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economical investigation

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I. Abbreviation list

e.g.	such as
ex.	Example
US	United States
SLA	Service Legal Agreement
UK	United Kingdom
NCC	National Computing Centre
R&D	Research and Development
No.	Number
CEO	Chief Executive Officer
CPC	Cost per Click
CTR	Click Through Rate
M	Million
BBC	British Broadcasting Corporation
FTC	Federal Trade Commission
Inc.	Incorporated
EU	European Union
Etc.	et cetera
SEO	Search engine Optimization
WWW	World Wide Web
DBM	DoubleClick BidManager
OPEC	Organization of the Petroleum Exporting Countries
Bzw.	Beziehungsweise
Bspw	Beispielweise

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Vorwort

Motivation / Problemformulierung

Heutzutage hat die technologische Ära eine große Popularität gewonnen und fast jeder Haushalt hat den Vorteil alle Informationen online zuzugreifen, die er /sie braucht. Internet ist in allen Bereichen eingesetzt.

Würden Sie sich Ihr Leben vorstellen ohne die Möglichkeit das Internet in jeder Sekunde zu benutzen? Würden Sie sich vorstellen, Google nicht benutzen zu können? Ist es fair, durch das Internet und durch die Notwendigkeit von Informationen gesteuert zu werden? Ist es fair, dass so viele Plattformen Monopole sind, weil das Vertrauen der Anwender als Vorteil genutzt wird und vielleicht sogar sie an Optionen mangeln? Glauben Sie, dass Internet schwächt oder stärkt die Monopolstellungen? Das sind die Fragen, die beantwortet werden müssen. Das ist ein Thema, bei dem es immer offene Fragen, Unzufriedenheit, Frust und viele andere gemischte Gefühle gibt.

Ziel der Masterarbeit

Das Ziel dieser Masterarbeit besteht in der Untersuchung des Konzeptes "Internet schwächt oder stärkt die Monopolstellungen?". Das Zweck ist es, ein klares Gesamtbild von Internet-basierten Monopole zu ermitteln, erstens durch die Klassifizierung und Differenzierung relevanten Monopol-Merkmale und Konzepte und zweitens durch die Beschreibung der Art und Weise, wie das Internet diese beeinflusst. Weitere Vor- und Nachteile der Monopole sollen erläutert werden, bevor die aktuelle Trends und Themen in diesem Bereich betrachtet werden. Eine Fallstudie und eine Herausforderung werden durchgeführt, um das bekannteste Internet-basierte Monopol, Google, zu besiegen.

Methodik

Themenbezogene Literatur steht in einer großen Nachfrage zur Verfügung, daher besteht es eine Herausforderung in der genauen Überprüfung der vorliegenden Quellen. Demzufolge sind Umfragen, Ausführungen oder Interviews für die Datensammlung in diesem Fall nicht notwendig. Stattdessen wird in Rahmen dieser Masterarbeit die Meta-Analyse verwendet.

Abstract

Motivation / Problem Formulation

Nowadays the technological era has gained a lot of popularity and almost every user is taking advantage of being able to find all the information he/she needs online. Internet is used in every field.

Would you imagine your life without the opportunity to use the Internet every second? Would you imagine not being able to Google everything? Google becomes a verb when a user needs something and then he Googles it. Is it fair to be controlled by the Internet and by the need of information? Is it fair that so many platforms are monopolies because of taking advantage of their users' trust and maybe even their lack of option? Do you think that Internet weakens or strengthens Monopolies? Those questions need to be answered. There will always be unanswered questions, dissatisfactions, frustrations and many other mixed feelings in this subject.

Objective of Master Thesis

The investigation object of this Master Thesis is the concept "Internet weakens or strengthens Monopolies?". The aim is to transmit a clear big picture of Internet based monopolies, firstly by classifying and differentiating relevant monopolies characteristics and concepts and secondly by describing how Internet strengthens or weakens them. Furthermore, advantages and disadvantages of monopolies should be described before looking to actual trends and topics in this field. A case study and a beat challenge of the most well-known Internet based virtual monopoly, Google, will be conducted.

Methodology

Relevant literature is available in a vast demand, so the challenge is to make an accurate review of the existing literature. Hence, a survey, an observation or an interview for data collection are not necessary here. Instead, the meta-analysis will be used.

1. Introduction

The scope of this Master Thesis is to give a big picture about monopolies, monopolies based on Internet and the influence and power they have in the online era. For a better understanding, Google has been chosen as an example because it has the most well known search engine and the source which people use for obtaining information in any fields. For many people Internet means Google, being synonyms from their point of view. Google is a virtual monopoly because there are several so-called competitors, which do not have half of Google's success in terms of number of users.

In order to be able to beat this Legend, the strategic Management has to be a very good one even though that does not guarantee success either.

Google became, for some people, a need like food or water. Imagining life without them, it is a thought that many do not even want to take into consideration. Is this worth it? Is there anything that can be done in order to change or make this better?

What makes the monopolies to be so strong? Is it the government, is it that all other competitors are so bad that cannot compete with them?

Hopefully, after reading these pages, the image will be clearer, the real involvement in individuals' life will also be taken more into consideration and last but not least some will think for a moment that they would like to have their freedom back.

2. What Is a Monopoly?

“A pure monopoly is a single supplier in a market. For the purposes of regulation, *monopoly power* exists when a single firm controls 25% or more of a particular market.”¹

There are several reasons, which can bring a company to become a market monopoly. Some of the most important are exclusivity of a certain resource. Such as Microsoft owning the Windows operating system, government granting a monopoly status to a certain company, producers have patents over designs, or copyright over ideas, characters, images, sounds or names, such as song writers, or when two companies merge and they get to a 25% market share or more.²

The atomicity of demand disappears in the case of supply because there is almost a single seller market. The product homogeneity is also disappearing because the products cannot be substituted and there is almost no transparency. Other economical agents cannot enter the market because there are barriers.³

The situation mentioned above is a general situation but there are also contestable markets. When talking about contestable markets, there are not any barriers in order to be able to entry into a market.” It can be argued that the threat of entry is enough to keep incumbents ‘on their toes’. This means that even if there are a few firms, or a single firm, as with oligopolistic and monopolistic markets, a market with no barriers will resemble a highly competitive one.”⁴

¹ http://www.economicsonline.co.uk/Business_economics/Monopoly.html

² E.g. Economics Online News Analysis Theory Comments -
http://www.economicsonline.co.uk/Business_economics/Monopoly.html

³ E.g. Caracteristici, tipuri de monopol, determinarea condiției de echilibru - Anamaria Aldea Carmen Lipara - December 2014

⁴ Monopolies - http://www.economicsonline.co.uk/Business_economics/Monopoly.php

2.1. Distinction of Different Monopolies

More types of monopoly can be distinguished and several factors can influence them:

Natural Monopoly - natural factors like location, geographical location or market reputation influence the market

Legal Monopoly - the case of the government sustaining it

Technological Monopoly - the used technology cannot be beaten by any other competitor

Pure/Absolute Monopoly - the supplier controls the demand and there is no replacement for a certain product. ⁵

2.1.1 Does a Monopoly Influence the Market?

The supplier, due to competition absence, decides the price in a monopolistic market. The consumers have less choice in this case of supply, being controlled by a monopolist, because there is no alternative.

The prices are higher because monopolies can exploit their position and charge higher prices, again, because of the lack of alternatives. This is getting more serious in case of basic necessities, like water.⁶

The case of OPEC for example is one of the cases where they are almost monopolistic.

2.1.2. Circumstances in which a Market Is Influenced by Being Monopolistic

A monopoly is strong and vulnerable in the same time. It is not necessarily safe and sometimes robust but somehow manages to maintain the control over the market.

⁵ E.g. Caracteristici, tipuri de monopol, determinarea condiției de echilibru - Anamaria Aldea Carmen Lipara - December 2014

⁶ E.g. .Economics Online News Analysis Theory Comments - http://www.economicsonline.co.uk/Business_economics/Monopoly.html

In many circumstances, monopolies have a big influence on the market. The output is restricted due to the dominant position and the freedom to exploit the market. Due to the lower output and the price rise there is no consumer surplus. This happens in the case of a consumer being prepared to pay a certain amount of money for a product. Over the time, a monopoly market gains power over the consumer resulting in an erosion of consumer sovereignty.⁷

The consumer has not enough information, the monopolist may know more and can exploit it to its own advantage.

