. What effects can I create with the means I have?
Basis for taking action	Desired worlds. Vision of a desired world determines goals; goals determine sub-goals, commitments and action	Possible worlds. Means and stakeholder commitments determine possible sub goals- goals emerge through aggregation of sub-goals
Basis for commitment	Should. Do what you ought to do- based on analysis and maximization	Can. Do what you are able to do- based on imagination and satisficing
Stakeholder acquisition	Instrumental view of stakeholder. Project objectives determine who comes on board	Instrumental view of objectives. Who comes on board determines project objectives

Reference: Read & Sarasvathy, 2005: 51

As the business moves away from startup and becomes an enterprise, Dr. Sarasvathy suggests shifting from Effectuation. This logic is explained in the Effectuation web site (www.effectuation.org) with an analogy (Figure 12). In the same page, she provides a Table (Figure 13) that eases what effectuation is and what isn't.

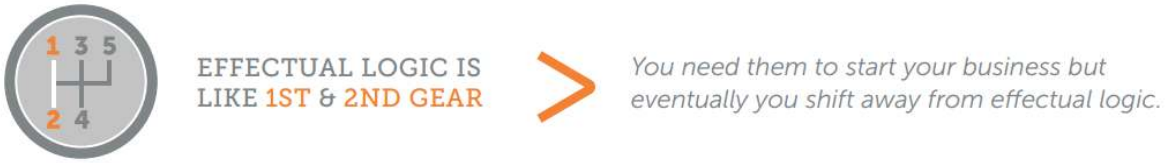


Figure 12: Effectuation Analogy

(Reference: Effectuation website)

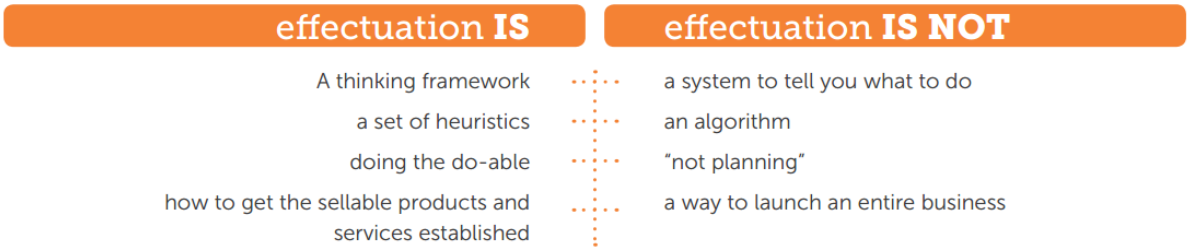


Figure 13: What is effectuation?

(Reference: Effectuation website)

Sarasvathy's effectuation research mainly tries to answer: How the entrepreneur handles Knightian uncertainty? Dr. Sarasvathy started her research in 1997 and conducted the research among 30 company founders from different sectors. She gave a 17 page problem set and asked them to keep talking aloud while solving 10 decision questions that was designed as if they were starting a new company. To each entrepreneur, exactly the same product was given with the aim to understand their approach to problem solving, where they start and how they think. At the end of this research, Sarasvathy found that 89% of the expert entrepreneurs used effectuation more often than causation. Here expert entrepreneur means the entrepreneur who had started more than one business (Sarasvathy, 2009).

Effectual logic gives the entrepreneur options to overcome the problems traditionally associated with the unknown unknowns of Knightian Uncertainty. For this reason, main strength of effectual logic is that it recognizes uncertainty as fundamental problem to entrepreneurs and the principles of effectuation is meant to help entrepreneurs to overcome the challenges of Knightian uncertainty (Sarasvathy, 2009).

There are five core principles that define Effectual Logic: which are 'The Bird in Hand Principle', 'The Affordable Loss Principle', 'The Crazy Quilt Principle', 'The Lemonade Principle' and 'The Pilot-in-the-Plane Principle'. These principles are explained below and discussed based on the experiences of Elon Musk. Elon Musk is a South African entrepreneur who started many successful companies like PayPal, Tesla and SpaceX. The examples about Elon Musk are retrieved from his biography: Elon Musk: Tesla, SpaceX, and the Quest for a Fantastic Future (Vance, 2015).

a) The Bird in Hand Principle

Entrepreneurs start with what they have. They will look at who they are, what they know and who they know (Sarasvathy, 2009).

The main idea behind this principle is entrepreneurs do not start with a specific goal but starts with the tools s/he already has (Figure 14). These tools include education, tastes, experience, friends, family and others. This is also known as "means principle" (Sarasvathy, 2009). On the other hand, in causal reasoning, first the goal is set and means assembled later.

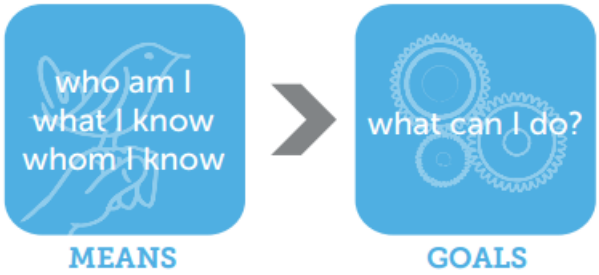


Figure 14: Bird in hand goal setting

(Reference: Effectuation website)

The principle could be explained with a real life example from Elon Musk and his story of starting PayPal. He had a degree from Economics and Physics. He has been writing computer programs since his childhood. While thinking of starting a company to make money for his ultimate dream of going to Mars and electric cars, he came up with the idea of digital payment system. To be able to develop e digital payment system, one should know finance industry and coding very well. He used his means about what he knows and later set his goal. (Vance, 2015)

b) The Affordable Loss Principle

Effectuation findings showed that expert entrepreneurs tend to limit the risk they take by understanding what they can afford to lose at phase of the business. Instead of seeking win big or nothing kind of opportunities, they are realistic about the amount they can lose, which is not limited to money but also time. An entrepreneur does not focus on possible profits, but on the possible losses and how they can minimize those losses

(Sarasvathy, 2009). Causal reasoning on the other hand, starts with targets of a return, and then works to minimize associated risk (Sarasvathy, 2009).

The entrepreneurs start their business with the aim of an expected return naturally, but rather than basing their decisions on that expected return, they instead based them on a predetermined level of affordable loss (Sarasvathy, 2001: 250).

Continuing with the same entrepreneur, Elon Musk, he started his two dream companies, SpaceX and Tesla without any monetary expectation but with the amount of money he earned from PayPal sales to eBay as affordable loss. He knew that he would lose all his fortune to develop a rocket and he was not expecting any space passengers anytime soon. All he knew was how much money he has to hold on to his dream (Vance, 2015).

c) The Crazy Quilt Principle

"Expert entrepreneurs build partnerships with self-selecting stakeholders" (Sarasvathy, 2009). Just after defining their goal, they start to discuss this with their friends, possible partners and stakeholders (Figure 15). Try to get their idea, input and also to obtain commitments from the key partners in early stages of a venture. Expert entrepreneurs tend to reduce uncertainty and instead of fighting with competition, they try to find a way to co-create the market with possible partners (Sarasvathy, 2009). Casual logic approaches competitors as they are rivals to contend with. Instead of partnerships, they try to develop strategies around mitigating the competition (Sarasvathy, 2009).

Figure 15: Crazy Quilt

(Reference: Effectuation website)

On June 2014, Elon Musk announced that they will be opening their patents to public for the advancement of electric vehicle technology. His explanation about the move in company web site shows clear signs of Crazy Quilt principle:

"We believe that Tesla, other companies making electric cars, and the world would all benefit from a common, rapidly-evolving technology platform. Technology leadership is not defined by patents, which history has repeatedly shown to be small protection indeed against a determined competitor, but rather by the ability of a company to attract and motivate the world's most talented engineers. We believe that applying the open source philosophy to our patents will strengthen rather than diminish Tesla's position in this regard" (Musk, 2014).

He also approached to BMW about sharing the cost of building recharging stations and creating a common infrastructure (Vance, 2014). This would be a perfect move for both his business from cost perspective and his ultimate goal of making world a better place with green energy via motivating and helping his rivals to move to electric car technology.

d) The Lemonade Principle

Causal way of thinking is concentrated on maximizing expected return, and avoiding surprises with the help of accurate prediction and comprehensive competitive analysis. Uncertainty is very high during the initial phases of a business and it is impossible for entrepreneurs to be prepared to every possible outcome.

This principle comes from the famous saying "when life gives you lemons, make lemonade". Most of the unsuccessful entrepreneurs see unexpected outcomes or surprises as something bad. As per effectuation research, surprises are not necessarily seen as something bad by expert entrepreneurs, but as opportunities to find new markets (Sarasvathy, 2009).

These kinds of situations might seem like a crisis to overcome to corporate managers. As the environment of a startup is very different compared to large corporations, different thinking logic should be adopted.

This principle is also aligned with the pivoting logic of Lean Startup and Agile concepts. Lean suggests that entrepreneurs should have a mindset that allows being flexible for possible pivots and not falling in love with the product. Insisting on a

specific product, specific market, and specific feature might destroy the startup according to Eric Ries (Lean Startup, page 169: Failure to Pivot).

There are many famous companies or products that are a result of an unexpected situation and successful pivot today. Couple examples are: Twitter pivoted from Odeo which began as a network where people could find and subscribe to podcasts; iTunes began to taking over the podcast niche, the founders feared and decided to pivot (Carlson, 2011).

On the other hand, Elon Musk, who was dreaming about going to Mars decided to start his own space company. He made his calculations and found how much he can spend on it. He decided to fly to Russia in hope to buy couple of rockets with this target budget. The meeting was progressing in a good mood till Musk asked how much a missile would cost. According to his biography (Vance, 2015), the conversation progressed as follows:

'Eight million dollars each', Russians said. Musk countered, offering $8 million for two. 'They sat there and looked at him,' and said something like, 'Young boy. No.'

Musk stormed out of that meeting, and on the plane home began devising a plan to create his own rockets. This bad meeting turned into a $12 billion company, SpaceX. He hired the best people in the industry, designed his own rockets with much more lower prices and even signed a contract with NASA (National Aeronautics and Space Administration) to become NASA's space taxis, shuttling astronauts to and from the International Space Station (CNNMoney, 2014), (Figure 16).

Figure 16: NASA Administrator Charles Bolden and SpaceX CEO Elon Musk
(Reference: Image Credit - NASA/Dutch Sleger)

e) The Pilot-in-the-Plane

Effectuation says that expert entrepreneurs focus on activities within their control and they know these activities under their control will result with the outcomes they desire. This effectual view of world comes from the belief that "the future is neither found nor predicted, but rather made" (Sarasvathy, 2009). The entrepreneurs that behave according to this principle are the ones who don't move with the wave but who create the wave. They don't act with very popular market trends or do things because everybody is doing same.

Musk's following quote can be shown as a good example for pilot in the plane principle. If he had acted based on the reports of his finance team, they would immediately stop his dreams about making a rocket. If he would make a market research to see how many people wants to live in mars, his marketing department would immediately stop him.

"The path to the CEO's office should not be through the CFO (Chief Financial Officer)'s office, and it should not be through the marketing department. It needs to be through engineering and design." (Elon Musk)

What Dr. Sarasvathy saw is effectual thinkers start very small with the means that are closest at hand, and move almost directly into action without elaborate planning

(Figure 17). Causal reasoning on the other hand, focuses more on market research; trends etc. and let the market lead them. In effectuation, plans are not activities that made comprehensively during start but they evolve throughout the whole process, revised multiple times based on needs and changes. These finding of Sarasvathy aligns with the suggestion of Lean Startup movement introduced by Silicon Valley entrepreneur and author of "The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses" Eric Ries in 2011.

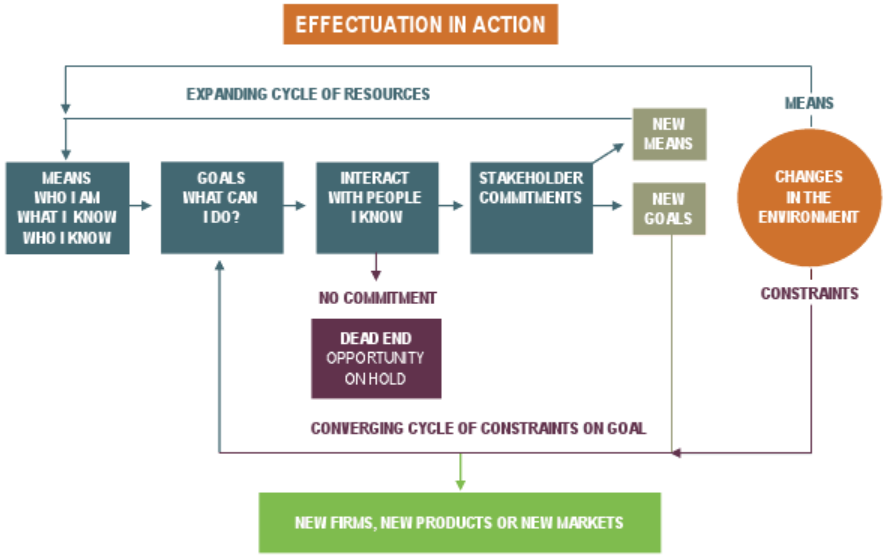


Figure 17: Effectual Cycle

Reference: Effectuation website

3.2 Literature Review of Effectuation Theory

Effectuation Theory is the latest entrepreneurship theory. Since its emergence in 2001, there exists research about effectual logic led by Professor Saras D. Sarasvathy, Mellon University Ph.D. She currently teaches entrepreneurship and ethics in Darden's MBA (Master of Business Administration) program and doctoral programs at Darden, Denmark, India, Croatia and South Africa. In 2007, Sarasvathy was named one of the top 18 entrepreneurship professors by Fortune Small Business magazine (CNN Money). Her scholarly work has won several awards, including the 2001 William H. Newman

Award from the Academy of Management and the 2009 Gerald E. Hills Best Paper Award from the American Marketing Association. Her book “Effectuation: Elements of Entrepreneurial Expertise” was nominated for the 2009 Terry Book Award by the Academy of Management (Darden School of Business Faculty Directory).

Sarasvathy’s Effectuation research was developed in Carnegie Mellon University, under supervision of Nobel prize winner Herbert A. Simon. Her research questions were: "What commonalities and differences exist in the decision-making process of an group of expert entrepreneurs who started with the same idea for a new venture and face exactly the same set of decisions in building it?" and "In the face of non-existent or not-yet-existent markets, what underlying beliefs about the predictability of the future influence the decisions expert entrepreneurs make as they build a new venture?" (Effectuation.org, Research Introduction).

To find the answer to those questions, Sarasvathy selected 27 entrepreneurs which has over 15 years of experience (expert entrepreneur in her defination). Those entrepreneurs are selected from both successful and failed ones and the company sizes were changing from $250 million to $6.5 billion. The entrepreneurs were given 17 page problem set of 10 typical questions related to building a venture. During the experiment, they were asked to think aloud. Their responses were analyzed by a team of researchers in the lead of Dr. The entrepreneurs and their responses were under groups of causal and/or effectual logic. At the end of the research Sarasvathy found that 65% of the respondents used effectual logic 75% of the time when they were solving the problems (Sarasvathy, 2009).

From this empirical basis, she saw that expert entrepreneurs share a similar logic for decision making and problem solving process. Causal thinking is not bad, but especially during the early stages of a startup, expert entrepreneurs preferred to use effectual logic in creating new opportunities (Sarasvathy, 2009).

There exists various research led by other researchers. During literature research, 16 dissertations and 17 articles related to effectuation have been analyzed. Despite the theory was originated from United States and United States being the cradle of startups due to Silicon Valley, majority of the dissertations was from North Europe (Figure

18,19). From United States, only one dissertation was analyzed while four articles were available.

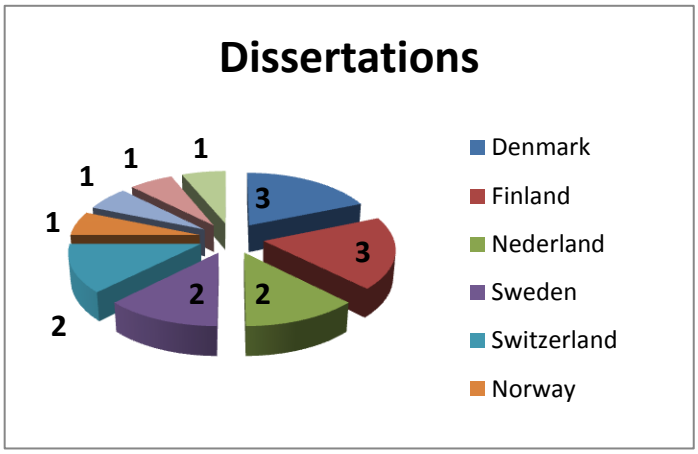


Figure 18: Effectuation Thesis per Country

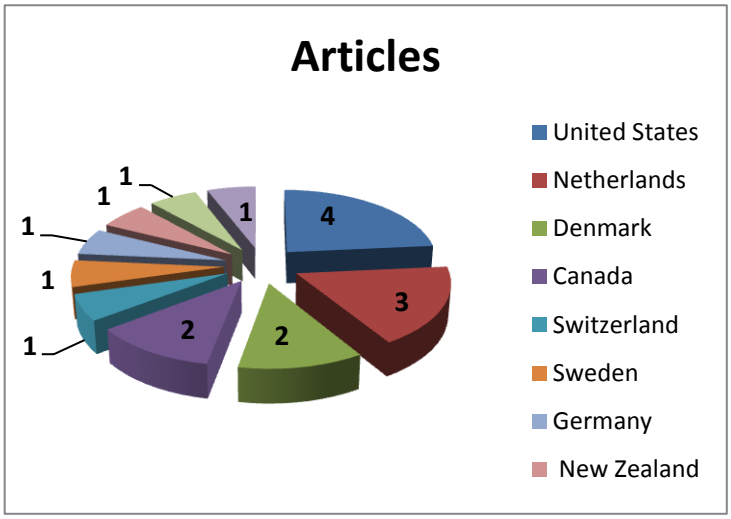


Figure 19: Effectuation Articles per Country

Except one article from South Africa, all the research were from developed countries. Also it was not possible to find any research related to Effectuation in Turkey. As far as to our knowledge, this study is the first one related to effectuation in Turkey.

Table 3 and 4 summarizes the dissertations related to effectuation. The earliest examined one is from 2009.

Table 3: Masters' Dissertations on Effectuation

Author	Research Question	Finding	Country	Result
Stephen Gregory Lutsch, Magnus Tranum Mortensen, 2013	Making strategic decisions in early-stage start-ups	Across a wide range of industries, sample of novice entrepreneurs tended to use effectual logic rather than the expected causal logic.	Denmark	Supportive
Christina Zacho Woetmann, 2014	Entrepreneurs usage of Effectuation and causation	Expert entrepreneurs prefer the process of effectuation and novice entrepreneurs favor the processes of causation	Denmark	Supportive
Stefan W. Arteaga, Hans-Gunnar E. Grepperud, Marie N. Hermansen, 2013	A Comparison of Students use of Effectuation and Causation Principles with that of Practitioners	The students are less effectual than the Entrepreneurs and Experts when employing effectuation logics.	Norway	Supportive
Xiaoqian Sun, Raj Kamal Bisht, 2013	Causation and Effectuation in the context of product development process in a large-sized established company	Effectuation logic does take place during the product development in a large-sized established corporate. Effectuation logic and causation logic can exist in parallel in different problem areas.	Sweden	Supportive
Soili Mäkimurto-Koivumaa, 2012	Effectuation in Embedded and Enquiry Based Entrepreneurship Education	The outlined effectual entrepreneurship education, if combined with action-based learning methods like enquiry-based learning for instance, could support the development of entrepreneurial behaviour, and ensuing entrepreneurship, among engineering students.	Finland	Not Available
Michel Diemer Nienhuis, 2010	Effectuation and Causation: The Effect of Entrepreneurial Logic on Incubated Start-up Performance	Effectuation is not one consistent block of constructs, but rather an inconsistent collection of behaviours that do not necessarily all have to be related to employment performance.	Nederland	Not Supportive
Gaby Sanwikarja, 2009	Effectual and Causal Reasoning in Domestic and International Entrepreneurial Success: A Study of Novice Entrepreneurs	The novice entrepreneurs predominantly rely on effectual logic, as opposed to causal logic. Moreover, the results show a presence of "bricolage" and "bootstrapping" techniques across all cases, indicating a relation to the concept of effectuation, and to entrepreneurial success.	Nederland	Supportive
Qian Liu, 2014	Effectuation in Entrepreneurship, a Case Study of Bonusbox	The investigated company Bonusbox is using effectuation on decision making.	Sweden	Supportive
Thanti Sibonelo Mthanti, 2012	The impact of effectuation on the performance of South African medium and high technology firms	Firms with a higher Entrepreneurial orientation were more likely to effectuate and be flexible and experiment.	South Africa	Supportive
Jori Onni Iisakki Rings, 2014	Effectuation in an Entrepreneurial Creation Setting an Action Case Study	Becoming an entrepreneur and creating something new can be less risky and more enjoyable when the effectual approach is used in the creation process.	Finland	Supportive
Stig H. Folkestad, 2010	A narrative case study of four successful entrepreneurs seen in the light of a wider specter of entrepreneurial theories	Thesis compared the usage of different entrepreneurship theories and Effectuation was one of them.	Denmark	Not Available

Table 4: PH.D. Dissertations on Effectuation

Research Question	Author	Finding	Country	Result
Experience, effectuation, and something good: Does the use of effectuation lead to positive outcomes?	Thomas E. Nelson, 2012	Entrepreneurs with more experience adopt the effectual idea of seeking out pre-commitments before starting a new venture. Entrepreneur's perception of his business's financial performance is positively related to his or her inclination to experiment, be flexible, and to evaluate business opportunities. By considering how much he or she can afford to lose.	United States	Supportive
How do attitudes of habitual high-technology entrepreneurs to early-stage failure differ in Silicon Valley, Cambridge and Munich?	Keith Cotterill, 2012	The recurring evidence of self-efficacy lends support to the wider theory of effectuation, in which entrepreneurs tend to have an effect on their environment, rather than reacting to psychological, social, economic and other causal factors around.	United Kingdom	Supportive
An Entrepreneurial Perspective on Early Product Innovation Processes: The case of SME in the Swiss Energy Sector	Peter Hürzeler, 2013	In most cases both effectual and causal processes were at work simultaneously in the product innovations analyzed throughout the study.	Switzerland	Neutral
Effectual Entrepreneurship and the Social Enterprise: an Examination of the Fit Between the Principles of Effectuation and the Sphere of the Social Enterprise as a form of New Venture	Anne-Valérie Ohlsson-Corboz, 2013	Thesis extends the use of the effectuation framework from commercial entrepreneurship to social entrepreneurship.	Switzerland	Not Available

In Table 5, the results in the means of four categories have been listed: Supportive, Not Supportive, Neutral and Not Available. The ones with Neutral tag are the ones who suggest the usage of causal and Effectual reasoning simultaneously. Not Available tags are for the researches which are related to theory itself. They are related to enhancement suggestions to the theory, the possible other usage of the theory in other fields like education etc. Supportive ones have parallel findings with original research while Not Supportive ones have not. From 16 studies, 10 was Supportive, one was Not Supportive, four were Not Available and one Neutral.

Table 5: Classification of Findings of Dissertations

Dissertation Name	Result	Dissertation Name	Result
How do attitudes of habitual high-technology entrepreneurs to early-stage failure differ in Silicon Valley, Cambridge and Munich?	Supportive	Effectuation and Causation: The Effect of Entrepreneurial Logic on Incubated Start-up Performance	Not Supportive
Making strategic decisions in early-stage start-ups	Supportive	A narrative case study of four successful entrepreneurs seen in the light of a wider specter of entrepreneurial theories	Not Available
Entrepreneurs usage of Effectuation and causation	Supportive	Effectual Entrepreneurship and the Social Enterprise: an Examination of the Fit Between the Principles of Effectuation and the Sphere of the Social Enterprise as a form of New Venture	Not Available
A Comparison of Students use of Effectuation and Causation Principles with that of Practitioners	Supportive	Effectual and Causal Reasoning in Domestic and International Entrepreneurial Success: A Study of Novice Entrepreneurs	Supportive
An Entrepreneurial Perspective on Early Product Innovation Processes: The case of SME in the Swiss Energy Sector	Neutral	Effectuation in Entrepreneurship, a Case Study of Bonusbox	Supportive
Causation and Effectuation in the context of product development process in a large-sized established company	Supportive	The impact of effectuation on the performance of South African medium and high technology firms	Supportive
Effectual Framework for Supporting Sustainable Entrepreneurship with Development Cooperation: Case Study of Mozambique	Not Available	Effectuation in an Entrepreneurial Creation Setting an Action Case Study	Supportive
Effectuation in Embedded and Enquiry Based Entrepreneurship Education	Not Available	Experience, effectuation, and something good : Does the use of effectuation lead to positive outcomes?	Supportive

Table 6 summarizes the results of articles. The earliest one was from 2008 and interestingly not from United States but Nederland.