Productivity lacks efficiency due to the competitors' absence. The market is becoming inefficient and the price is not set to be equal to the marginal cost of supply. The consumer is not able to make a price comparison, which brings the products to be sold at a price set above marginal cost. This will drive to a loss of net welfare to the community.⁸

According to the economist Harvey Leibenstein with his "X-Efficiency Theory", "eliminating monopoly or an increased specialization leads not to a significant raise in welfare. A reason for this is that allocational inefficiency involves only net marginal effects, which is a result of price and quality distortions."⁹

According to him, "in the case of regulated monopolies there is no motivation to reduce cost up to a minimized level."¹⁰

Leibenstein's X- Efficiency theory actually shows "that product prices could be lower than they really are but due to the non-minimization they are not. This way of pricing does not protect the consumer from too high prices. More competition would force them to look for cheaper resources and cheaper materials to reduce their selling price for their outputs and be more competitive, but in a monopolistic industry they are free to set the prices and in best case (for the company, not for the consumer) like in the medical

⁷ E.g. Economics Online News Analysis Theory Comments

⁸ E.g. Economics Online News Analysis Theory Comments

- http://www.economicsonline.co.uk/Business_economics/Monopoly.html

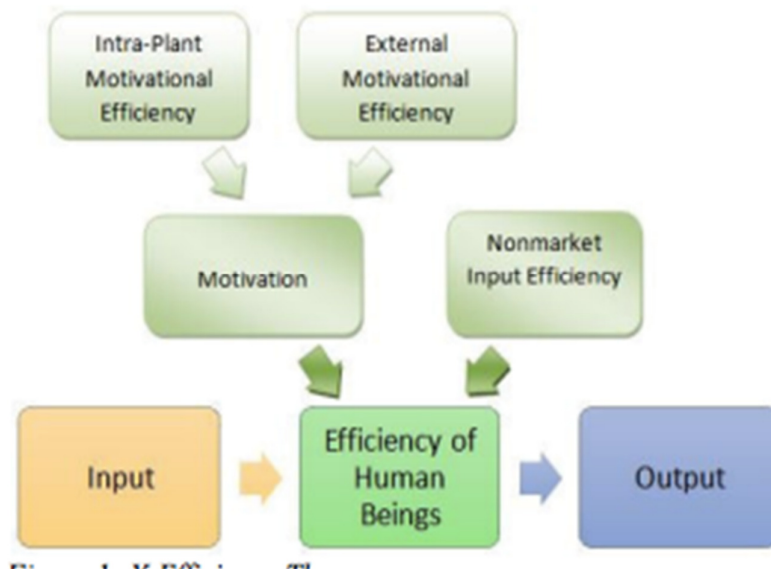
⁹ Michael Huil - Critical view on Leibenstein's X-Efficiency Theory p.2

¹⁰ Michael Huil - Critical view on Leibenstein's X-Efficiency Theory p.2

industries, consumers are dependent on their products which results in price inelasticity. Price changes only lead to a small movement in demand.”¹¹

The below figure is showing the importance of human being efficiency in the transformation from input to output for the efficiency to grow.

Figure 1: X-Efficiency Theory



Source : Michael Huil - Critical view on Leibenstein’s X-Efficiency Theory ¹²

2.2. Advantages and Disadvantages of Monopolies

These results are detrimental for the society. As mentioned before, a monopoly enterprise can artificially impose raised prices to its marketed products. If there were more economic units / traders in this sphere, prices could be lower. “Another disadvantage of the monopoly consists in the limited offer that a society can have, the

¹¹ Michael Huil - Critical view on Leibenstein’s X-Efficiency Theory p.2

¹² Michael Huil - Critical view on Leibenstein’s X-Efficiency Theory p.4

monopolistic unit being the only one that offers merchandise in that specific field, not being interested necessarily in diversifying products.”¹³

Normally, buyers and sellers of goods and services take prices into account when deciding how to use available resources, and based on market prices ensure an efficient allocation of resources. There are also situations when prices do not reflect the opportunity costs (e.g. cases of market failure). A case of market failure is monopoly.¹⁴

Another drawback refers to the quality of the products.¹⁵

When it comes to monopoly advantages, The Economist specialists treat the monopoly topic differently. There are no visible benefits at first sight. One of the situations in which a monopoly can be seen as bringing advantages, as well, is the one where in a certain economy sector, a company manages to become monopolistic by eliminating the competition because it is the best in the market. “The envisaged economic unit managed to reach the leading position by cheaper or better quality products / services than other economic agents.”¹⁶

Regarding to researches on monopolistic companies, “on long term, a monopolist can be better positioned in order to exploit economies of scale, due to its size and resources, than if there are more small competitors in that branch of economy.”¹⁷

The next positive aspect can be found in the Research and Development field. The larger enterprises may get higher profit, giving them the option to invest more into Research and Development. Under these circumstances, they can adopt earlier the latest technologies, driving to lower production costs, lower end user prices and better quality products. All these mean benefits for the society.¹⁸

Of course, the enterprises may not invest an important amount of the profit in R&D but at a certain moment they will have to, pushed by the market dynamics.

¹³ E.g. Petru Mihail Carare -Monopoly: Advantages and Disadvantages March 15, 2011

¹⁴ 8. Monopolul

¹⁵ E.g. Petru Mihail Carare -Monopoly: Advantages and Disadvantages March 15, 2011

¹⁶ E.g. Petru Mihail Carare -Monopoly: Advantages and Disadvantages March 15, 2011

¹⁷ E.g. Petru Mihail Carare -Monopoly: Advantages and Disadvantages March 15, 2011

¹⁸ E.g. Petru Mihail Carare -Monopoly: Advantages and Disadvantages March 15, 2011

From a positive perspective, a monopoly may be a driver of innovation. Although highly successful enterprises (ex. Microsoft) are criticized. It is important to underline that they are in the forefront of new discoveries, which push the technical barriers, leading to the society development and prosperity.

Through these innovative patents they have, these companies keep their power and dominance within the markets.

Such a situation appears in an industry where long-term cost is subject to a wide range of production levels, in which case there may be a single supplier that can fully exploit all the internal economies of scale, as well as achieve productive efficiency.¹⁹

A real advantage dependent on monopoly refers to the natural monopoly. In such cases, it may be only a single supplier, which is able to exploit the internal economies of scale and to achieve the necessary productivity. This may be the only solution in areas of very high importance for people.

Water, gas, electricity industries are the best examples of areas with natural monopoly tendencies. This is explained by the very high costs necessary to build and maintain the required networks. Still, even within the natural monopoly category, there are important differences between the supply and the distribution activities (ex. electricity versus gas)²⁰.

¹⁹E.g. Petru Mihail Carare -Monopoly: Advantages and Disadvantages March 15, 2011

²⁰ E.g. Petru Mihail Carare -Monopoly: Advantages and Disadvantages March 15, 2011

3. Internet based Monopolies vs. Physical Monopolies

According to Columbia University Law Professor and Senior Adviser to the U.S. Federal Trade Commission, Tim Wu, the biggest question is if today's Internet monopolies are really comparable to the monopolies of other ages.

He says: "Some agree that Internet monopolies are inevitable, but insists also that they are also inherently vulnerable and ephemeral." "Just wait and today's monopolies will be reshaped or destroyed by disruptive market forces. ... The theory is based, in part, on an inescapable truth: all things change."²¹

The today's market is different from the one imagined by Adam Smith, who sustained that in a free market, many companies, making the same product, should sell at the low price.

This is a picture of powerful companies which succeed one another and which are in the driving seat only while they are No. 1. Let's think about Facebook in 10 years from now, if it loses the technological advance, it will be no longer a monopoly.²²

Even though it might seem hard at the beginning, a monopoly can also be replaced because of the contestable markets.

Due to the fact that the unregulated Internet nature is threatening the monopolistic consolidation of Internet services, the term eMonopolies appeared. This consists in those Internet domains which offer an expanding menu of services, extended information collected easier by users, and the revenue is exclusively coming from advertising,.

The antitrust Law is seen as the only hope in order to be able to secure privacy of companies and individuals.²³

²¹ E.g. Erick Schonfeld - How Durable Are Information Monopolies On The Internet? Nov 13, 2010

²² E.g. Erick Schonfeld - How Durable Are Information Monopolies On The Internet? Nov 13, 2010

²³ George N. Bauer Brooklyn Law Review - eMonopoly - Why Internet-Based Monopolies Have an Internet Get-out-of-Jail-Free Card 2010

Internet monopolies have the same characteristics as the physical ones, the only difference is that they are based on an online platform and, as in the case of physical monopolies, the competition is existing but has not resources to gain a place in the market.

Huge companies, like Amazon, Google, Booking.com, own the market. It is needed a growing and growing exceptional network in order to fit and to remain in the market.

According to Columbia University Law Professor Tim Wu: “The Internet has long been held up as a model for what the free market is supposed to look like - competition in its purest form. So why does it look increasingly like a Monopoly board? Most of the major sectors today are controlled by one dominant company or an oligopoly. Google owns search; Facebook, social networking; eBay rules auctions; Apple dominates online content delivery; Amazon, retail; and so on.”²⁴

When it comes to Internet based monopolies, there are some of them, which are made to look like a monopoly. In Internet there is a winner-takes it most kind of strategy, if not winner-takes-all in which a company has monopoly without technically owning 100 percent of the market.²⁵

Nowadays there are not so many physical or location based monopolies, excepting the government monopolies and maybe the public utilities which are not able to become 100 percent online based. Almost everything became online, to be more accessible for the user, and as well because of the lower costs. Even though some of the companies are both physical and Internet located, the Internet side is gaining more and more popularity.

²⁴ E.g. Erick Schonfeld - How Durable Are Information Monopolies On The Internet? Nov 13, 2010

²⁵ E.g. Erick Schonfeld - How Durable Are Information Monopolies On The Internet? Nov 13, 2010

3.1. Advantages and Disadvantages of Being Internet based

According to researchers: "Internet has been perhaps the most outstanding innovation in the field of communication in the history of mankind. As with every single innovation, Internet has its own advantages and disadvantages. Nonetheless, the greater magnitude of its advantages outweighs its disadvantages."²⁶

There are some advantages and disadvantages of being Internet based. As a major advantage, there is for sure the lower costs regarding the physical location but in the same time, there are some other costs, which should be taken into consideration.²⁷

On one hand, when thinking, for example, about an online clothes shop, some of the people are not very open to buy something without trying it on. This could be seen as a disadvantage for certain shops. On the other hand, online shopping gains more popularity because of the lack of time that the consumers have and due to their busy schedule.

The transaction costs, when being Internet based, are more affordable.