Table 6: Articles on Effectuation

Author	Research Question	Finding	Country	Result
Juita-Elena (Wie) Yusuf , Margaret F. Sloan, 2015	Effectual Processes in Nonprofit Start-Ups and Social Entrepreneurship An Illustrated Discussion of a Novel Decision-Making Approach	Training social entrepreneurs in effectual decision making has potential to better mirror real-world applications and may increase a venture's ultimate success.	United States	Supportive
Gaylen N. Chandlera, Dawn R. DeTienneb, Alexander McKelviec, Troy V. Mumford, 2011	Causation and effectuation processes: A validation study	Causation is negatively associated with uncertainty, while experimentation, a sub-dimension of effectuation, is positively correlated with uncertainty.	United States	Supportive
Stuart Reada, Michael Songb, Willem Smit, 2009	A meta-analytic review of effectuation and venture performance	Conduct a meta-analysis of the articles published in the Journal of Business Venturing, summarizing data on 9897 new ventures to connect three of the principles of effectuation positively with new venture performance.	Switzerland	Supportive
John T. Perry, Gaylen N. Chandler, Gergana Markova, 2012	Entrepreneurial Effectuation: A Review and Suggestions for Future Research	Reviewed the effectuation literature and make suggestions for how to design and conduct empirically rigorous effectuation studies consistent with the developmental state of the research stream.	United States	Not Available
Greg Fisher,2012	Effectuation, Causation, and Bricolage: A Behavioral Comparison of Emerging Theories in Entrepreneurship Research	The analysis highlights behavioral similarities and differences between the various theoretical perspectives in entrepreneurship research, providing insight into how these perspectives contrast and complement one another, and how they could be integrated in future research.	United States	Supportive
Svante Andersson, 2011	International entrepreneurship, born globals and the theory of effectuation	Effectuation theory focuses on the entrepreneurs' ability to create opportunities together with network partners and is a useful tool to understand the development in the born global firm.	Sweden	Supportive

Table 6 continues:

Malte Brettel, René Mauer, Andreas Engelen, Daniel Küpper, 2012	Corporate effectuation: Entrepreneurial action and its impact on R&D project performance	Effectuation is positively related to success in highly innovative R&D projects. Causation approaches are beneficial in projects with low levels of innovativeness.	Germany	Supportive
Rainer Harms, Holger Schiele, 2012	Antecedents and consequences of effectuation and causation in the international new venture creation process	Experienced entrepreneurs tend to apply effectuation rather than causation, while uncertainty does not have a systematic influence. Entrepreneurs using causation-based international new venture creation processes tend to engage in export-type entry modes, while effectuation-based international new venture creation processes do not predetermine the entry mode.	Netherland	Supportive
Suna Løwe Nielsen, Astrid Heidemann Lassen, 2012	Identity in entrepreneurship effectuation theory: a supplementary framework	Identity construction is an active and integral part of the effectuation process, and it importantly influences the manner in which the entrepreneur acts and makes decisions in the process.	Denmark	Not Available
Hans Berends, Mariann Jelinek, Isabelle Reymen andRutger Stultiëns, 2014	Product Innovation Processes in Small Firms: Combining Entrepreneurial Effectuation and Managerial Causation	Because the combination of effectual and causal principles leverages small firm characteristics and resources, this article concludes that product innovation research should more explicitly differentiate between firms of different sizes, rather than prescribing large firm best practices to small firms.	Netherland	Neutral
Sussie Morrish ,2009	Portfolio entrepreneurs: an effectuation approach to multiple venture development	There is evidence of effectuation reasoning during the preliminary and early stages of venture and portfolio development. Portfolio entrepreneurs tend to adopt causation logic as ventures and portfolios mature.	New Zealand	Supportive
Jeroen Kraaijenbrink, 2008	The nature of the entrepreneurial process: causation, effectuation, and pragmatism	Suggests 2 modifications on Sarasvathy's work on effectuation.	Netherland	Not Available
Müller, Sabine, 2010	Causation and Effectuation Processes: Opportunity Discovery and Exploitation Logics of Habitual Entrepreneurs	Habitual (i.e. serial and portfolio entrepreneurs) entrepreneurs mainly apply an effectual logic with regards to the four dimensions examined. Some of the more inexperienced habitual entrepreneurs tend to apply both logics, but almost exclusively become effectual more experienced they become.	Denmark	Supportive

Table 6 continues:

Maine, E.; Soh, P.; Dos Santos, N, 2012	Decision-making processes in biotech commercialization: Constraints to effectuation	Assessment of qualitative interviews with founders and CEOs demonstrates that, initially, each company began in effectuation mode and, over time, transitioned to a spectrum between effectuation and causation.	Canada	Supportive
Christophe Garonne, Per Davidsson, 2010	Do strategy choices matter for nascent firms? Effectuation in the early stages of venture creation	Situation of high uncertainty, nascent firms using effectuation are more likely to reach operational stage than their counterpart using causation.	Canada	Supportive
Soili Mäkimurto-Koivumaa, Vesa Puhakka, 2013	Effectuation and causation in entrepreneurship education	Study suggests a model in which effectuation could be used systematically together with causation in entrepreneurship education.	Finland	Neutral
Dan Kaufmann, 2013	The influence of causation and effectuation logics on targeted policies: the cases of Singapore and Israel	A combination of the Effectual and Causual logics is needed, especially when targeting complex sectors with a yet unknown development path.	Israel	Neutral

Table 7 summarizes the results of articles. The classification tags are same as the ones used in Table 5. Within 17 articles, 11 of them was Supportive, three were Not Available and three were Neutral.

Table 7: Results Classification of Articles

Article	**Result**	**Article**	**Result**
Effectual Processes in Nonprofit Start-Ups and Social Entrepreneurship An Illustrated Discussion of a Novel Decision-Making Approach	Supportive	Product Innovation Processes in Small Firms: Combining Entrepreneurial Effectuation and Managerial Causation	Neutral
Causation and effectuation processes: A validation study	Supportive	Portfolio entrepreneurs: an effectuation approach to multiple venture development	Supportive
A meta-analytic review of effectuation and venture performance	Supportive	The nature of the entrepreneurial process: causation, effectuation, and pragmatism	Not Available
Entrepreneurial Effectuation: A Review and Suggestions for Future Research	Not Available	Causation and Effectuation Processes: Opportunity Discovery and Exploitation Logics of Habitual Entrepreneurs	Supportive

Table 7 continues:

Effectuation, Causation, and Bricolage: A Behavioral Comparison of Emerging Theories in Entrepreneurship Research	Supportive	Decision-making processes in biotech commercialization: Constraints to effectuation	Supportive
International entrepreneurship, born globals and the theory of effectuation	Supportive	Do strategy choices matter for nascent firms? Effectuation in the early stages of venture creation	Supportive
Corporate effectuation: Entrepreneurial action and its impact on R&D project performance	Supportive	Effectuation and causation in entrepreneurship education	Neutral
Antecedents and consequences of effectuation and causation in the international new venture creation process	Supportive	The influence of causation and effectuation logics on targeted policies: the cases of Singapore and Israel	Neutral
Identity in entrepreneurship effectuation theory: a supplementary framework	Not Available		

3.3 Theoretical Approach Adopted In the Thesis

Based on literature review, Effectuation theory was selected as the best fit for investigating early startup failures for this study. It focuses on dealing with Knightian uncertainty, finding required resources and being lean as well.

According to majority of the postmortem failure analysis research, one of the top reasons listed as failure reason is bad product market fit or reasons like no need for the product in the market. One of the key principles of effectuation tells entrepreneurs not to tie themselves to any theorized or pre-conceived “market” or strategic universe for their idea. Instead, the theory suggests there will be surprises along the way. Many entrepreneurs will end up in new markets or end up creating a new market. The research work of Dr. Sarasvathy show that starting with exactly the same product, the entrepreneurs within the research focus, ended up creating companies in 18 completely different industries (Sarasvathy, 2001).

Another key principle of effectual logic is the focus on building early stage partnerships instead of on doing a detailed competitive analysis (Sarasvathy, 2009). With this principle, entrepreneurs gain buy-in to their idea. They can make a basic sanity check of the product and can generate new ideas about the product. Early stakeholders would complete each other which will prevent couple of the failure reasons like wrong team, initial funding, lack of network/advisors and etc.

According to effectuation, expert entrepreneurs choose to view the future as something that is not to predict but to make. Consciously, or unconsciously, they make their decisions along the way as if they believe that the future is set in advance and they need to discover it, but rather it gets shaped through the actions and strategic decisions (Sarasvathy, 2009).

CHAPTER IV

METHODOLOGY

Research methodology adopted in this study is explained in this chapter, including research design, interview guide, and selection of informants, interview process, and evaluation of these methodological choices.

Since effectuation is a new theory and as far as to our knowledge this study is the first one in Turkish context adopting an effectual view for investigating entrepreneurial behavior; qualitative research is found to be appropriate and inductive approach of exploratory research is adopted.

In her initial investigation, Dr. Sarasvathy prepared a problem set which includes general situational problems that entrepreneurs would typically face in a start-up environment. The participants were expert entrepreneurs (the ones who started more than a startup in the past) and MBA students. The original research might give better results in favor of effectuation due to lack of stress factor and the fact that not being in a situation to lose anything. The research was designed to focus on the entrepreneurs' own experiences. Getting detailed information about the actual challenges they faced and how they reacted to them was the main aim of the research.

A qualitative research, inspired by Jovchelovitch and Bauer (2000) and Schütze's (1992) narrative interviewing has been identified as the best way to deliver aimed results to this thesis since it allows the interviewer to "reconstruct social events from the perspective of informants" (Bauer, 1996). The narrative interview creates "a setting that encourages and stimulates an interviewee to tell a story about some significant event in their life and social context" (Bauer, 2000: 59), which will be the problems they faced with their startup and how they could or could not cope with them.

With the aim of better testing the validity of effectuation and the market research related to startup failure, narrative interviewing has been combined with the semi-

structured interview which allows the researcher to adjust the questions according to the interviewee's replies (Jovchelovitch and Bauer, 2000). This allows two way communications, but with a strong focus on the informants' narratives, like personal stories, motivators, worldview, intentions and actions. Not having a strict list of pre-defined questions for the interview allows the researcher to have flexibility for further exploration on relevant topics, allows follow-up questions, or more guided questions if the interview drifted off topic.

4.1 Research Design

This thesis has been written to find the reasons of startup failure. The research approaches to this question from entrepreneurial perspective and takes the existing body of literature on effectuation as theoretical framework. This thesis uses the most common methods of data collection used in qualitative research. For exploratory research, case study research is suitable (Yin, 2011).

Figure 20 demonstrates the stages of the research. The study was conducted to find answer of a specific question, "Why startups fail?" Second stage was literature review to understand entrepreneurial theories and best framework was identified as Effectuation. In third stage, personal networks have been investigated to reach out to the best candidates. Interview process was followed by data analysis and classification of the results.

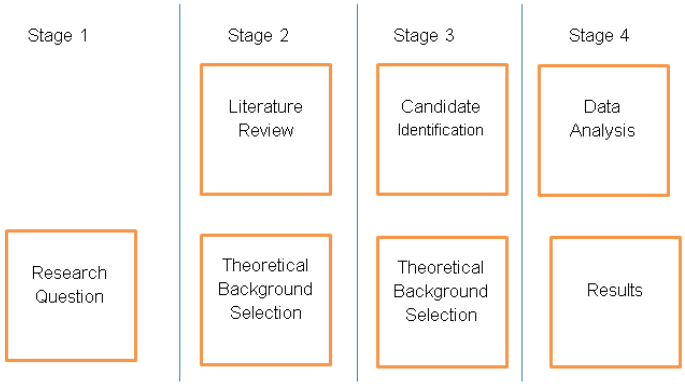


Figure 20: Stages of the Research

4.2 Research Question

The research question is “Why startups fail?” Within numerous reasons and many obvious ones, it was decided to concentrate on the entrepreneurial reasons. Within this perspective effectuation theory was identified as the best theory that covers the startup decision making difficulties. The main hypotheses are listed below:

H_1: Entrepreneur’s personality plays the biggest role on startup success or failure.

H_2: The entrepreneurs using Effectual logic on their decision making steps during initial phases of the company has higher chance to succeed.

4.3 Data Collection

Data of this study was collected through both primary and secondary resources. Primary data was collected through narrative and semi-structured interviews. Majority of the interviews were conducted face-to-face in Ankara and in İstanbul and two of them were conducted by web conference via Skype, since the entrepreneurs were living in Antalya. After the completion of each of the interview, transcripts were written and key quotes were extracted in order to support the analysis. On the other hand, secondary data included the prior interviews of successful entrepreneurs from internet sources. These secondary resources were analyzed for supporting the findings delivered from the interviews.

4.4 Sampling

Snowball sampling was used in the study. Snowball is a sampling technique which leverages a small number of initial information resources to reach a larger number of information resources. This is done by using their social networks. "Snowball sampling" terms comes from the analogy of a snowball which increases in size as it rolls down the way (David, 2009). As the number of resources grows, more new connections can be made with help of those new relationships. Snowball sampling leverages the recommendations to get in touch with new people who have the required qualifications.

The qualifications are determined in advance. However, the success of this technique is highly related with the quality of initial contacts.

This technique is identified as the best sampling technique for the thesis due to nature of the topic. The entrepreneurs that need to be interviewed are CEO of successful companies or entrepreneurs who are working day and night without any time for such activities. It would be very hard to meet them without an initial referral.

The chain started with initial referrals of thesis supervisor, İrge Şener. Starting from entrepreneurs from Çankaya University, the network was enhanced via including entrepreneurs from Sabancı and Özyeğin Universities. Personal network was also used to arrange interviews.

4.5 Participants

Interviewed entrepreneurs were selected with multiple restrictions:

1) The company should be less than five years old, should be still considered as startup but not a corporation.
2) Even if it's progressed further than the startup phase, all interviews were made related to initial founding days and decision making steps from that days.
3) The company should be a technology company. Preferably introducing a new service or a better way of doing business for an existing product or service.
4) The interviewee should be founder or co-founder of the startup and should be critical decision maker of the startup.
5) Selected startups could be both successful ones and the ones already failed.

Due to these restrictions, the study was limited to eight entrepreneurs. In addition, two Incubation Center Directors were interviewed. The Incubation centers are the ones within Sabancı and Özyeğin Universities. They are supporting the entrepreneurs from different perspectives like mentoring, introducing to a network of investors, providing initial office etc. They are not accepting every entrepreneur or startup idea but doing some analysis to understand if they are worth supporting. From this point of view, they are valuable information sources for this study as they had worked with many different startups.

Brief description of the entrepreneurs is listed below:

Entrepreneur 1: This entrepreneur was graduated from Middle East Technical University Electrical and Electronics Engineering Department in 2005. His parents were working for government institutions and did not motivate him at all for entrepreneurship. During his summer internships in Ankara, he decided these kinds of jobs are not suitable for him and started to think about starting his company. Even before starting to University he was doing some minor web based development projects and earning some minor income. The interview was conducted in his office in Ankara face to face.

Entrepreneur 2: Entrepreneur is an electronics engineer graduated from Ankara University. His first interaction with technology was started with his first computer, Commodore64, when he was nine years old. He learned coding with this toy and has been doing some outsource projects since then. He still has a company that works based on projects and creating outsource codes mostly to different countries and he finds the projects via global freelance project advertisement web sites. This small company is treated as "cash cow" to support his living while he also works on different products and startups. The interview was conducted via web conferencing as he lives in Antalya.

Entrepreneur 3: Entrepreneur 3 was introduced by Entrepreneur 2. He is also an engineer from a middle class family. He and his older brother were playing games since their childhood. They always wanted to build their own games for ages and that's how they decided to start their company. Their startup is a game development company. The team worked on game engine development and several amateur real time strategy and role playing games at the beginning. Their company has been active for more than five years now but since last one year they were not going well. They were about to close their startup just one year ago and they could manage to survive and now they are very successful. The interview was conducted via web conferencing as he also lives in Antalya.

Entrepreneur 4: Entrepreneur 4, Co-Founder of the startup, was introduced by director of Özyeğin University incubation center. He holds a Master's degree in Computer Engineering from Koç University and a Bachelor's degree from Middle East Technical University, Electrical and Electronics Engineering. He defines his motivation

of being an entrepreneur as his passion to convert his abilities to a value. Meeting was held face to face in Istanbul.

Entrepreneur 5: Entrepreneur 5, co-founder of the startup, was also introduced by director of Özyeğin University incubation center. He holds MSc Computer Networks from Royal Institute of Technology, Stockholm. He comes from a wealthy family and his aim is not to earn money at the first stage but help other people and be in the charity, "to create a social effect" with his words. Meeting was held face to face in Istanbul.

Entrepreneur 6: Entrepreneur 6 is an electronics engineer graduated from Çankaya University and still continues his academic work in the same University as a research assistant while working on his master of science. Although he was planning a steady career for himself, one of his class mates had changed his idea during an electronics class related to laser communication. Meeting was held face to face in Ankara.

Entrepreneur 7: Entrepreneur 7 is a Computer Engineer who is continuing MBA at Çankaya University now. He's coming from a family that also owns their business, not in R&D (Research and Development) but more in import and sales of electronic equipment. He started his company with one of his friends who were also willing to own his own business and make money. The only missing thing was the product idea. They started to follow technical forums, publications and conferences which finally lead them to the idea of touch screen products. Meeting was held face to face in Ankara.

Entrepreneur 8: Entrepreneur 8 is both a former entrepreneur and an incubation center director which makes him a valuable resource for this research. He was graduated from Stanford University, Industrial Engineering in 2000. After graduation, he started his career in investment banking of JPMorgan and BCP Securities in New York. Until 2005, he worked in this area and in the field of analyzing companies from a financial and strategic point of view. Following year, he started to work for World Bank Jakarta as a research analyst. In 2006, he decided to return to Turkey and joined the founding team of Endeavor's Turkey and worked there till 2008. Endeavor is an international organization which supports entrepreneurs in developing countries. Meeting was held on web conferencing via Skype due to busy schedule of the entrepreneur.

Information about the participants and their startups are summarized in the below Table 8,9,10 and 11:

Table 8- Entrepreneur Experience and Years of Startup Activity

	Main Activity	**Established Year**	**Background and Experience**
Entrepreneur 1	Digital Media	2011	Had another startup which is still active since 2006
Entrepreneur 2	Web Portal	2015	Had corporate experience
Entrepreneur 3	Digital Gaming	On and off since 2011, fully active since 2014	Still university student
Entrepreneur 4	E-shopping Big Data Analysis	2012	One failed startup
Entrepreneur 5	Digital Payment, Charity	2012	Had corporate experience
Entrepreneur 6	Communications Technology	2013	No entrepreneurship or corporate experience
Entrepreneur 7	Electronics Hardware	2009	No entrepreneurship or corporate experience
Entrepreneur 8	Web Portal	2010	Had corporate experience

The entrepreneurs that were interviewed were self-funded or they win an initial support prize from competitive contest (Table 9).

Table 9- Startup by Initial Funding Resource

	Initial Funding Resource
Entrepreneur 1	METU Techno park competition + Family and friends
Entrepreneur 2	Self-funded
Entrepreneur 3	Self-funded, Family support
Entrepreneur 4	Self-funded
Entrepreneur 5	Self-funded
Entrepreneur 6	Ministry of Science, Industry and Technology + METU Techno park Competition
Entrepreneur 7	Ministry of Science, Industry and Technology + Self-funded
Entrepreneur 8	Self-funded+ Angel Investor

Entrepreneurs prefer to start their companies in University techno parks (Table 10).

Table 10- Startup by Office Location

	Office Provider
Entrepreneur 1	Middle East Technical University
Entrepreneur 2	Akdeniz University
Entrepreneur 3	Akdeniz University
Entrepreneur 4	Ozyegin University
Entrepreneur 5	Ozyegin University
Entrepreneur 6	Çankaya University
Entrepreneur 7	Ankara University
Entrepreneur 8	Not available

All of the entrepreneurs interviewed for the research were engineers, majority of them with Electronics major (Table 11).

Table 11 – Entrepreneurs by Education

	University	**Major**
Entrepreneur 1	Middle East Technical University	Electrical and Electronics Engineering
Entrepreneur 2	Ankara University	Electronics Engineering
Entrepreneur 3	Süleyman Demirel University	Computer Engineering
Entrepreneur 4	Middle East Technical University	Electrical and Electronics Engineering
Entrepreneur 5	Yeditepe University	Computer Engineering
Entrepreneur 6	Çankaya University	Electronics and Communication Engineering
Entrepreneur 7	Çankaya University	Computer Engineering
Entrepreneur 8	Stanford University	Industrial Engineering

4.6 Interviews

The main interviewing technique was narrative interviewing. It was tried to make entrepreneurs talk about their initial days and some directive questions were also asked to get perception on the five principles of effectuation theory. Semi-structured interviews were conducted with eight entrepreneurs and two directors in a time span between April-June 2015. There exists different number of questions based on entrepreneur and the available information that were already gathered from web before the interview. General summary of the questions are listed in the interview guide is presented in Appendix-I.

The orders of the questions are different for every interview based on the progress of the interview. Before starting the interviews, extensive internet research about the startup and the entrepreneur has been completed. The aim was not to spend limited time of the busy founders with basic questions like when they founded, what is their education level etc. It was not only a time saving activity, it also allowed to prepare more to the point questions to understand the effectual logic usage of the entrepreneurs. The formats of the interviews were more like a conversation than question and answer session. To create a friendly and relaxed environment, the interview was not recorded but notes were taken about the key points. Due to nature of the research, there will be no transcript but a detailed summary will be included (Appendix II).

CHAPTER V

RESEARCH FINDINGS AND ANALYSIS

Interview summaries for each of the cases are presented in Appendix-II. All of the cases were examined through the perspective of five of the effectuation principles and the findings were analyzed cross-case.

5.1. Interview Analysis

Findings Related to Bird-in-Hand Principle:

Entrepreneur 1: The way Entrepreneur 1 and his class mate used their school project and school partnership to create a million dollars company is the first signs of Bird in Hand principle.

Entrepreneur 2: The starting logic of Entrepreneur 2 is definitely complying with Bird In Hand principle. He used what he knows, who he knows and what his need is. He knows how to code, he has coder friends, has two small children going to kindergarten which lead him to his project.

Entrepreneur 3: He first started with what he knows best which is video games and coding. He says: "Our team members are all hardcore gamers playing games since the early glorious days of games. Everyone on our board has passion about role playing and strategy games." They look into their family to find first fund to start a company. This is in parallel with Bird in Hand principle.

Entrepreneur 6: The startup idea of Entrepreneur 6 was found during a technical class. He and his classmate thought they already know the technology and they can do it. So they started with what they know and get the support of their university resources to start which is who they know. This is a sign of Bird in Hand Principle.

Entrepreneur 7: His motivation was to start a business. As he didn't know what to do and only aim is to start a business he keep watching technological videos and sectoral news to get an idea. So he was not using Bird in Hand Principle.

Findings Related to Affordable Loss Principle:

Entrepreneur 1: Despite starting the football match tracking project with a thought about how much they can earn on his first startup, he changed his vision to Affordable Loss on second startup. This is also a supportive finding to Effectuation Theories's expert entrepreneurs tend to use Effectuation finding. With his second startup, he was an expert entrepreneur and started to use more Effectuation.

Entrepreneur 2: He started with possible income predictions which made them to move away from Affordable Loss principle.

Entrepreneur 3: Entrepreneur 3 never started the job thinking of how much they could earn. They just knew they have 170.000 TL their family could afford to give them and that was their Affordable Loss.

Entrepreneur 6: He is an entrepreneur who is not motivated with money but motivated with creating products. He never calculated his potential earning. His affordable loss was the money he earned from support programs. He acts according to Affordable Loss principle.

Entrepreneur 7: As per his interview, he said he was not calculating potential profit but he was calculating how long they could survive with their own money. He used his real estates as initial research and development fund. He says: "During this period we sold three houses and bought a lot of LCD televisions to understand the working logic of screens by disassembling them into pieces. Afterwards we presented them to relatives; almost all of them got televisions because of us." These are signs of Affordable loss principle.

Findings Related to Lemonade Principle:

Entrepreneur 1: He faced with Lemons multiple times. First they had the problem with Turkmenistan government and almost lose all his employees. This led him to decrease the product line and focus on important products. Also the distribution and partnership channel they have now is triggered from this problem. Another lemon was

when the journalists made misleading news from his explanations about product technology and accused them with unpleasant news: “Great cunning ... METU businessman told the way to escape from the EDS (Electronic Data Systems) system!” They could manage to make lemonade from the lemons in both times and came stronger and stronger.

Entrepreneur 2: Related to Lemonade principle, he didn’t provide much evidence. The difficulties they faced were related to financial support and they couldn’t create an opportunity out of the problems.

Entrepreneur 3: When things went crazy and much unexpected like Soma disaster, a big competitor came and crashed their project; they could successfully pivot to outsource game coding business and could manage to survive while extending their business. This is a perfect sign of Lemonade principle for Entrepreneur 3.

Entrepreneur 6: When he realized the laser technology doesn’t have a wide range of opportunities and also had some health effects on their eyes, they could successfully pivot to another technology. This is a good example of Lemonade principle.

Findings Related to Crazy-Quilt Principle:

Entrepreneur 1: The way he found partners early on his startup ideas, his co-founder of first startup was his class mate. Getting funds from angel investors; he explains funding procedure as “we used 3f rule while searching money for the startup, friends, family and fools. We could manage to find a ‘fool’ to invest us” and he loughs, “seems he was not that fool, now we are a big company”. Finally his partnerships with global competitor, agreement to translate and use the content from Buzzfeed, are all examples classified under Crazy Quilt principle.

Entrepreneur 2: As they do not see any competition in the market for themselves, he did not make a comment on competitive strategy or strategic partnership so it makes hard to evaluate them for Crazy Quilt principle. They go to the investors with their minimum viable product, show them the system and wanted to get early commitments and get fund. They also showed the product to potential customers and ask

if they would buy it. One of the pain points mentioned by him was “due to our culture, people are not giving open and honest feedback and every potential customer said it would be perfect but when it comes to real purchase they did not want to buy it.” So we can count them as in the middle applying Crazy Quilt principle but it was expected for them to push harder to get real support before moving further.

Entrepreneur 3: The approach of the entrepreneur to get their friends into the board of their company for both technical and marketing jobs is a good example for Crazy Quilt. As all the team is crazy gamers, they are native to know which kind of products would work in the market and as they are also coders, they got their early commitment for development.

Entrepreneur 6: He had already started to look for potential partnership from market giants; they show the signs of Crazy Quilt.

Findings Related to Pilot-in-the-Plane Principle:

Entrepreneur 1: He defines his goal as to become Turkey's largest media company. He is trying to shape the new media which makes him Pilot in the Plane. He defines him as future oriented and not a person living in the past and analyzing what happened, what would be the result, what was the cause.

Entrepreneur 2: For Pilot in the Plane principle, the actions of him do not show any signs of it. This might be due to not willing to spend time on the product any further and they seem to be abandoning the product now.

Entrepreneur 3: For the Pilot in the Plane principle, his approach on outsource games was also aligned with effectuation. They told that they are not only taking orders from the customers and develop it but they direct their customers in different directions both from revenue generation of the potential game and technical specifications of the game as they know the market well. They are not looking for the money of their customers and does whatever the customers ask but they also direct them to the right way they believe. They want to change the gaming industry and they believe they have a lot of knowledge on customer preference and experience. So instead of

allowing their customers to lead them, they are trying to lead the customers. This logic was clearly seen in the following quote: “Our aim, however, is not to obey business side of the gaming. Instead we dream creating new worlds and new experiences.”

Entrepreneur 6: The technology Entrepreneur 6 and his partner are working with is very new to Turkey and also to the world. He is not looking for basic ways of doing business and following the popular trends but he wants to be the Pliot in the Plane.

General Findings about Effectuation Theory:

As a result of interview analysis, it was traced out that most of the successful entrepreneurs use the main principles of effectuation theory. Three of the interviewed entrepreneurs are using all principles of Effectuation: Entrepreneur 1, Entrepreneur 3, and Entrepreneur 6. These startups could be classified as successful as of their current situation.

Entrepreneur 1: His startup is a very good example for a successful startup. He shows many aspects of Effectual thinking during the interview and while telling about his progress. The startup is one of the most popular portals in Turkey now and we had already started to see similar sites trying to replicate the similar business model of the company.