Researchers also mean that "Most of the very successful Internet-based companies are nearly monopolists."²⁸

According to them, the majority of "these providers do not generate content themselves, but only provide access to different content on the Internet "²⁹

One of the most asked question from a competition policy perspective is not so much "whether these firms have such a dominant position today, but rather why they have such a large market share and whether this is a temporary or non-temporary phenomenon."³⁰

²⁶ Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization? January 2013

²⁷ E.g. Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization? January 2013

²⁸ E.g. Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization? January 2013

²⁹ E.g. Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization? January 2013

³⁰ Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization? January 2013

3.2. Advantages and Disadvantages of Being Physical

When talking about monopolies, there are more advantages than disadvantages for the company itself and more disadvantages for the consumer. The consumer has not a vast range of choice and this is how his satisfaction is going down.

Location based or not, a monopoly has always been benefiting to the company and not to the user.

4. Does Internet Strengthen or Weaken Monopolies?

The influential elements which have emerged during the lifetime of the present generation are several, such as media world including newspapers, magazines, books, radio, television, movies, and now the Internet. They occupy the beginning of the end of government-as-protector-of-the-consumer and the start of government-as-the-protector-of-big-business. In addition, the news industry, now a part of the five dominant corporations, reflected this new direction.

The European Commission and US Federal Trade Commission have investigated Google, eBay and other Internet companies lately for their business practices. The users have also started to be quite concerned about the power companies like Facebook have in the market.³¹

The Competition and Consumer Protection Organizations have started to question that the current laws, which regulate the competition, reflect the latest changes in the digital markets.

The response to this question may be given only after a thorough analysis of the two types of markets: the online and the offline (brick-and-mortar) ones.

³¹ Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization? January 2013

It has started to be almost a rule that most of the successful Internet based firms act as almost monopolists. For example, Facebook, Google and a few other similar firms leave very small market space for possible competitors.³²

A very important topic for analysis is the reason why these companies got to have such an important market share and if they can keep it for long term or it is only a short term status. Are they really technologically superior or they benefit from barriers which prevent the other companies to enter in this competition?

It is also important to understand if we face a “Schumpeterian competition” which means that “one temporary monopoly is followed by another, with innovation as the driving competitive force, or are we dealing with monopoly firms that mainly try to foreclose their markets through anticompetitive behavior”.³³

4.1 Economical Investigation

Since its beginning, the Internet was covered as a common good, governed in common by three entities: “the government, the private sector and the civil society”. The same rules have also been applied to the Internet of Things. Lately, the private sector has started to take distance from this alliance, in the process to develop the business. This behavior breaks one of the most important rules of Internet: “network neutrality, a principle that assures a nondiscriminatory, open, universal Communication Commons in which every participant enjoys equal access and inclusion”.³⁴

The feeling of being secure while using Internet as a whole is one of the most important desires. Nowadays, building a relationship of trust becomes more and more difficult and in this case, transparency looks to be the key to success.

In order to be Internet based, there are some regulations, which have to be respected.

³² E.g. Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization? January 2013

³³ E.g. Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization? January 2013

³⁴ Jeremy Rifkin - The Internet of Things: Monopoly Capitalism vs. Collaborative Commons July 04,2014, Updated Dec, 11, 2014

Generally, the SLAs (Service Legal Agreement) are the only source of formal description of service contracts between the two parties. In e-business platforms, SLAs are essentially important for the service consumer as it compensates the consumer's high dependency on the service provider.³⁵

In most of the times, the gap between desire and reality is big.

According to Swanson and Ramiller, the organizational decision makers, when being in a situation of confronting the potential innovation in cloud computing, are facing a complex problem because in the first stages, adapting to all kinds of changes and new things can limit the 100% good implementation of the innovation.

Being open and willing to implement and adapt your needs and requirements to the new stuff is good but in the same time, something that should be taken into consideration is if all the guidelines can be followed as stated. Reality is quite harsh in these cases.

4.2 Meta-analysis

User Guide

There are several methods of research such as: narrative review, vote counting, combining probabilities and meta-analysis. The one used in this paper is meta-analysis and it is conducted with the help of an online meta-analysis tool.

Definition of Meta-analysis

"Meta-analysis is the statistical procedure for combining data from multiple studies. When the treatment effect (or effect size) is consistent from one study to the next, meta-analysis can be used to identify this common effect. When the effect varies from one study to the next, meta-analysis may be used to identify the reason for the variation."³⁶

³⁵ Ghumman, Waheed Aslam - Automation of the SLA life cycle in cloud computing

³⁶ https://www.meta-analysis.com/pages/why_do.php

“The term meta-analysis was coined by Glass (1976) in reference to “the statistical analysis of a large collection of analysis results from individual studies for the purpose of integrating the findings.””³⁷

The purposes Meta-analysis are used for:

- “If studies have conflicting results, it can be used to establish statistical significance
- To develop an accurate estimate of effective magnitude
- To provide a thorough analysis of harm, safety data and benefits
- To investigate subgroups with individual numbers that are not statistically significant.”³⁸

Meta-analysis main advantages:

- “A more substantial statistical impact
- Affirmative data analysis
- Ability to extrapolate to general population affected
- They are considered to be an evidence-based resource.”³⁹

Meta-analysis main disadvantages:

- “Time-consuming to distinguish appropriate studies
- Not all studies will provide adequate data for inclusion and analysis

³⁷ Julia Koricheva and Jessica Gurevitch - Place of Meta-analysis among Other Methods of Research Synthesis p.8

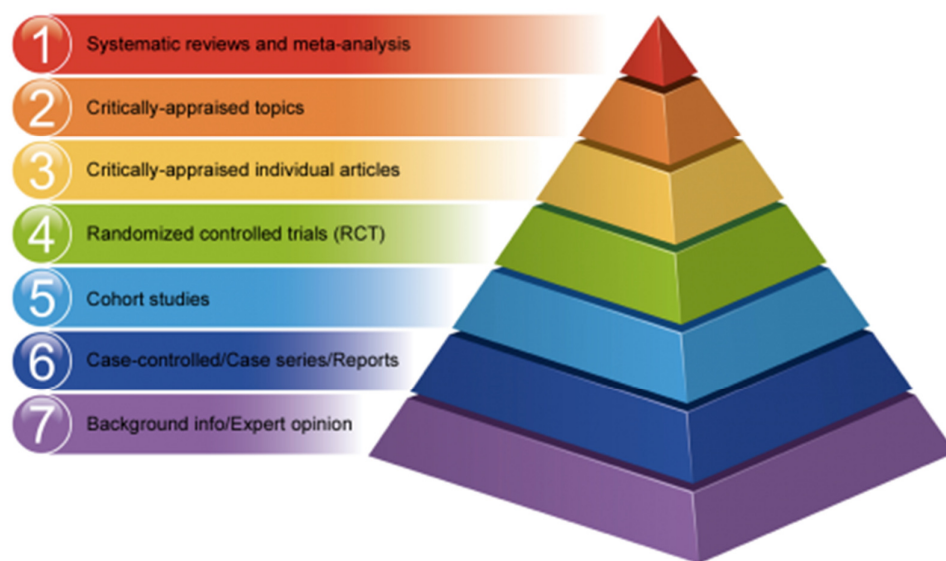
³⁸ Hannah Nichols Knowledge center - How Do Clinical Trials Work? October 25,2015

³⁹ Hannah Nichols Knowledge center - How Do Clinical Trials Work? October 25,2015

- They require advanced statistical techniques
- Heterogeneity of study populations.”⁴⁰

The hierarchy of studies in medical field is pictured in Figure 2. However, the procedure is the same in all fields. In the pyramid, it is shown the quality of evidence and how this influences a study.

Figure 2: Quality of Evidence



Source: Hannah Nichols Knowledge center - How Do Clinical Trials Work? October 25,2015⁴¹

⁴⁰ Hannah Nichols Knowledge center - How Do Clinical Trials Work? October 25,2015

⁴¹ Hannah Nichols Knowledge center - How Do Clinical Trials Work? October 25,2015

Figure 3 shows a comparison between the characteristics of different research procedures and the way their advantages and disadvantages.

Figure 3: Comparison of methods of research synthesis

Characteristics of the review type	Narrative review	Vote counting	Combining probabilities	Meta-analysis
Imposes restrictions on the type of studies that can be used in review	No	No	No	Yes
Interprets study outcome based on its statistical significance	Yes	Yes	Yes	No
Takes into account sample size and statistical power of the individual studies being combined	No	No	Yes	Yes
Assesses statistical significance of the mean (overall) effect (i.e., whether it is significantly different than zero)	No	No	Yes	Yes
Assesses the magnitude of the mean effect	No	No	No	Yes
Allows analysis of sources of variation among studies	No	No	No	Yes

Source: Julia Koricheva and Jessica Gurevitch - Place of Meta-analysis among Other Methods of Research Synthesis⁴²

⁴² Julia Koricheva and Jessica Gurevitch - Place of Meta-analysis among Other Methods of Research Synthesis p.8

Scope and Purpose

Meta-analysis is used in several fields: medical research, psychology, ecology, education, criminology etc.

Usually the field in which it is used the most is the medical one because of its large range of existing information.

The product used to be able to get as many results as possible is an Online Meta-Analysis tool whose benefits are that the wanted information is instantly generated. The entire paper is based on analyzing several studies in order to determine if internet strengths or weakens monopolies.

This User Guide's purpose is the better understanding of Meta-analysis procedure, how it is done and which is its scope.

Process Overview

When doing a meta-analysis, several metrics have to be taken into account. In order to obtain an as accurate as possible result there are 9 steps:

Step 1: Systematic review

Step 2: Parties involved – in this case Google

Step 3: Problem formulation and investigate if it has been done before. Registering your review

Step 4: Perform search.

Step 5: Data extraction.

Step 6: Critical appraisal of studies (quality assessment).

Step 7 Data synthesis.

Step 8: Presenting results (writing the report).

Step 9: Archiving and updating.⁴³

⁴³ <http://www.ccace.ed.ac.uk/research/software-resources/systematic-reviews-and-meta-analyses>

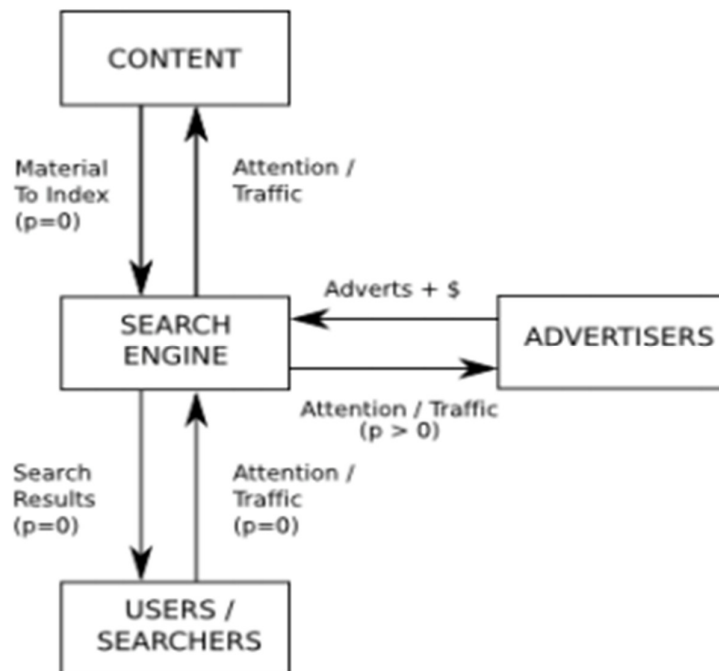
After this Meta – analysis is performed, the question of how market shares have evolved over time will get things clearer.

According to researchers: “Obtaining good (comparable) market share data over a reasonable stretch of time is not easy. In particular, in the late 90s and early 2000s the only information recorded was the number of visits to a particular website.”⁴⁴

With help of an online Meta-analysis tool, the URL google.com was verified and the results are stated in the following figures.

Figure 4, below, is giving an explanation of how a search engine works behind the actual platform.

Figure 4: The structure of the search engine business



Source: Rufus Pollock- Is GOOGLE the next MICROSOFT? Competition, Welfare and regulation in internet search⁴⁵

⁴⁴ RUFUS POLLOCK - IS GOOGLE THE NEXT MICROSOFT?
COMPETITION, WELFARE AND REGULATION IN INTERNET
SEARCH p. 13, April, 2009

⁴⁵ RUFUS POLLOCK - IS GOOGLE THE NEXT MICROSOFT?

In the model, there are four types of agents: 'users' (U), 'advertisers' (A), 'content providers' (C), and search engines (S).⁴⁶

In order to decide the price, the first thing to take into consideration is the searching content. On the search engines, the information is seen as free. This is in the history and tradition of Web. The people have access to this content and no fees are charged. After all this information is posted, every user can see it and grow the traffic on a specific website.

The next important fact is that search engines do not have any subscription fee.⁴⁷

On one hand, the value of a search is heterogenic between users and time, which brings a difficulty in providing a good price.

On the other hand, the search engines are Meta information providers and give the users the opportunity to switch between information of their interest.⁴⁸

The search engines make money from ads and websites, which want to have priority in search and get a higher ranking.

Advertising online is pretty expensive and there are also some specific ways of calculating it.

The Cost per Click Formula (CPC) calculates the cost per click which will always be less than or equal to the maximum bid, as it is an average of bids against a series of competitors over a period of time. Because of how Google's AdWords auction works,

COMPETITION, WELFARE AND REGULATION IN INTERNET
SEARCH p. 15, April, 2009

⁴⁶ RUFUS POLLOCK - IS GOOGLE THE NEXT MICROSOFT?
COMPETITION, WELFARE AND REGULATION IN INTERNET
SEARCH p. 15, April, 2009

⁴⁷ RUFUS POLLOCK - IS GOOGLE THE NEXT MICROSOFT?
COMPETITION, WELFARE AND REGULATION IN INTERNET
SEARCH p. 15, April, 2009

⁴⁸ RUFUS POLLOCK - IS GOOGLE THE NEXT MICROSOFT?
COMPETITION, WELFARE AND REGULATION IN INTERNET

the actual cost per click is heavily influenced by both the bidder and your closest competitor's ad rank, maximum bid, and Quality Score.⁴⁹

The actual formula CPC in AdWords is:

$$\text{Competitor AdRank} / \text{Your Quality Score} + 0.1 = \text{Actual CPC}^{50}$$

Google Page rank is calculated as follows:

$$PR(A) = (1-d) + d (PR(T1)/C(T1) + \dots + PR(Tn)/C(Tn))$$

Where:

PR (A) = Webpage A Rank;

d = Damping factor (usually 0, 85);

PR (Ti) = Page Rank of Webpage i, of the listed link;

C (Ti) = Total Number of pages Ti outgoing Links⁵¹

Click Through Rate (CTR):

$$CTR = (\text{Clicks} / \text{Impressions}) \times 100$$

CTR = A measure of the efficiency of particular banner advertising. The higher CTR is, the more animated banners to Internet users to a reaction ("Click")

CTR - standard banner average 0.5 percent, for larger sizes higher ⁵²

⁴⁹ <http://www.wordstream.com/cost-per-click>

⁵⁰ <http://www.wordstream.com/cost-per-click>

⁵¹ E.g Prof. Dr. Wolfgang Fritz | Internet-Marketing & E-Commerce | Seite 276

⁵² Prof. Dr. Wolfgang Fritz | Internet-Marketing & E-Commerce | Seite 323

Google is not the only one, which uses the technique of CPC in order to gain and keep users. Amazon, for example, is using the same approach. When talking about Facebook, things change a bit because their scope is networking more than actual revenue achieved through impressions.

The legend of the following results generated by the domain check regarding the Meta-analysis on Google is pictured in Figure 5.

Figure 5: Meta analysis Legend

color = **Error** color = **Warn** color = **Good**

Source: Figure generated based on meta-analysis tool the data provided through online domain check.⁵³

Figure 6 illustrates the main report on Meta Tags.

Figure 6: Meta tags Report

Meta tags report for: https://www.google.com/?gws_rd=ssl	
meta tag	value
Title:	Google
Description:	Search the world's information, including webpages, images, videos and more. Google has many special features to help you find exactly what you're looking for.
Robots:	noodp

Source: Figure generated based on meta-analysis tool the data provided through online domain check.⁵⁴

⁵³ Meta-analysis Online Tool

⁵⁴ Meta-analysis Online Tool

According to Figure 6, the description of google.com Webpage is “Search the world’s information, including webpages, images videos and more. Google has many special features to help you find exactly what you are looking for. ”⁵⁵

An analysis through frames, words, webpage size and the load time can be seen in Figure 7. What can be understood from the above figure is that Google has no frames, there are no adult’s words, the size of the webpage is 193139 bytes and there is a slow time load of 2.35 seconds.⁵⁶

Figure 7: Web page analysis

Web page analysis.
No frames where found. A web page with frames is difficult to index by a search engine spider.
No adult words where found. Adult words and can activate adult filters on search engines.
The size of the web page. The size of the web page is 193138 bytes.
The web page load time is slow. The web page load time is 2.35 seconds.

Source: Figure generated based on meta-analysis tool the data provided through online domain check.⁵⁷

Figure 8 is showing:

- the title,
- title length which is 6 characters,
- description,
- description length, which has 159 characters,
- the keywords which were not detected,

⁵⁵ Meta-analysis Online Tool

⁵⁶ Meta-analysis Online Tool

⁵⁷ Meta-analysis Online Tool

- Robots. One robot is used
- Twitter Card which is not used,
- Google Plus Publisher which is not connected
- The open graph, which is not used as well.⁵⁸

Figure 8: Meta tags Analysis

Meta tags analysis.	
Title:	Webpage has a title. The title is an important factor in the on-site search engine optimization. For best practice make use of your main keywords in the title.
Title Length:	Title is smaller than 60 characters (6 characters). The title of your page has a length of 6 characters. Most search engines will truncate titles to 60 characters.
Description:	Webpage has a description. The description is an factor in the on-site search engine optimization. For best practice describe where your webpage is about in the description.
Description Length:	Description is greater than 80 and smaller than 160 characters (159 characters). The meta description of your page has a length of 159 characters. Most search engines prefer an meta descriptions between 80 and 160 characters.
Keywords:	Webpage has no keywords meta tag. The keywords meta tag is obsolete, and no search engines does use the keywords meta tag in their web ranking nowadays.
Robots:	Webpage has a robots meta tag. The webpage has a robots meta tag but we can't interprets the robots meta tag values. (noodp)
Twitter Card:	Twitter card is not used. With Twitter Cards, you can attach rich photos, videos and media experience to Tweets that drive traffic to your website.
Google Plus Publisher:	Publisher is not connected to Google Plus. The publisher of the page is not connected to your Google Plus account to define the author of this one.
Open Graph:	Open Graph is not used. The Open Graph meta tags is not used. The Open Graph protocol enables any webpage to become a rich object in a social graph. For instance, this is used on Facebook to allow any webpage to have the same functionality as any other object on Facebook.