Entrepreneur 3: This startup is acting aligned with Effectuation logic. With their lessons from Soma and Kickstarter problems, they now know that they cannot predict the future whatever they do. So they are only making very short term plans and walk to their dream of changing gaming industry. In conclusion, Entrepreneur 3 is a good example of a successful startup using Effectuation.

Entrepreneur 6: Despite not being an active product seller yet, the products they are working on are very bright. The entrepreneur’s motivation and way of thinking is aligned with effectuation logic and it is believed that a bright future is expected for this startup.

Some other examples are partially using Effectuation principles on their decision making process. For example:

Entrepreneur 2 started the business with Bird in Hand principle but he didn't used remaining 4 principles. He also admits that most probably they will be closing the business soon if they cannot find additional funding or new customers.

Entrepreneur 8 already knows the theory of Effectuation, he personally attended to a seminar delivered by Sarasvathy and he believes this theory would lead to success if it's applied to a good product. When he thinks about his failed startup, he can see that he did not used all aspects of theory but only couple of them like bird in hand while selecting the market, lemonade while trying to pivot. The most important reason for failure is wrong expectations and product itself for his case. His comments were also confirmed by us from the interview. He started his company with a good Bird in Hand evidence and could manage to pivot successfully but this was not enough for him to succeed.

Entrepreneur 7 hadn't talked about potential partnerships (Crazy Quilt), they are not using a brand new technology or they are not leading the market but more a follower (Pilot in the Plane) and he didn't talk about any major problems they faced and need to adjust their actions (Lemonade). So they are only showing the signs of Affordable loss.

On the other hand, it was found out that Entrepreneur 4 and Entrepreneur 5 were not using the principles of effectuation for their start-ups.

From **Entrepreneur 4's** first startup, it's hard to see any Effectual logic being used. He was using total causal logic. They jumped into the business without knowing anything or anyone, his motivation was his potential earnings etc. From his second startup, similar to first one, it was not possible to get signs of effectual logic.

Entrepreneur 5 didn't show any signs of Effectuation during his interview. Despite being a very good social project and having support, the startup was never expected to become a real business and they are planning to handover the company to charity at the end.

Based on all the interview findings, the summary of Effectuation principle usage is presented in Table 12. As can be interpreted from the Table-12, most of the interviewed entrepreneurs use 'Bird-in-Hand' principle. The least used principle is

Crazy Quilt. This is not a surprise, most of the entrepreneurs are coded to deal with the competition or keep their idea to themselves not to lose their valuable idea.

Table 12: Entrepreneurs by usage of Effectuation

Entrepreneurs	Bird in Hand	Affordable Loss	Crazy Quilt	Lemonade	Pilot in the Plane
Entrepreneur 1	x	x	x	x	x
Entrepreneur 2	x				
Entrepreneur 3	x	x	x	x	x
Entrepreneur 4					
Entrepreneur 5					
Entrepreneur 6	x	x	x	x	x
Entrepreneur 7		x			
Entrepreneur 8	x			x	

5.2.Secondary Resources

This section is dedicated to important startups of Turkey which already complete their exit or become corporations. As it was not possible to arrange an interview with the CEOs and there were already a lot of available interviews available, it was decided to compile a secondary resource analysis with some of the entrepreneurs.

5.2.1. Startups that did not use Effectuation

There are many successful internet startups in Turkey since last five to ten years. Despite the number is high, majority of the startups are trying to adopt a successful business model of another startup from other countries. Most of the times, they were showing signs of causal decision making. This study is interested with new product or service model generated startups so many of the important startups are not considered within the research. These are:

Gittigidiyor, Şükrü Andaç: Using the business model of eBay and already acquired by eBay. Gittigidiyor was second largest exit of Turkey after Yemeksepeti but it will not be investigated in detail as it is not meeting the startup criteria of the study. The company was founded by Serkan Borançılı, Burak Divanlıoğlu and Tolga Kabataş. During their interview with Şükrü Andaç, Milliyet Technology Editor in 2011, they

explained their logic on startups as there is no need to discover America again and confirmed they will continue with already tried and successful business models in the future. Their success criterion for Gittigidiyor was a very fast exit by selling the company in the first place (Andaç, 2011). The founders directly adopted a successful business model from another company and applied it with a causal manner.

Hepsiburada, Kaan Dönmez: Hepsiburada was founded in 1998 by Kaan Dönmez. The company is owned by Doğan Holding and they were one of the first online shopping sites in Turkey. They have first movers advantage but working with a replicable business model. As the company is owned by a big company, valuable data about the founders and initial story could not be obtained. On the other hand, they are not bringing much innovation to online shopping, so Kaan cannot be evaluated as an Effectual entrepreneur.

Markafoni, Sina Afra: Markafoni is the first private shopping site of Turkey. It was founded by successful Turkish entrepreneur Sina Afra. He was graduated from Business Management. While he was working for eBay, responsible from acquisitions, he had a chance to work with startups and realized this different world (Atasoy, 2014). He saw the absence of private shopping in Turkey and decided to start Markafoni in 2008 and three years later sold 71 percent of Markafoni to Cape Town-based Naspers for about $200 million (Harvey, 2012). Despite its success, it doesn't meet the startup criteria but more a successful execution of a known business model.

Trendyol, Demet Mutlu: Trendyol was founded by Demet Mutlu in 2009 as another internet shopping web site in Turkey. According to her Linked-in page, she holds bachelor's degree from New York University in Economics and an uncompleted master's in business administration from Harvard Business School. She has around 6 years of corporate experience before starting the company (Linked-in, Demet Mutlu). In 2011 she was listed as Fortune's most promising women entrepreneurs list (Sellers, 2011). Trendyol doesn't meet the startup criteria but more a successful execution of a known business model.

Grupanya, Onur Yıldırım: Grupanya was co-founded in 2010 by Onur Yıldırım. Other two co-founders were Mustafa Köne, and Baran Dilber. According to

his Linked-in page, he holds Electronics and Communication Engineering degree from İstanbul Technical University followed by Master's and P.h.D. degrees from Bosphorus University on Biomedical engineering. He started a web design company when he was student and also worked in corporate life for some years (Linked-in, Onur Yıldırım. Grupanya is a replica of Groupon business model, e-commerce marketplace connecting millions of subscribers with local merchants by offering discount on activities, travel, goods and services.

Sahibinden.com, Taner Aksoy: The company was founded by Taner Aksoy, board deputy chairman of Aksoy Group in 2010 (Sahibinden.com web site). The entrepreneur was already owner of a family company and business model is replicated from other portals like Ebay, Amazon and Craigslist.

5.2.2. Startups that use Effectuation

Nevzat Aydın, Yemeksepeti: Yemeksepeti was selected as eligible startup to investigate for the study. Despite using a known idea of online food delivery, they were the first to bring this idea in Turkey and in a much more enhanced way compared to the companies worldwide.

Nevzat was graduated from Bosphorus University, computer engineering in the mid-90s and started to MBA program in University of San Francisco. While continuing his MBA, he followed the latest developments on e-trade and personally used services to order food frequently. He returned back to Turkey in 2000 to launch his project yemeksepeti.com. He's still the CEO of Yemeksepeti and has major impact to e-trade in Turkey. He is a Member of the Young Entrepreneurs Supreme Board of the Union of Chambers and Commodity Exchanges of Turkey and a Founding Member of Galata Business Angels. Nevzat Aydın was one of the 150 entrepreneurs invited from all over the world to the Entrepreneurship Summit held by US President Barack Obama on 26-27 April 2010 (US Embassy, 2010).

He saw the idea of food ordering via internet while he was in United States. He was an engineer who knows coding and this was not a hard code to write. He shared the idea with his friends and also involved them. They also used the connections of their

friends and relatives to make deals with restaurants and also as their first customers: "In 2001, we got our first 25 restaurants -- friends of friends -- and pretty much willed other friends to order." These are examples of Bird in Hand Principle.

First 5 years of the business was hard and they didn't earn any money but they didn't give up. He knew it will be hard at the beginning and he didn't start with potential income forecasts but knowing how much they can lose. This logic was also confirmed by his co-founder Melih Ödemiş: "We were new graduates living with family and nothing to lose. We could only lose one - two years of our possible corporate career and possible one - two years of salary." This is the evidence of Affordable Loss principle.

Aydın decided to start his internet food ordering company when the country internet penetration was only 3-5%. When he go to the field and wanted to check the validity of his idea with restaurant owners nobody was interested. He believed his idea and instead of giving up, he decided to create the future and started the company. This is clear sign of Pilot in the Plane principle.

Aydin preferes to enter foreign markets via partnership with the local companies. Instead of trying to enter an established market and make plans against competition, they prefer partnership and this is sign of Crazy Quilt principle.

Yemeksepeti was one of the lucky startups who didn't need to make a big pivot since from the start. From the available interviews, we couldn't find big problems that would let us to analyze the Lemonade Principle usage. On the other hand, if we think about the general progress of the company, building one of the biggest internet companies of the country in an era where household internet usage was almost zero is the biggest challenge. He did pretty well on decision making under high uncertainity and most probably he would successfully use Lemonade principle if the situation required.

The details of the secondary interview are given in Appendix III.

5.3.General Evaluation

The first hypothesis of the study was: Entrepreneur's personality plays the biggest role on startup success or failure.

Entrepreneur's motivations, definition of success for them, how patient they are, are very important factors. It was found that motivation and patience are correlated. If an entrepreneur's motivation is to make money quickly or if they start with specific goals in advance like timelines for getting profits etc. they are more likely to give up their startups earlier or they are not giving enough time for their startups to succeed. Most startups do not become successful overnight. The unknown story from outside is the fact that it takes a lot of hard working, endless sacrifices from social life, continuous psychological ups and downs to finally reach to a successful product. Startup owners and employees cannot make big amounts of money in first couple years. These living standards cannot be handled with many bright business people or bright engineers when they know they could have a good salary and a steady life if they work in corporations.

On the other hand, if an entrepreneur's motivation is related with more moral values than financial goals, they would be more motivated to continue when they face with a difficulty. The famous motto of many Silicon Valley startups is "to make the world a better place" these days. Some are genuine, some are not but they definitely realized it's bringing more support from both investor and customer side.

The expectation of the study for this hypothesis is the entrepreneurs with motivations other than becoming rich quickly have more chance to succeed. This hypothesis is also aligned with the Effectuation theory. Rather than starting with the plans of possible income from the startup, entrepreneurs starting with are the maximum they can lose are supposed to be more successful.

As a result, the first hypothesis is accepted.

The second hypothesis of the study was: The entrepreneurs using Effectual logic on their decision making steps during initial phases of the company has higher chance to succeed.

The most important value brought by Effectual logic is its' help dealing with ambiguity. It acknowledges that not all the plans and decisions should be made in advance but when it's needed. It also creates an organic chance for a primitive market research or sanity check as it looks for early partnership and kind of getting feedback for the possible product. The entrepreneurs operating in this logic knows everything will not

be perfect and they know that both good and bad surprises are part of this journey and they would not give up quickly. This doesn't mean that effectual entrepreneurs fall in love with their initial business idea and doesn't make any changes on the plans. They would make pivots when needed.

One of the most successful startups interviewed for the study was Entrepreneur 1's startup. From his interview it was found that he acts with Effectual logic. Entrepreneur 6 was another entrepreneur acting with Effectual logic. Despite they do not start their product shipments yet, they are showing very good progress from possible partnerships they are currently working on and multiple support awards they already won. It's matter of time for them to bring real dollar value.

Two entrepreneurs that already declared their startups as failed were Entrepreneur 2 and Entrepreneur 8. Not surprisingly the founders were only using one or two principles of effectuation.

The exception startup was Entrepreneur 7. The founder was only using Affordable Loss aspect of the Effectuation. According to him, their startup was successful. As we don't have access to financial details of the company we should trust the comments of the entrepreneur. Also it's known that he started the company with another co-founder. So the second founder might be complementing the missing parts of him.

As a result, the second hypothesis is accepted.

CHAPTER VI

DISCUSSION AND CONCLUSION

A new work environment culture has born. A culture which creates disruptive innovation and disruptive business models. A culture which is very agile, deals with uncertainty and limited budgets more effectively. A culture which is focusing on cooperation and generalization of their work power instead of specialization. A culture that is going to change the world in ways hard to imagine from today. A culture called STARTUP.

Startups are the most important fuels of economy and technology these days. Due to their importance, this research investigated the reasons that lead to startup failure. With sectoral research and direct interviews with both failed and successful entrepreneurs, the primary analysis has been completed.

While researching the failure reasons, the focus of the research was to understand the reasons directly related to entrepreneur him/herself and his/her decision making mechanism. Despite there are many available entrepreneurship and innovation studies in Turkey, we could not find any studies related to Effectuation. As of our knowledge, this is the first Effectuation study related to Turkish entrepreneurs.

Another importance of the research is that most of the studies research the external environment factors related to startup or product success. Our study is not only focusing on product but specifically to technical startups. There are not much studies concentrated on technical startups in Turkey. Also our study is focusing on internal factors of entrepreneur him/herself.

This study could create some awareness about the different needs and different environment of startups compared with corporates.

Regarding the findings, first interesting finding was related to the gender of the entrepreneurs. It was not possible to find a female entrepreneur within our network. This

small sample group is also aligned with the general picture in Turkey and all around the world: majority of the entrepreneurs are male. On the other hand, the ages of interviewed entrepreneurs were between 25 and 35 which is a fairly young population. Another finding was all of the entrepreneurs that we interviewed were engineers, most of whom are computer or electronics engineers.

This might seem as an inevitable result due to the restrictions that the research has for the selection of startups: which is being a technology company. On the other hand, we are living in an era of technology and not only engineering graduates but many social science graduates, especially business management graduates, are working in technology companies. It was expected to interview some business management graduates to be founders or at least co-founders of some startups, however it was not possible.

It was seen that, majority of the entrepreneurs needed to use their own resources to start or continue operation of their business. It was also raised as a pain point during interviews. Due to cultural habits of the Turkish people, the parents are willing their children to have a steady job in a reputable company with a predictable income. It was very hard for all of the entrepreneurs to find their initial fund. Despite many other funding resources both from government institutions and private sector, the most frequently used support programs were from The Scientific and Technology Research Council of Turkey (TUBITAK) and Ministry of Science, Industry and Technology after University techno parks.

Since last couple years, nor Turkey neither worldwide startup ecosystem were not discussing about startup success of Turkey. In 2011, eBay announced the majority stake acquisition of Gittigidiyor. In 2014, MIH Allegro BV completed the acquisition of Markafoni and finally the biggest exit of Turkey was Delivery Hero's Yemeksepeti acquisition. This kind of successful exits increased the attention of foreign investors to Turkey. There is one more important result of these exits: they created new angel investors. Sina Afra, Nevzat Aydın and many other successful expert entrepreneurs are now investing and willing to invest more to startups. This leads to the development of startup ecosystem in Turkey.

6.1. Turkish Startups from Innovation Perspective

Unfortunately, Turkish startups are not creating as much innovation as their fellows from Silicon Valley, Europe or Israel. While trying to identify possible startups to be interviewed or famous companies that were startups in the past, it was seen that Turkish startups are more followers than innovators. The most common internet startup company type these days is internet shopping companies. Many startups created web sites or smart phone applications to replicate the successful business models of the famous companies like hotel booking web sites, daily discount coupon sites, taxi sharing applications etc. Turkish way of entrepreneurship is more about successful execution of a known business model and product. Therefore, it could be suggested that Turkish technology based entrepreneurs use causation much more than effectuation. As indicated in the secondary source details, some of these companies are already sold to foreign companies.

These observations are also confirmed with Bloomberg Innovation Index (Bloomberg, 2015). Turkey was listed in 35th rank within 50 countries. Details could be found in Appendix-IV.

6.2. Findings Regarding to Effectuation

From the analysis of both first and secondary resources, it was seen that almost all of the successful entrepreneurs are using Effectuation principles. Despite there is no one true way of decision making and it highly depends on the situation, Effectuation helps entrepreneurs to deal with the problems during initial phases of the startup better than Causal logic.

It was also found that, the entrepreneurs who are starting a business with already available business plan from competitors or similar companies from different countries tend to use Causal logic and this logic perfectly works for them.

Another important topic is about the alignment of classical business management approach and the Effectual logic. As stated during the study, Effectual entrepreneurs are not 100% dependent on classical reports like market research or they don't make

extensive planning activities before acting. This doesn't mean that Effectual logic doesn't support entrepreneurs to do any planning or research. It suggest not to spend a lot of time at the beginning for intensive planning but jump into action and be flexible to modify the plans along the way based on changes and needs. It was also seen that if the successful entrepreneurs with unusual business models or products made market research, most probably they will not start their venture. For example there are not a lot of people around dreaming of living in Mars or willing to buy a space travel ticket to compensate the Elon Musk's dream in SpaceX. When Nevzat Aydın asked if the restaurants are willing to be in their system, they said: "we even don't have a place to put internet in the restaurant" thinking internet is something like a refrigerator or something. If Entrepreneur 1 made all his plans with over tracking the balls, he would not think out of the box and modify his system on different usages or not even his second startup would have born from a bad interview experience.

In summary, it was investigated that entrepreneurs using Effectual logic at the early days of their venture has more chance to be successful compared to Causal entrepreneurs. On the other hand, Causal logic should also contribute to decision making in later phases of a company for continuous success.

6.3. Limitations of the Study

It was very hard to find startups within the specified criteria of the study in advanced. As non-technical products and the technical businesses which are direct replicable business models of an already known business as startup was not categorized, the numbers of startups to be interviewed were limited. Second limitation is about the entrepreneurs not being very responsive to interview requests unless interviewer was introduced by one of their acquaintances. From this aspect, snowball technique was the best sampling technique for this thesis.

Apart from these limitations, as conclusion, supportive findings for Saras Sarasvathy's Effectuation theory were derived from the findings of this study. The entrepreneurs that use Effectuation decision making logic in early days of their startups are more successful and the ones that don't use have higher chances of failure.

APPENDIX I: INTERVIEW GUIDE

Bird In Hand

- What was your motivation and how did you select the market?
- Do you have enough technical/market knowledge to survive or did you leverage from someone else?
- What was your initial financial resource?
- How did you set the amount you could spend?

Pilot in the Plane

- Do you believe in market research? To which extend did you use it?
- Do you think entrepreneurs can predict the future with research?
- Which one defines your strategy? Catching the wave or creating the wave?

Lemonade

- What kind of bad surprises did you face with? What was your response?
- Any of them turned into something good?
- Did you make any pivots?
- What was your reaction to surprise?

Crazy Quilt

- Did you have any early partnership?
- What is your approach to competition?

Affordable Loss

- Did you make any business plan like possible income or loss?
- What were you willing to lose?
- What is your quit line? At the point you spent your entire target budget or you don't get profit for an amount of period?

APPENDIX- II INTERVIEW SUMMARIES

Entrepreneur 1

For his university graduation thesis, he and a friend of him made a robotic arm that would track and catch a ping pong ball that was dropping down from an inclined plane which was separated by nails. While trying to complete this project, he got his first startup idea during a friends gathering. One of the friends arrived late mentioning he was having an Astroturf match and scored a great goal, wished he had a chance to show his friends. This was the eureka moment for him. Entrepreneur and his partner thought if they can tract the ping pong balls, they can track football balls and create a system to record goals and can sell it to astroturfs. They made a research, there were 12.000 astroturfs in Turkey, if they can sell this system to 1.000 of them from 5.000$ price they would make a fortune. That was how they decided to start the business.

They got their first fund from METU (Middle East Technical University) Teknokent, 'New Ideas New Businesses' contest being second best and rewarded with 10.000 TL and a 25 square meter office. They started to have meetings with astroturfs from İstanbul, İzmir, Ankara and could manage to sell only three systems. Then they tried their chance on tennis court which also was not more than two - three sales. In the meantime his parents were insisting him to start a regular job and not providing any financial support.

With the same tracking and counting logic, they decided to make a pivot and count people in shopping centers. They started their first startup and their first sale was made to Antalya airport. It was followed by olive counting, sheep counting; sack counting and the company had a great success finally and made one million dollars of revenue in 2010.

With their image recognition technology, they also had some different products like registration plate recognition. With this product they got a job opportunity from Turkmenistan government. The project was to track the registration plates of government cars on the way that president uses daily. Due to political situation in Turkmenistan, this was a top secret project. The team made their assessment and they accepted the project, planning to finish it in one month. His co-founder and five more

engineers from the company went to Turkmenistan and government told they need to take their passport till the end of the project as this was a secret project. After starting the project, they understood that government registration plates were not having a specific reflector component which was a must, for technology wise recognition. The government did not accept their solution and did not allow the engineers to fly back without making it work. It took three months to get the engineers back to Turkey with technical expert approvals from METU saying that this cannot be done without changing the plate systems.

During this time many other projects delayed, they cannot deliver some projects and they faced with around 700.000TL liability. The engineers resigned when they returned back to country. He faced with the *Lemons* and needed to find a way to survive. He decided to close all different product departments and only focus to people counting. They decided not to make any onsite business anymore and made some partnership agreements to deploy their products onsite. With this new action, they could survive and turn the events back to track.

In 2011 things were on track. Once they got a call from METU Teknokent management telling that there are some journalist visiting Teknokent and they want to make interviews with successful companies. He accepted to have an interview with them. While explaining why their product and technology was superior, he gave an example: "Our Radar system is different than we've seen anywhere in Ankara. Our system is placed on the roadside all the way to perceive that there is a high resolution camera. With the current systems they need to use multiple cameras and they are tracking one strip. If you drive in the middle of two strips, other systems cannot capture, but our system can." Early next morning he woke up with a phone call from a mainstream media channel requesting an interview. When he checked the newspapers, he saw himself all over: "Great cunning ... METU businessman told the way to escape from the EDS (Electronic Data Systems) system!"

This was the other *lemon* he faced with. That day he started to think about a way to control media, a way to publish important news ideas by people themselves. He decided to create the new media which people not only read the news but can also create

their news and participate to the material. That was the time he registered domain name of his second startup, September 2011. He rose around $ 250.000 fund and they released first beta site in March 2012, followed by official release in August 2012.

For their promotion, they made a basic market analysis. They saw that the most popular daily newspaper sites have an average visitor age of 35. They evaluated the ways to reach to younger people and they saw that they don't want to enter newspaper sites to get news but they believe if there is something important, someone will share it on Facebook or Twitter. He explains their action: "Then there was no media channel to embrace the young audience. A Turkish entrepreneur opened an account named CNN last minute and he was tweeting the news from CNN. He was reaching 630 thousand followers and he wrote there, ' This account is for sale'. We immediately got in touch with him, because our aim was to enter people's timelines. Since last 3 years, we can reach the number of followers he already had a good deal ... with that account, we bought it. Currently we have 840 thousand followers. "

In October 2012, they received an investment of about 600 thousand dollars. Now they are trying to finish the procedures to open Russian and Arabic versions of the site and about get three million dollars more from a London-based investment fund for these new entities. The reason they selected Russian and Arabic versions is that both regions are near to Turkey and they don't have similar media portals. Also there are a lot of internet users in both regions if we count Russian speaking countries like Azerbaijan, Kazakhstan and the Middle East countries speaking Arabic language. The other reason for selecting these regions is that they have available resource to support translations and operation easily in Turkey. They are planning to leverage from Russian people especially living in Antalya and there are a lot of people speaking Arabic languages in Turkey. "Our startup (they use the startup name here) will be very nice" is their slogan and now they are 15th most visited website with 1.5 million visits per day.

Despite being one of the pioneers in the market, they have some global competitors. Buzzfeed is one of the most important global competitors and they decided to make a partnership with them. They have a special agreement to use their content and they are translating some of their content to Turkish weekly. With this partnership, while

enriching their content, they are also getting extra traffic from people who don't understand English. This partnership also helps them to deal with the critics like, being a replica of Buzzfeed. He also mentions that they tried to collaborate with local players in the market to agree on a level of price for their advertisement customers but he could not get supportive approach.

Entrepreneur 2

He discussed the details of his startup which is a portal project for children day-care center. The system has multiple modules including finance and accounting. The portal allows parents to track their payments and liabilities, social media component which allows day care centers to share photos of children during daily activity, some internal tools for centers to use for their human resource management etc.

The interview started with the motivation of the project, how it was started and why this specific service was selected. He started the explanation with his previous job experience. Most of his previous outsource projects was related to financial systems, online payments and web portal development. So he already knows the technical details and was not hard for him to develop this portal in the first place. Second motive was his family; he already has two young children who also go to day-care center. In 2014, Ministry of Education restricted schools to share photo, video or voice sharing of children in open social media sites (Ministry of Education, 2014). He saw the opportunity here and decided to start the project with his partner.

His project selected as one of the 15 projects that will be supported by Etohum, accelerator and seed investor. The accelerator wanted to see first sales before providing the seed investment (20.000 TL) which made the team to continue pitching to different investors to find initial money. Their starting point was an income calculation with logic like: there are 6.000 day-care centers in Turkey, if we could sell our system to half of it, we are asking for 69 TL monthly per customer, this would be enough money to keep business going.

When they started to approach to their customers, they realized that the big chains are asking to get the product for free to be a reference for rest of the schools,

while small ones are asking it for free as they are too small to make the payment. They understand things will not be easy for them and decided to make a partnership agreement with a promotion company to make the sales and get a specific amount of the income. This partnership just started couple months ago and they don't have any customers yet.

As a last resort they are planning to put the product to a crowd funding project and ask money from individuals to make donation for the day-care centers. If a day care center gets enough donations to get the product, they will deploy it. It will be a charity project for people while the centers are not paying any money, startup will continue to get payed.

As they don't see much is coming from the project, the team is in the middle of defining it as a failed startup or ongoing startup. Currently they are not willing to invest more money and time on the product before finding first customers; the project is kind of on hold.

Entrepreneur 3

He defines his team as follows: "Our team members are all hardcore gamers playing games since the early glorious days of games. Everyone on our board has passion about role playing and strategy games. We also follow game industry very closely. Our aim, however, is not to obey business side of the gaming. Instead we dream creating new worlds and new experiences."

He explained their motivation as to create their own games and to change the gaming industry. His brother and him both were engineers and have different technical knowledge complementing each other. Their family was their first supporter when they decided to start their business and family invested around 170.000 TL. With this first seed, they started to develop games both for mobile and web. For three - four years they developed games and could not earned much money. He insists their aim was not the amount of money they would earn in the first place but they wanted to develop games.

Last year, they were planning to publish a new game after a long development. They decided to publish it first in Kickstarter.com which is a crowd funding portal to get some investment. The same day they published their project, Soma mine disaster was happened. This tragic accident prevented them to make advertisements in local market and they decided not to make any promotion in Turkey as they count on overseas market. Unfortunately they noticed that another well-known game was also published in Kickstarter just after 1 hour they published their project. Due to this unexpected second situation, they also lose their expectations from other markets. The project was available in the portal for 12 days and they started to remove it without getting the funding they required. After this unpredictable experience, their motivation went down. For around one month none of the partners came to the office, some worked from home, some went to holiday.