Source: Figure generated based on meta-analysis tool the data provided through online domain check.⁵⁹

The most used keywords detected on the webpage by frequency, density title and description are listed in Figure 9.⁶⁰

⁵⁸ Meta-analysis Online Tool

⁵⁹ Meta-analysis Online Tool

⁶⁰ Meta-analysis Online Tool

Figure 9: Keywords found on page

Keywords found on page.					
These are keywords found on the web page. These are the keywords where the web page is target for (probably contain the most searches for this web page one of these keywords).					
Keywords (one word)	Freq	Density	Title	Desc	<H>
search	9	6.98%	×	✓	×
google	7	5.43%	✓	✓	×
more	4	3.10%	×	✓	×
instant	3	2.33%	×	×	×
ok	3	2.33%	×	×	×
press	3	2.33%	×	×	×
enter	3	2.33%	×	×	×
say	3	2.33%	×	×	×
chrome	2	1.55%	×	×	×
learn	2	1.55%	×	×	×
gmail	2	1.55%	×	×	×
off	2	1.55%	×	×	×
settings	2	1.55%	×	×	×
secure	1	0.78%	×	×	×
my	1	0.78%	×	×	×
thanks	1	0.78%	×	×	×
business	1	0.78%	×	×	×
docs	1	0.78%	×	×	×
sign	1	0.78%	×	×	×
history	1	0.78%	×	×	×

Source: Figure generated based on meta-analysis tool the data provided through online domain check.⁶¹

Meta-analysis is usually used in the medical research and in transportation and the scope of the analysis is to detect the risks, determining the reality according to different information found. In this master thesis, the meta-analysis has the scope to discover the way Google is functioning and which are the steps for a random user to better understand the strategy behind the page source.

The Meta-analysis has been conducted by researching several studies and literature regarding Google's market share, revenue, which of its products is the most successful and compare the generated information.

There are also different strategies of filtering information in a search engine. The most well known are: Collaborative filtering, Content-based filtering and hybrids.

⁶¹ Meta-analysis Online Tool

Collaborative filtering is based on a model of prior user behavior. This method can be used from a single user's behavior or from the behavior of other users who have similar traits.⁶²

“When it takes other users' behavior into account, collaborative filtering uses group knowledge to form a recommendation based on like users. In essence, recommendations are based on an automatic collaboration of multiple users and filtered on those who exhibit similar preferences or behaviors.”⁶³

Content-based filtering recommendation method is done on the basis of a user's behavior. This approach uses historical browsing information. If a user commonly reads a certain kind of articles, content-based filtering can use this history to identify and recommend similar content. This content can be manually defined or automatically extracted based on other similarity methods.⁶⁴

Collaborative and content-based filtering combined results into a Hybrid approach and it also increases the efficiency of recommender systems.⁶⁵

Several algorithmic approaches can be distinguished for recommendation engines.

“Many of the algorithms come from the field of machine learning, a subfield of artificial intelligence that produces algorithms for learning, prediction, and decision-making.”⁶⁶

Some of the most used are:

- “Pearson correlation – which looks for similarities between two users and measures the linear independence between two variables. The users are filtered by neighborhoods and this procedure mostly uses collaborative filtering.

⁶² Recommender systems, Part 1: Introduction to approaches and algorithms

⁶³ Recommender systems, Part 1: Introduction to approaches and algorithms

⁶⁴ Recommender systems, Part 1: Introduction to approaches and algorithms
<http://www.ibm.com/developerworks/library/os-recommender1/>

⁶⁵ Recommender systems, Part 1: Introduction to approaches and algorithms
<http://www.ibm.com/developerworks/library/os-recommender1/>

⁶⁶ Recommender systems, Part 1: Introduction to approaches and algorithms
<http://www.ibm.com/developerworks/library/os-recommender1/>

- Clustering algorithms – which can find structure in a set of random data, identifying similarities and calculating the distance among items. If the items are close to each other they can be taken in clusters.”
- “The simplest Clustering algorithm is k-means, which partitions items into k clusters. Initially, the items are randomly placed into clusters. Then, a centroid (or center) is calculated for each cluster as a function of its members. Each item's distance from the centroids is then checked. If an item is found to be closer to another cluster, it is moved to that cluster. “⁶⁷
- Euclidean algorithm - “Other clustering variants include the Adaptive Resonance Theory (ART) family, Fuzzy C-means, and Expectation-Maximization (probabilistic clustering), to name a few.”⁶⁸

Moreover, Others:

“Bayesian Belief Nets, which can be visualized as a directed acyclic graph, with arcs representing the associated probabilities among the variables.

Markov chains, which take a similar approach to Bayesian Belief Nets but treat the recommendation problem as sequential optimization instead of simply prediction.

Rocchio classification (developed with the Vector Space Model), which exploits feedback of the item relevance to improve recommendation accuracy.”⁶⁹

⁶⁷ Recommender systems, Part 1: Introduction to approaches and algorithms
<http://www.ibm.com/developerworks/library/os-recommender1/>

⁶⁸ Recommender systems, Part 1: Introduction to approaches and algorithms
<http://www.ibm.com/developerworks/library/os-recommender1/>

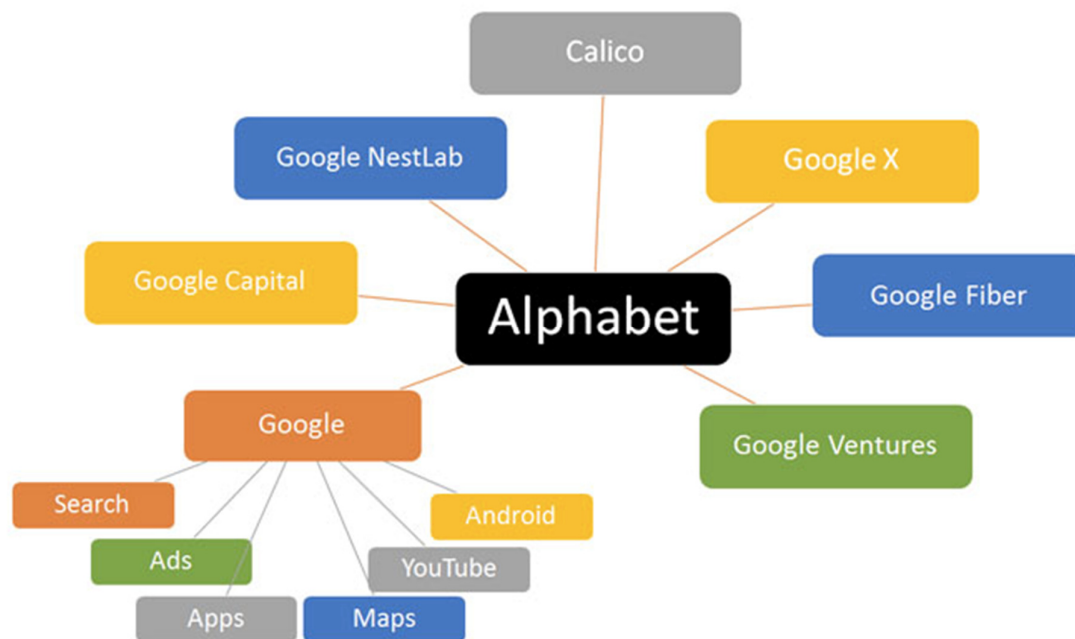
⁶⁹ Recommender systems, Part 1: Introduction to approaches and algorithms
<http://www.ibm.com/developerworks/library/os-recommender1/>

4.3 Case Study: Google Problem of Monopoly

On August 10, 2015, Google announced that from now on they are a subsidiary of Alphabet Inc. and all their businesses will be headed under Alphabet Inc.⁷⁰

“Alphabet Inc. doesn’t own the domain “Alphabet.com”. The company domain is <https://abc.xyz/>. Alphabet would be headed by Larry Page.”⁷¹

Figure 10: Alphabet Subsidiaries



Source: Everything you want to know about ‘Alphabet Inc.’⁷²

⁷⁰ E.g. Everything you want to know about Alphabet Inc.

⁷¹ Everything you want to know about Alphabet Inc.

⁷² Everything you want to know about ‘Alphabet Inc.’

Companies like Amazon, Google and Facebook have become absolutely necessary for modern business. Google holds 80% of the search engines market in USA and even more in key other continents

According to William Baker in the Nation, “It has monopoly-like influence over online news”.⁷³

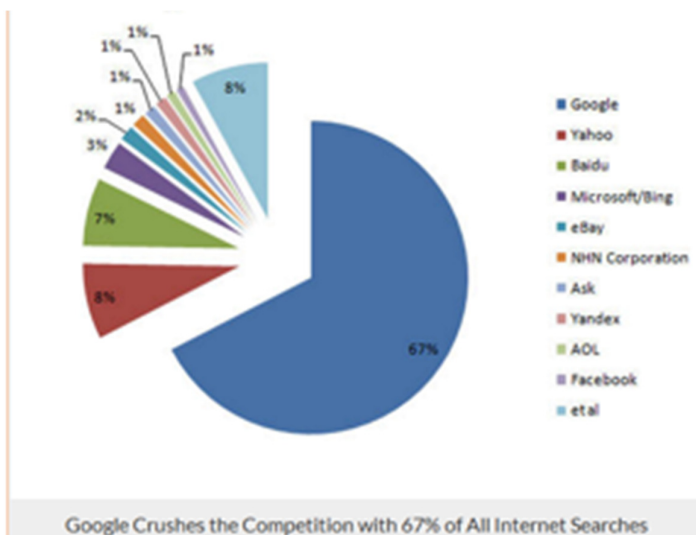
YouTube, which is Google’s owned, is the dominant on-line – video market in the US.⁷⁴

Steve Balmer, former Microsoft’s CEO, expressed his opinion that “Google is a monopoly” “whose activities were worthy of discussion with competition authority.”⁷⁵

Actually, Google and many other technology companies got government support via tax reliefs and other measures.

According to Figure 11, Google achieved Tops 100 Billion Searches by July 2009 and counting.

Figure 11: Google Continues to dominate Search



Source: Erik Ells Erik Ellsworth- Google Continues Search Dominance September 1, 2009.⁷⁶

⁷³ Everything you want to know about ‘Alphabet Inc.

⁷⁴E.g. Michel Bauwens - Should we consider the new internet monopolies as public utilities? November 5, 2014

⁷⁵ E.g. Erik Ells Erik Ellsworth- Google Continues Search Dominance September 1,2009

⁷⁶E.g. Erik Ells Erik Ellsworth- Google Continues Search Dominance September 1,2009

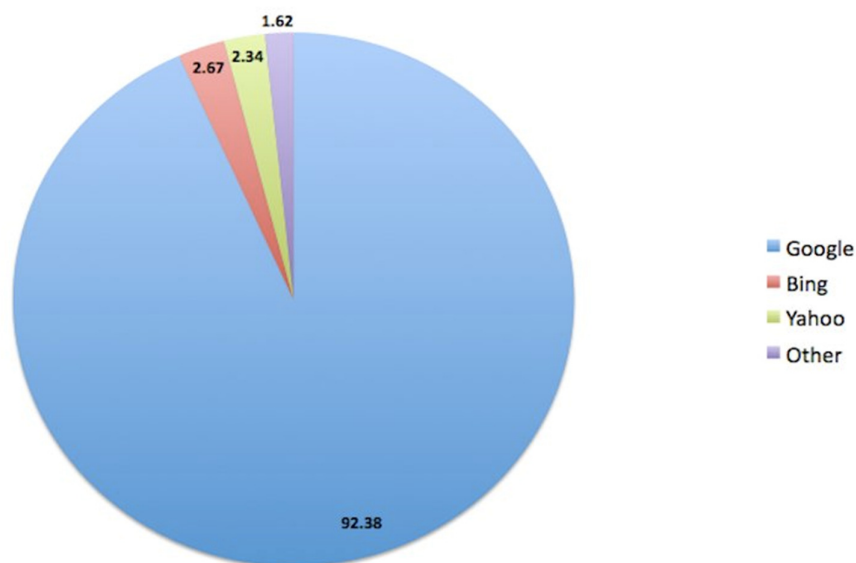
Even though there are several other search engines, “Google continues its virtual monopoly of Internet searches.”⁷⁷

Comscore made a study of global search market growth in 2009 and the results show that Google’s search engine traffic grew 58% from July 2008 to July 2009 and has captured a whopping 67% of the entire search market.⁷⁸

Many researchers have stated, and the numbers are also showing, that there is a very low chance to change the Google’s monopoly in the near future. The numbers are increasing due to the clicks and impressions achieving a very high performance.

As it can be seen in Figure 12, according to StatCounter, Google practically owned the market in October 2014 with 92.38 %. According to the stated information in October 2014 the other search engines had a market share of around 2% each.

Figure 12: Europe Search Market Share, Oct. 2014



Source : Matt Rosoff, data generated by StatCounter ⁷⁹

⁷⁷ E.g. Erik Ells Erik Ellsworth- Google Continues Search Dominance September 1,2009

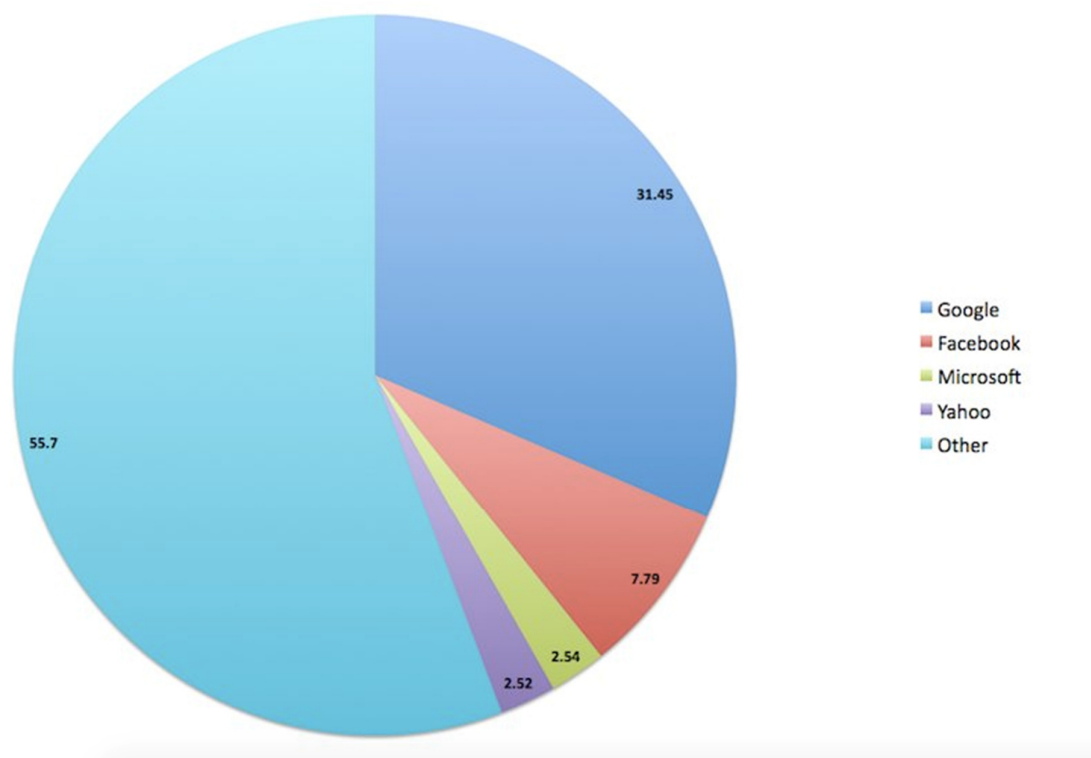
⁷⁸E.g. Erik Ells Erik Ellsworth- Google Continues Search Dominance September 1,2009

⁷⁹ Matt Rosoff -Here's How Dominant Google Is In Europe Nov. 29, 2014

In Global Digital Advertising Revenue, Figure 13 is showing the results in 2014 according to eMarketer, where Google is market Leader again.

Further information for Google's dominance in Europe is presented in Appendices.

Figure 13: Global Digital Advertising Revenue, 2014



Source: Matt Rosoff, data generated by eMarketer⁸⁰

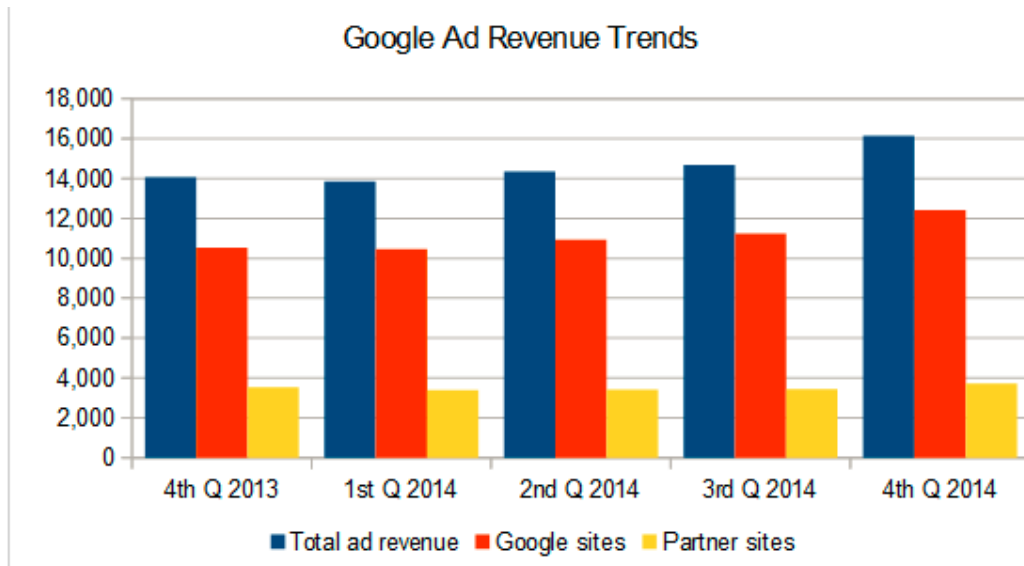
As the most important thing is the consumer's satisfaction, the big question is if there is a real problem that Google is the market leader, and has a virtual monopoly. Their

⁸⁰ Matt Rosoff -Here's How Dominant Google Is In Europe Nov. 29, 2014

customers take the decision. They prefer to use the Google engine instead of any other one. This popularity has been gained in time.⁸¹

Figure 14 is showing that the Ads revenue was slowly growing during 2013 - 2014 timeframe, even though in the 4th Quarter 2013 and in the 1st Quarter 2014 it had a stagnation.