While trying to find their way, the bigger brother brought an outsource project which could be finished in one day and bring them 300$, not a bad amount to survive during this period. They decided to leverage their knowledge on programming and game development to do outsource business. With this new opportunity, they could earn money with much more risk and they would have a chance to work on their side projects in parallel. He says now they earn almost 1.000 times more compared to last year these times.

Their dream company is Google who changes the world and another famous gaming company Blizzard which produces very famous video games like World of Warcraft, Diablo, StarCraft etc.

Entrepreneur 4

Before founding his current startup, he co-founded a web start-up. This startup idea comes from his personal problem he faced at the last year of university education. While applying to universities out of Turkey for masters, they needed to post a lot of documents internationally and needed to pay a lot of money for each post. It was the times he watched the movie called “Cast Away” which was about an FedEx executive Chuck Noland (Tom Hanks) who had a plane crash during a business travel. He and his

partner decided to go to FedEx with a copy of the movie in their hand claiming discount for the posts they bring to them saying they are fans of the company. FedEx impressed with these young enthusiasts and agreed to support them to deliver two value added shipment solutions to university student market.

After earning some customers, they decided to scale their business to small medium business market as well. They didn't talk to their potential new customers in advance and they didn't know the market as well. In the meantime, they started to have some cash flow problems from the deals they made with channel partners of FedEx and they finally closed the business.

Afterwards, he decided to try his chance on corporate company to earn money. He worked as a mobile applications ecosystem manager at Nokia. He pioneered product strategies, negotiated strategic partnerships, and led business development for Nokia Store applications. He initiated and managed a mobile entrepreneurship fund with eTohum, and became a key contributor/investor of the local mobile application industry.

His second startup is a personal shopping guide bringing customers similar products and trends among shoppers like them. The startup aims to become a platform where shoppers from all around the world help each other shop. He defines the product as: "We believe in social influence, social shopping and the power of collaboration among shoppers. All of us are shoppers and there are many times when we cannot decide what to buy, where to buy and wonder if there are better options. With our startup, we'd like to make it easier for you to decide, shop smarter and better". He defines the most important advantage of his new startup as being a real time product suggestion tool.

Entrepreneur 5

The startup is a fund raising system which allows you to choose a civil society foundation and to fund them by rounding up your total price of your basket in an online shopping site when you pay with a credit card. They already have very big customers who adopted the portal to their internet shopping including: Morhipo, Boyner, Network, Gap, Biletix, MyBilet etc. They have agreement with leading charity institutions to

transfer the money they earn including: Tema, WWF (World Wide Fund for Nature), AÇEV (Abbreviation in Turkish: Mother And Child Education Foundation), AKUT (Abbreviation in Turkish: Search and Rescue Association), UNICEF (United Nations Children's Fund), TEV (Abbreviation in Turkish: Turkish Education Foundation) etc. The screenshot of the system from one of the contracted online shopping web sites could be seen in Figure 21:

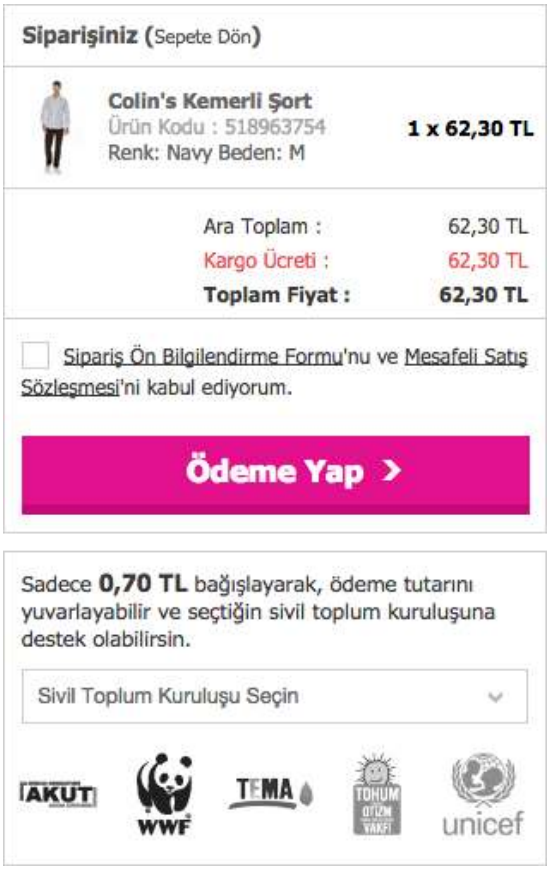


Figure 21: Screenshot of Entrepreneur 5's startup integrated online shopping site

Startup is actually a successful pivot from their previous product which was also a charity project but it was an online game transferring the money they get from advertisements to charity. This product didn't work as the advertisement incomes were not at the levels they expect.

Their roadmap for the startup is to fully hand it over to a charity institution for operation. They are planning to move to a different startup which can bring actual money for them.

Entrepreneur 6

The idea of laser communication lead two friends to start their company and in 2013 they won award from METU "New Ideas New Businesses'" competition and Defense Industry Executive Committee award. These two awards with some minor ones provided them 310.000 TL of initial funding for their startup. Besides the monetary awards, they also had a chance to attend two weeks boot camp in Silicon Valley. First half of the day they were attending to trainings related to entrepreneurship and rest of the day they were attending to meetings with possible investors and making pitch for their startups. He found this boot camp very valuable for them to change their mind on entrepreneurship and how to develop their social skills.

Two engineers started to build their laser communication systems in their office provided by Çankaya University with their initial funding. After some time, they realized that the laser market is already an old one and it was hard to make innovation there. He also tells that it was not very healthy for their eyes. So they decided to make a pivot on their product and use a technology which is more open to innovation, Visible Light Communication (VLC). This technology uses human eye visible light to transfer data. This is an emerging technology which is being tested by technology giants like Samsung, Cisco etc for Internet of Things projects. Internet of Things is a concept that suggests not only phones of personal computers to connect to internet but all the equipment in our house, even trees will be connecting to internet and making possible them to communicate with each other. It is being assessed as the next big development nowadays.

They are still using their initial funding for their operations. As they don't have a marketable product yet, this is the only money they can spend. During the interview time, they were about to release their first product physically in couple weeks. To be able to understand their motivation on starting the business and how they keep their motivation high while they are not earning any money, second interview was set with him. His motivation is only to fulfill his urge to achieve, make innovation and as famous Silicon Valley saying, he wants to make the world a better place for humanity. He doesn't care not living a wealthy life or he does not lose his motivation because of not

earning any money since last two years. He is making plans about how long could they survive with the remaining fund they have in their hand, in other words how much money they could lose. In the meantime, he keeps applying for innovation project competitions to get extra funding and he works on possible partnerships.

He made couple visits to Silicon Valley, Korea etc. to get possible partnership agreements. There is an ongoing possible partnership agreement with one of the leading multinational consumer electronics company. He knows it would not be very logical trying to compete with sector leaders but it would be wise to make partnership with them.

Entrepreneur 7

With an aim to do reverse engineering, they started to buy LCD (Liquid Crystal Display) televisions, split it off to its components and try to understand how it works. "During this period we sold three houses and presented LCD televisions to all of our relatives" he says. Finally they found the balance between developing and buying and started to compile required hardware with all in house produced software.

The startup is not developing a brand new product or we cannot say they are bringing innovation to the market but now they are in a good position. Their current customers are government institutions, shopping centers, museums and universities.

When we think them in concept of effectuation, they did not start with bird in hand principle. They started with the idea of starting a company and tried to find a good market to get in to. Their motivation was earning money in the first place but they started the business with an affordable loss and they tried to deal with it. So they are somehow using affordable loss principle. During interview, it was not possible to catch any negative experience to change the plans or adapt so it's not possible to mention Lemonade principle for this startup. When it's thought about the market and their competitors, they are also not following Crazy Quilt or Pilot in the Plane principles.

Entrepreneur 8

The startup is software which offers idea crowdsourcing service integrated with Facebook and Twitter. The platform ensures participation and collaboration with social media integration, gamification and co-editing of ideas.

The startup was started by Entrepreneur 8 and his friend living in Denmark in 2010. As starting a company in Denmark is easier compared to Turkey, they decided to start the company there. He accepted to be part of this company as he has knowledge about startup consultancy, good network of investors and investment banking experience. As initial funding, partners used their own money. They needed to invest multiple rounds from their own pockets and at the end they needed to a $50.000 from an American angel investor.

He explains their motivation as growing fast and selling the company as soon as possible with a good profit. It took a while for them to realize this was not a very realistic target for them. In time, they started to have difficulties to sell the product and they decided to make a pivot. By getting feedback from potential and existing customers, they decided to create an application for social media which became the Facebook and Twitter integrations.

During time, they realized the product is very complex and not scalable. Scalable means to be able to maintain its profitability or efficiency when the volume of sales increases. In around two years they run out of money again and they decided not to invest anymore to this company.

When he thinks about the mistakes they made, he talks about three items: creating a complex product, creating a product that doesn't solve any real problem and high operational costs. He uses this lessons learned while helping the startups he currently supports.

Incubation Center Directors

Özyeğin University Incubation Center Director

FitStartup Factory is an ICT-focused accelerator program designed to enable tech entrepreneurs in Turkey to create high potential, sustainable businesses, taking them

from the idea stage to launch. It's an Özyeğin University brand sponsored by Turkcell and TEB, supported by different seed founders and companies. The director serves as the Technology Entrepreneurship Supervisor in the Center for Entrepreneurship. In charge of the operations of the Fit Startup Factory, he provides training and mentoring to tech entrepreneurs in how to cross the "death valley" and help them develop more innovative business models. He is an engineer worked in different corporations and has not started a company. On the other hand he had worked with many different startups and has been in the startup ecosystem for a very long time and he has a lot of experience which was very valuable to understand the motivation and failure reasons of the startups.

Interview with him was conducted with an onsite visit to their office in Istanbul. The office is a shared environment for multiple startups and the office includes a place for Galata Business Angels which is one of the leading Angel networks of Turkey.

Startup Factory does not give funds to the startups but they help them to create a network for investors, give them a temporary office, guidance and mentorship. He defines the criteria they look in the startups is their relevance with the problem they are aiming to solve. He gives an example: "If someone comes to us and says they are working on a product for handicapped people, we first try to understand if they have a handicap or a handicapped person in their family, friends. We want to understand their motivation". They don't want to support startups that saw an idea in TedTalks or which are very popular at the market and rush to get their part from the wave. The companies like internet shopping or discount ticketing are these kinds of startups they reject. He believes the entrepreneurs who have a passion to make an impact are the ones who are most successful. This logic of looking into their relevance is related to Bird in Hand Principle.

When it's asked what kind of actions they are taking to prevent them failing and he says: "We want them to fail fast. Fail fast before losing a lot of time and money. Fail fast if the project will not work and find another way to make it work."

Another key thing they check is the scalability of the business. Their scalability definition is related to money/time being invested to the customer and the dollar value they earn for that investment. They don't want to lose 1.000$ on promotions, customer

travels, extra development etc. just to earn a 500 $ business. This can be related to Affordable Loss principle.

They want the startups to follow Lean Startup practices. Creating minimum viable product and going into market, talking with the customer, talking with possible investors, get early commitments or development ideas is their motto. He says: “Get out of the building; you can’t start your business sitting in front of your PC all the time”. This is a good example of Patchwork Quilt principle.

Another key area they are evaluating is the vision of entrepreneurs. He says: “We want startups that targets to enter the markets that will be developed in next five years”. They don’t want the wave followers but the wave creators. This is a good example of Pilot in the Plane principle.

In conclusion, despite not knowing Effectuation Theory and supporting Lean Startup movement, Startup Factory is following Effectuation principles most of the times while selecting the Startups they will support.

He introduced two entrepreneurs: Entrepreneur 4 and 5.

Sabancı University-Entrepreneurship Council Director (Entrepreneur 8)

In 2013, he joined Sabancı University Entrepreneurship Committee as director to coordinate the entrepreneurship and pre-incubation activities. He was interviewed twice, both for his current role and his failed startup.

First interview was about his background and his role in Sabancı University. His observations about startup failure have been asked. He talked about the failure on being able to develop a prototype. Without a prototype, it’s hard for entrepreneurs to get feedback on the initial product, to assess them as potentially successful or to get investment from investors.

The second reason he defines was entrepreneurs not being able to deal with uncertainty. There are many unknowns and different variables entrepreneurs need to deal.

Another observation from him was related to the motivation of entrepreneurs. The ones that started to make a difference, to bring a disturbance are more successful compared to the ones whose motivation is money. He defined the most important reason of failure or giving up early as the monetary expectations of entrepreneur: getting rich quickly and easily. This expectation makes them give up when they face with difficulties or they cannot be patient enough to live with very limited budget while they have chance to get a regular payment job. He accepts the fact that entrepreneurs need to work harder and much longer hours compared to a regular job and this might also be very hard for young entrepreneurs. While the same age friends are traveling around the world with their backpack, they might not have this chance ever he says. The most successful startups of nowadays like yemeksepeti.com needed to wait five - six years before starting to make some money and according to him this makes most of the entrepreneurs terrified and close their business.