Figure 14: Google Ad Revenue Trends



Source: Scott Bateman - Revenue for Google-owned sites is outpacing revenue for partner sites.⁸²

Tim Wu, Professor of Law at Columbia University and Senior Adviser to the U.S. Federal Trade Commission, brings into discussion how “these new corporations act as colonizers in the new virtual space.”⁸³

⁸¹E.g. Jeremy Rifkin - The Internet of Things: Monopoly Capitalism vs. Collaborative Commons July 04,2014, Updated Dec, 11, 2014

⁸² Scott Bateman - Revenue for Google-owned sites is outpacing revenue for partner sites

⁸³ .E.g. Jeremy Rifkin - The Internet of Things: Monopoly Capitalism vs. Collaborative Commons July 04,2014, Updated Dec, 11, 2014

According to him, a very important question is “how hard would it be to go a week without Google? Or, to up the ante, without Facebook, Amazon, Skype, Twitter, Apple, eBay, and Google?”⁸⁴

Professor Wu is putting his finger on a disquieting new reality: “the new communication medium a younger generation gravitated to because of its promise of openness, transparency, and deep social collaboration masks another persona, more concerned with ringing up profit by advancing a networked Commons”⁸⁵

In the case of Google, if somebody says now that Google is simply the best search engine, which has already taken the principle of natural monopoly, they are right. If an enterprise has taken the dominance in a market, its life is always easier than in the case of not leading a market. Each user brings a lot of money that can plug it into the development. More importantly, the monopolist understands its users better and better. The company learns what the users are looking for and what links they click - the more likely it meets their future taste. The competition comes barely at hand.⁸⁶

If for Google it is not important how many people use their products – “no significant direct network effects”, this parameter is very important for the social networks, like Facebook.

The entry into the search engine business area is made harder by the indirect network effects and the economies of scale, which are partly based on learning effects and depend on the cumulative number of searches and on decreasing average costs caused by the substantial costs of the technical infrastructure.⁸⁷

Figure 15 gives a better understanding of how Google grew during the time.

Google was founded in 1998 and it had only 8 employees and the revenue was 0.2

⁸⁴ .E.g. Jeremy Rifkin - The Internet of Things: Monopoly Capitalism vs. Collaborative Commons July 04,2014, Updated Dec, 11, 2014

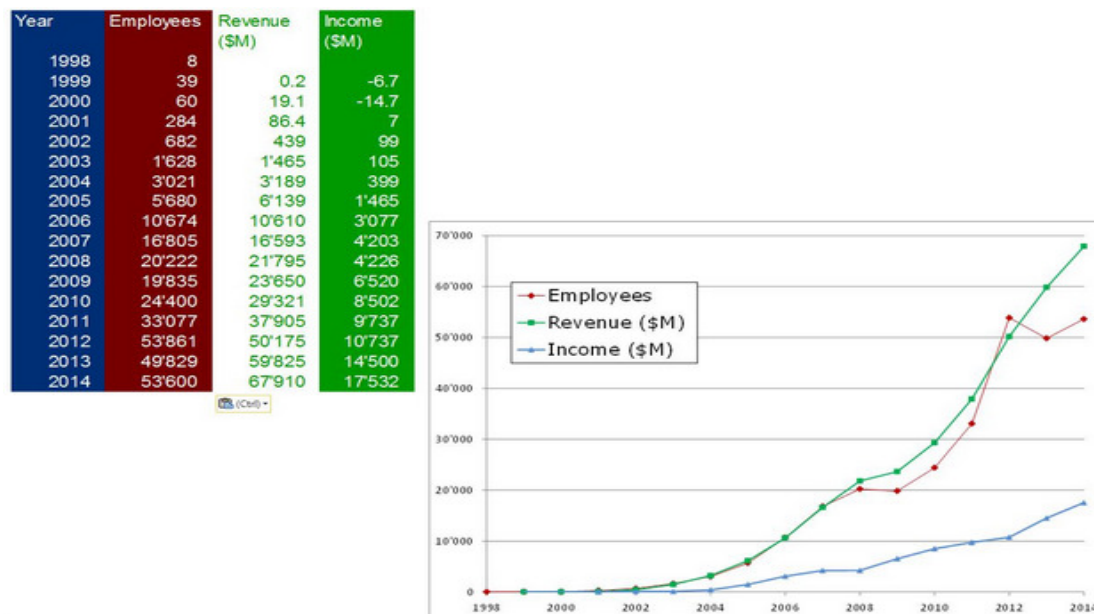
⁸⁵E.g. Jeremy Rifkin - The Internet of Things: Monopoly Capitalism vs. Collaborative Commons July 04,2014, Updated Dec, 11, 2014

⁸⁶ E.g. Jeremy Rifkin - The Internet of Things: Monopoly Capitalism vs. Collaborative Commons July 04,2014, Updated Dec, 11, 2014

⁸⁷ E.g. Justus Haucap, Ulrich Heimeshoff - Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization?, January 2013

Million \$, getting in 2014 to 53600 employees and a revenue of 67910 M\$.

Figure 15: History of Google Growth



Source: Google in the Plex – Part 2: ... and a business, August 29, 2015⁸⁸

Figure 16 is illustrating all the products owned by Google. Some of them are international, some of them are specifically for a certain market.

For example, Orkut is the social network for Brazilian market and DBM (DoubleClick Bid Manager) is used mostly in the Russian market.

⁸⁸ Google in the Plex – Part 2: ... and a business, August 29, 2015

Figure 16: Google Products



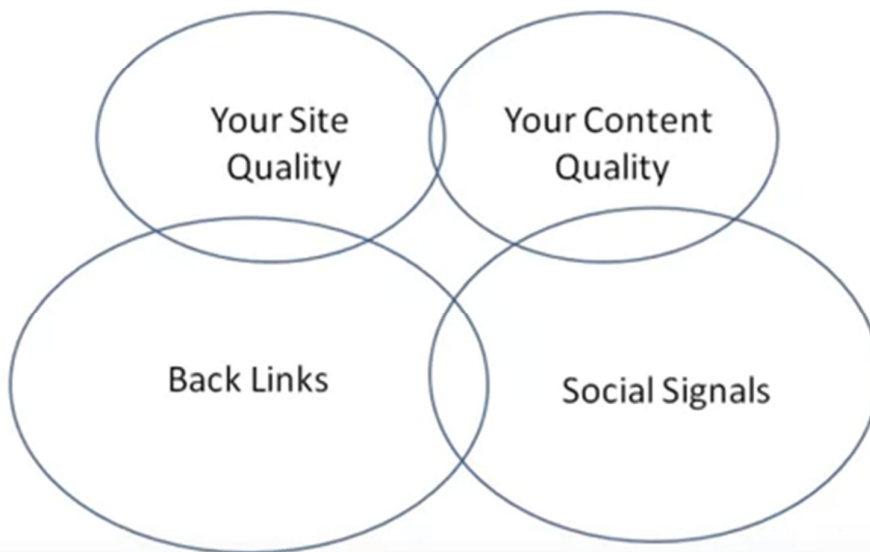
Source: The Google Empire⁸⁹

When talking about SEO (Search engine Optimization), one of the most important factors is the ranking of the page. Figure 17, below, is explaining the way Google is ranking the webpages.

⁸⁹ The Google Empire - <http://dailyinfographics.eu/the-google-empire/>

Figure 17: Google Ranking Factors

Google Ranking Factors



Source: Google Algorithm - Part 2 - How to Easily Increase Your Website Quality Gainwebsite

According to Gainwebsite SEO Consultants “Google rewards high Quality websites, with compelling, relevant and dynamic content that people stay to read or view, come back to over and over again and share on their social networks, and that other good sites refer to.”⁹⁰

Further information of how Google is ranking is attached in the Appendices.

Another very important factor are the Keywords in titles and descriptions. Every filter is done by the used keywords.

Due to the fact that the Quality of the page plays a very important role when ranking, the factors which are taken into consideration are distinguished by:

⁹⁰ Part 2 - How to Easily Increase Your Website Quality Gainwebsite

- “Site age
- Domain renewal Date
- # of ads on the page – above the fold
- Text/HTML Ratio – more text is better
- Navigation Quality –internal links- User experience – 3 Clicks (Faust Rule)
- Security Certificate – http vs. https”⁹¹

4.4. Beat Google Challenge

According to history, “Google was not the only one with the technology”.⁹²

Even though Google is not an absolute monopoly, it is for now the strongest and the most used search engine all around the world.

“Google’s dominance is self-reinforcing, but also makes it more useful. Larger audiences improve Google’s data and make its products more accurate – as well as ever more impossible to avoid.”⁹³

Google is like a spider sitting in the center of the Internet and maintaining people.

They catalogue the WWW (World Wide Web) by actually using in the page source a sort of spider or crawler that detects the keywords in the archive and every further information is stored. This brings Google in the place of having the biggest online database.⁹⁴

The strategy they are using is economies of scope. For them there is no need to specialize in a specific field because revenue is getting bigger by having more products and not the best quality for each of their products.

The European Commission has initiated various preliminary investigations against Google during the time. The US American Federal Trade Commission also stands for that through Press reports in order to decide if it should be taken any decision according

⁹¹ Part 2 - How to Easily Increase Your Website Quality Gainwebsite

⁹² Kurzweil, Transhumanism -Google in the Plex – Part 1 : a technology..., August 27, 2015

⁹³ The Guardian Online-Google dominates search. But the real problem is its monopoly on data April 19,2015

⁹⁴ Google Algorithm - Part 2 - How to Easily Increase Your Website Quality Gainwebsite

Dana Valentina Lungu Solomonescu 1049077 – Does Internet weaken or strengthen Monopolies
– an economical investigation

to the current situation of Google. The essential accusation against Google refers to the discriminatory Listing from Search results.⁹⁵

Google, itself, always underlines that advertising is just one click away. Thus, it remains to be seen in what way the current undoubtedly market strength Google's position has at the moment is of durable nature or not.⁹⁶

Google's ascension happened in an unfriendly environment. When thinking about a public utility or a natural monopoly we may immediately think about the water and sewer system and not about the Internet tools. According to Bill Thomson, a technology consultant who wrote in an online BBC post: "A government serious about ensuring that the net benefits society as a whole could start by investigating Google and considering whether we should create Ofsearch, the Office of Search Engines."⁹⁷

Daniel Brandt of Google Watch / Public Information Research, Inc. expressed a similar statement: "It's way too powerful...It's scary because if Google drops, you could be out of business in no time."⁹⁸

After careful research, the conclusion would be that the problem is not that Google is unbeatable because any of the other search engines has or at least had the same chances in the market. As in the definition of monopoly, one of the factors that makes it market leader is that its technology is better than the others', its advertising is better, it also is user friendly and the most important one is that it gained the trust of the user. However, this does not mean it is undefeatable. There is still a chance for Google to be beaten.