He thinks that the entrepreneur physiology is very important for success. To be a successful one, they need to have a good balance between being tenacious, flexible, independent thinking and having good communication skills. If an entrepreneur is lack of one of them, they need to be with a partner that compliments the missing item.

APPENDIX – III: SECONDARY INTERVIEW DETAILS OF NEVZAT AYDIN

Yemeksepeti was launched 15 years ago and it became a very popular food delivery brand in Turkey. They are also active in the Middle East, serving to the United Arab Emirates, Saudi Arabia, Lebanon, Oman, Qatar and Jordan. They become so popular and market dominator that Turkish Competition Authority announced that they are starting an investigation with an argument that "Yemeksepeti is preventing customers to work with competitors by suppression and promotional applications" (Rekabet Kurumu, 2015).

In May 2015, Delivery Hero, the global leader in online and mobile food ordering, announced that they acquired Yemeksepeti to US$589 million (General Atlantic, 2015). This acquisition was announced as largest acquisition ever made in the online food ordering sector by General Atlantic. The importance of this acquisition for Turkey is very high: It is the largest exit to date in Turkey's internet startup history. Till Yemeksepeti, the largest exit was GittiGidiyor's sale to eBay for $217 million in 2011.

Yemeksepeti was selected to be investigated not only it was the largest exit of Turkey but also because of the entrepreneurs of the company. The startup was initiated in 2000-2001. Those were the days when the internet penetration, % of population with internet connection was around %3-5. It was seen as a crazy idea for people to use internet for food ordering while they don't even know what internet is. The internet penetration rose to 46.63% in 2014 and this could help us to better understand the environment when Yemeksepeti started the business (Internet Live Stats).

In his interview to Christopher M. Schroeder, Nevzat explained his vision about the company and internet opportunities: "My friends in Turkey loved the idea of delivery -- as bread, groceries, and pharmaceuticals had been delivered for decades. But they also told me a phone service would be good enough. I thought Internet ordering eventually would leap past the phone" (Pando, 2013).

The only problem of Yemeksepeti was not internet penetration rates but financial crisis emerged in 2001 just 1,5 months after the company was established. In the first eight months of 2001, 14.875 jobs were lost and the dollar rose to 1.500.000 liras from 670.000 liras (Wikipedia, 2015).

They leveraged their network of friends to find the restaurants and also as their first customers: "In 2001, we got our first 25 restaurants -- friends of friends -- and pretty much willed other friends to order. We were lucky to process four or five orders a day." Orders slowly increased over years: 150 per day by the end of their first year, 450 in their second year, over 1.000 in their third year. Due to budget restrictions, they did not make any special marketing activity until 2006 when Google AdSense was introduced in Turkey (Pando, 2013).

Based on the Yemeksepeti co-founder Melih Ödemiş's presentation held in İzmir Ekonomi University, details about the initiation has been understood (Etohumtv, 2015). Ödemiş is the classmate of Aydın from Bosphorus University. In his presentation he told Aydın, him and two more friends were constantly thinking about starting their own internet business. They were in active search of a good idea. Even they developed a system like Biletix, largest seller of event tickets in Turkey, as a school project. Aydın mentioned about his idea of food delivery service he saw in United States to Ödemiş and two more friends from university in 2000 and team decided to start the company. First days of the startup, their plan was to write the code themselves, find initial partner restaurants. While waiting for customers to come, Aydın was keeping his job in City Bank and Aydın was continuing his MBA, so do rest two members. Soon they realized this startup would be a big thing and decided to provide full time dedication. Two other co-founders could not take the risk to leave their jobs and decided to leave. Aydın and Ödemiş were on their own. Ödemiş left his job and Aydın quit from MBA program and returned to Turkey.

Their initial funding was $80.000, the money they have and got from their family (ShowTV news, 2015). Ödemiş explains their logic as follows: "We were new graduates living with family and nothing to lose. We could only lose one - two years of our possible corporate career and possible one - two years of salary."

Two engineers wrote the software code of the startup. They hired two employees, one to take the orders and a secretary. Two co-founders were taking the orders during night and Sundays. They started pretty lean and could not make any money till 2005

(Success Story of Yemeksepeti, 2013), the year when ADSL (Asymmetric Digital Subscriber Line) subscriptions started to spread.

2006 and 2011 were important years for Yemeksepeti due to technological infrastructure changes in Turkey which lead to differences in customer behaviors. In 2006, there was an increasing trend on mobile access, and a dramatic increase in adoption of home computing. Aydın explained what it meant for Yemeksepeti: "Before this, the orders we had were mostly lunch, people ordering from work computers. But now with people have laptops with them at home, dinner orders have become over half our deliveries" (Pando, 2013).

In 2011 Turkish consumers were not only using internet for email, browsing, and chat but becoming online buyers. "We are still in early days of people using credit cards online, so our transactions are mostly cash on delivery or mobile point of sale, but that is changing. Online banking is on the rise, and we believe 20 percent or more of our sales could be credit or debit card based in the next two years" (Pando, 2013). Yemeksepeti was already a known brand for years and consumers had a trust on the web site as a safe one.

In 2008, they got their first venture capital funding of $3 million for %20 of their shares from European Founders Fund (Etohumtv, 2015) and second round from General Atlantic in 2012 for $44 million. They used this second round of funding to extend their presence in Middle East and North Africa region (Curley, 2012).

In November 2012, they announced the acquisition of majority stake in ifood.jo, the fast growing Jordanian startup offering the same sort of food delivery service. Based on Venturemagazine interview with Zeid Husban, co-founder and managing partner at ifood.jo, the partnership was initiated by Yemeksepeti (Venturemagazine, 2012). He said: “They came to us. We are the market leader in Jordan with more than 80 percent of the market share. We have deals with 230 restaurants and a user data base of 25,000 in Jordan. Our year-on-year growth is 200 percent”.

We approached a few investors two years ago, but [nothing materialized]. I think this deal is part of their strategy to expand in the Middle East. The idea is to invest in an already existing company that knows the market”.

In 2010 before this second round funding, Yemeksepeti had launched FoodonClick, brand to serve in Middle East market in the United Arab Emirates. The entity also operates in Qatar, Oman, Saudi Arabia and Lebanon.

Foodonclick had faced different challenges in Lebanon and Saudi Arabia. In Lebanon they had to deal with a lack of infrastructure, market understanding. On the other hand, they had first-mover advantage.

In Saudi Arabia, there was already a competitor in the market. In Kuwait Talabat was already popular, heavily-funded new-comer HelloFood, Otolob in Egypt, all are active in Saudi Arabia.

Gökhan Akan, CFO and co-founder of Yemeksepeti, talked about Foodonclick to Wamda, a platform of programs and networks that aims to accelerate entrepreneurship ecosystems across Middle East and North Africa (MENA). He told that the company's primary strength is its years of experience in online food ordering, under Yemeksepeti, which brings "a lot of know-how," and its focus on customer service and mobile- through which the company receives 25%-30% of its orders. This allows Foodonclick to position itself "very close to the customer" (Mayard, 2013).

Akan also talked about current competitive environment: “The best way to compete is to serve the customer in the best possible way. Our way to compete is to give the best possible service. We're not going to build a strategy around HelloFood or any other competitor. We have the funding and will to perform well in [the Middle East and North Africa].”

A Lebanese blogger Rita made a comparison between Foodonclick and its rival Hellofood and shared her experience in her blog (Ritkaml, 2014). Foodonclick seems to be really sticking on Akan’s comments on their strategy in 2013. The blogger talks about their fast responses to feedbacks, quick delivery and customer service quality.

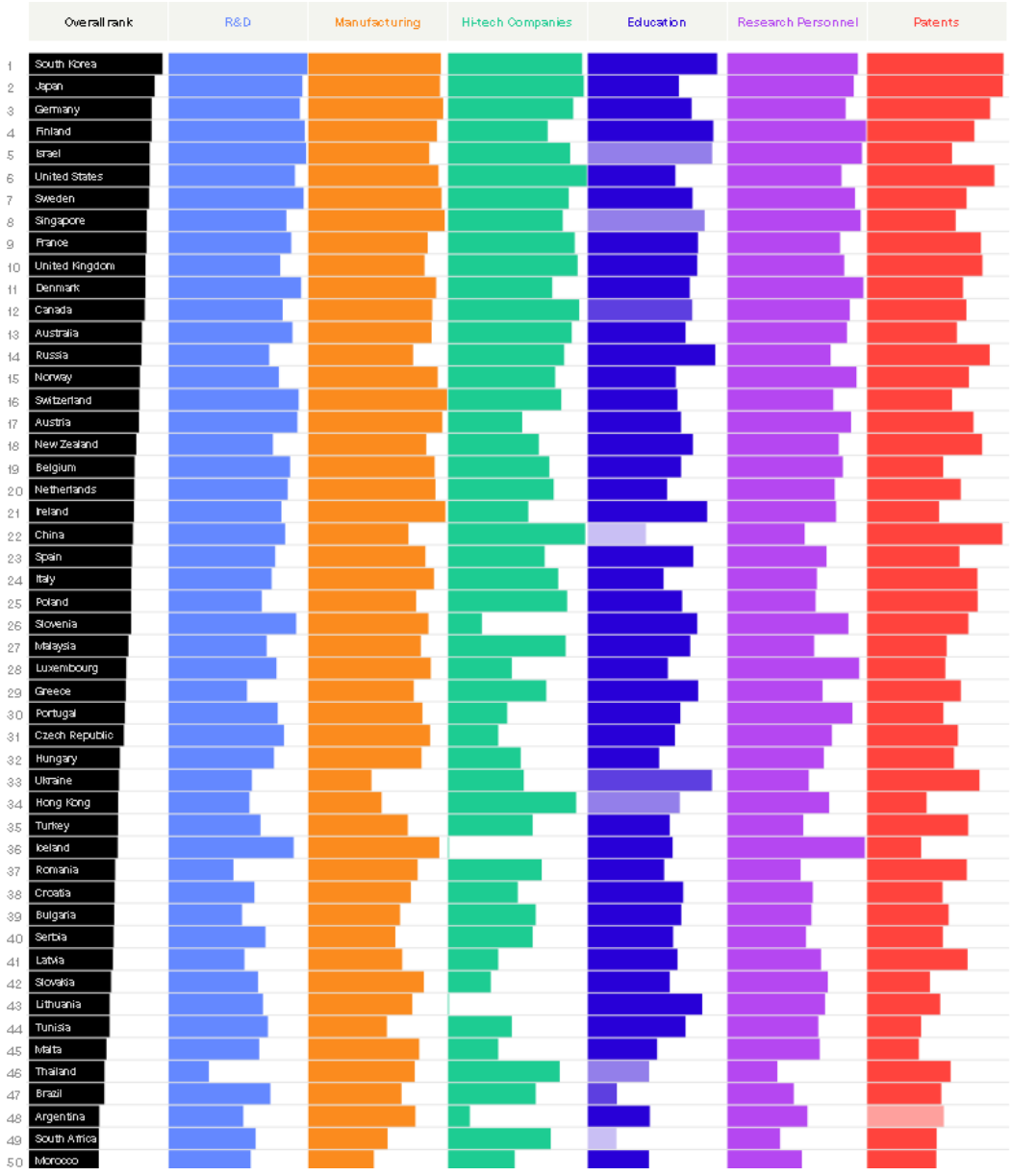
This intense focus on customer satisfaction and quality of food delivery was the main differentiator of Yemeksepeti. Instead of focusing on how to beat the competition, they focused on their customer. They are also doing some interesting marketing activities targeted and tailored to specific customers which go viral in social media. Some examples are birthday celebration videos per name (Yemeksepeti Youtube

channel, Video 1) and preparing videos saying " we had noticed you haven't given any orders since last three months, what is the reason" (Yemeksepeti Youtube, Video 2). The interesting and differentiating part is, Yemeksepeti employees, including Nevzat Aydın himself, are playing in these short videos. These are great examples of customer focus.

Other than these successful ventures, they also tried their chance in Greece and Russia. Greek expansion was an investment to a local online food delivery company but they decided to end the partnership due to economic situation of Greece. In Russia, there were cultural and infrastructural difficulties lead them to close their operations there. In his interview to CioTurk, Nevzat Aydın explains the difficulties they had in Russia. The packet service delivery times were very long in Russia and this was a normal thing for both customers and restaurants. He believed that he would get more returns if he spend his money and time to other markets and that's how he decided to expand United Arab Emirates (CioTurk, 2013).

Nevzat Aydın confirms that their strategy on expanding to new countries as acquisitions: "Despite the importance of population and purchasing power in the markets we enter, we also need to know the culture of the market. In this sense, we believe we'll also catch the same success we achieved in Turkey in the whole region. Ifood.jo our investment in Jordan, is an indication of the success of our strategy. From now on, we will continue on our way with acquisitions in the markets we saw the potential (Kanal Finans, 2014).

APPENDIX IV- BLOOMBERG INNOVAION INDEX,2015



APPENDIX V- CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: IŞIKTAŞ, Burcu
Nationality: Turkish Republic (TC)
Date and Place of Birth: 21st August, 1983
email: burcuisiktas@gmail.com

EDUCATION

Degree	Institution	Year of Graduation
MS	Çankaya Univ. Business Administration	2015
BS	Electronics Engineering, Ankara University	2004
High School	Eskişehir Anatolian High School	2000

WORK EXPERIENCE

Year	Place	Enrollment
2009-	Cisco	High Touch Operations Manager
2006-2009	Cisco	Inside Sales Account Manager
2005-2006	Simet	Project Engineer

FOREIGN LANGUAGES

Advanced English, Native Turkish

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