As the Russian market is the only one where Google is not leading the market, there could still be a chance to be defeated.

⁹⁵ E.g. Justus Haucap - Wie lange hält Googles Monopol? November 2012

⁹⁶ E.g. Justus Haucap - Wie lange hält Googles Monopol? November 2012

⁹⁷ E.g. Justus Haucap - Wie lange hält Googles Monopol? November 2012

⁹⁸ Adam D. Thierer and Clyde Wayne Crews Jr - Google as a Public Utility? No Results in This Search for Monopoly, November 14, 2003

5. Dangers that Are in Store for Web Users and the Community

In 2012, the Officials at the Federal Trade Commission concluded: “Google Inc. used anti-competitive tactics and abused its monopoly power in ways that harmed Internet users and rivals”.⁹⁹

On the other hand, the FTC commissioners: “voted unanimously in early 2013 to end the investigation” as “the competition staff recommended against a lawsuit, although it said Google’s actions resulted in significant harm to rivals”.¹⁰⁰

Internet is very useful but in the same time very dangerous because all the information is for free and can be harmful for children.

Privacy is one of the biggest worries of every user.

Unfortunately, privacy, when using Internet, is very low because any search is stocked and used for further recommendations according to users’ preferences.

The European Commission launched, on the 14th of July 2016, a new offensive against Google, accusing it, again, of abuse of dominant position in relation to the services of online shopping and online advertising. According to European Commissioner for Competition, Margrethe Vestager, there were presented additional arguments showing that Google favored unduly own service to compare products within search results pages in general.¹⁰¹

Google is defending its actions and in two blog posts is giving an answer regarding the complaints they got from European Union. One of their first reactions in 2015 is “that its search does not harm businesses, and another arguing that Android has actually increased consumer choice around the world.”¹⁰²

⁹⁹ Stefano Sessa -How internet monopolies are ruining our lives, August 8, 2015

¹⁰⁰ Stefano Sessa -How internet monopolies are ruining our lives, August 8, 2015

¹⁰¹ E.g. Vlad Barza- Comisia Europeana acuza din nou Google de abuz de pozitie dominant July 14, 2016

¹⁰² David Lumb -Read Google's Defensive Response To European Antitrust Charges 16 April.2015

Google is also charged by the European Union because of abusing search monopoly in Europe.

5.1. Silent Revolution

According to Einstein we do not have to think about the future because it is coming very quickly anyway. "Do not think about the future - whatever comes quickly."¹⁰³

In the last 200 years, there have been two major innovations. First, the Industrial Revolution brought us cars and factories, railways and electricity, which changed our lives. Next, Internet Revolution brought us computing power, data network, unprecedented access to information and communication and changed our lives.

Now we go through another change: the Internet industry, benefiting from intelligent computers, advanced analytic power and creativity of the people. It is the union between mind and machine.

Technology begins to transform industrial sectors vital to the economy and individuals lives through energy, aviation, transport or health. From an economical point of view, it is unusual and highly entertaining because that is a greater transformation within the Industrial Revolution and of course economic growth.¹⁰⁴

It seems that our mindset on monopoly has to be changed in the Internet era.

This is a paramount topic and top thinkers should come together to discuss it.

Looking back to the Internet development since its appearance, we may observe that the players who have had a focus on niche information got to impose the games rules.

The current monopoly threats like Google, Amazon, eBay, Facebook have been more focused on the stakeholders than on dominance, unlike their predecessors Microsoft and AOL.

¹⁰³ Capital.ro - NOUA ORDINE MONDIALĂ: Bine ați venit în epoca Internetului industrial December 31.2013

¹⁰⁴ Capital.ro - NOUA ORDINE MONDIALĂ: Bine ați venit în epoca Internetului industrial December 31.2013

The governments will have to be, by far, more attentive to these companies which dominate the Internet niches, from the public policies point of view. To “break them up” will not be a solution in many cases because these firms have become dominant naturally and they will be able to re-invent themselves very fast, following the same steps they already know (ex. the phone companies).¹⁰⁵

The discussion on the government intervention may be long, with its pros and cons but what it has to be underlined is that if “leaving things to the market when there is no market is just trusting to luck.”¹⁰⁶

It would be useless to “break them up” as both Facebook and Google have become dominant, close to a monopoly, thanks to the huge number of users. Their success and subsequently their value is directly the result of the number of people who use them.

Any action taken into the direction to remove this position of dominance would harm the users/ consumers. Definitely, this should not be the aim of any organization, which has the objective to control monopolies.¹⁰⁷

5.2 Manipulation of Users' Perception of Reality

The monopolies are not abusing of their powers but it is part of their strategy to preserve their dominant position. The opinions are split. For example, according to Peter Thiel, those abuses can only be limited if the political powers agree with that. The monopolist software from Microsoft, Internet Explorer was imposed on the market by crushing Netscape and becoming default browser on Windows.¹⁰⁸

Users are frequently manipulated and their perception of reality is very disturbed by their daily basis activities. As the definition of accurate disappears, trust is relative, so they take what they get without having any influence on it.

¹⁰⁵ Mike Shatzkin- Managing monopolies and dominance in the Net age, February 23, 2009

¹⁰⁶ Mike Shatzkin- Managing monopolies and dominance in the Net age, February 23, 2009

¹⁰⁷ Mike Shatzkin- Managing monopolies and dominance in the Net age, February 23, 2009

¹⁰⁸ E.g. Stefano Sessa -How internet monopolies are ruining our lives, August 8, 2015

The reality perception of users' reality is manipulated, their social life has become almost nonexistent. They use Internet for everything: communication, shopping and even reading.

5.3 How Power and Control Drastically Affect Public and Private Life

These days, Silicon Valley is perceived as the “new entrepreneurship Mecca”. Nevertheless, it seems to be forgotten that the control is now in the hands of a small number of monopolists and financial entities. They are Microsoft, Google and unknown financial leaders. These kind of companies act as “the puppet masters behind the celebrated tech Unicorns.”¹⁰⁹

The legend around Silicon Valley is actually a propaganda. No matter how talented you are, if you are not backed by powerful Internet firms and financiers, your start-up will not be successful. Even someone like a nowadays Leonardo Da Vinci, without their support, would be a “loser”.¹¹⁰

According to TechCrunch: “Startups run on an alchemy of ignorance and amnesia that is incredibly important to experimentation. Most startups fail. The vast, vast majority of startup employees will never exercise their options, let alone become millionaires while doing it. Mathematically, talented individuals are certainly better off financially going into a profession or working at a large tech company, where pay is higher and more secure”.¹¹¹

Talking about “building one of these companies (Unicorns) is still ridiculously difficult and rare. If 60,000 software and Internet companies were funded in the past decade, that means only 0.14% have become unicorns – or one in every 714.”¹¹²

¹⁰⁹ E.g. Stefano Sessa -How internet monopolies are ruining our lives, August 8, 2015

¹¹⁰ E.g. Stefano Sessa -How internet monopolies are ruining our lives, August 8, 2015

¹¹¹ E.g. Stefano Sessa -How internet monopolies are ruining our lives, August 8, 2015

¹¹² E.g. Stefano Sessa -How internet monopolies are ruining our lives, August 8, 2015

6. Conclusion

Before the online Era, there were monopolies and there still are. What changed is that today Internet is helping a company to gain online market share and it also makes easier for a user to find what he/ she needs without going to a location based shop or to a bank, etc.

Online companies become stronger and stronger, monopolies seem to have no competition or even if there is any competition, it is harder to enter the online market than the regular market.

To put that in a nutshell, after conducting a Meta-analysis and literature research, I got to the conclusion that Internet does strengthen monopolies. The government is helping them, the users as well.

Online based monopolies, and in this case Google, which is the example of this master thesis, became much smarter than before and every single person is using them without even realizing it. Online search engines are based on suggestions or recommendations according to the previous searches. Even the ads, which pop up on regular websites, are appearing because of previous searching. Those ads are based on keywords and paid by third party companies to Google in order to have their products advertised.

Google became a verb when a person wants to get an information: he/ she googles it.

No human being is used or needed behind this procedure, all the work is done by algorithms and automatized tools and usually without the pressure of time. There is also a risk, which cannot be avoided, which is the user privacy. Companies like Google are leading users' lives and become almost irreplaceable. Users play a very big role in the success that online-based companies have, even though this leads to a huge lack of privacy for them.

Google is giving a sequence of information regarding the sources but, as a consumer, there can be a doubt regarding that this brings our interest on top. Because even though there is a certain information, it is not necessarily the right information.

The consumers allow search engines to have several private information about them but there is no regulation regarding the fact that this information will not be stocked and

used. The only regulation regarding privacy is that they are allowed to use the information they have in specific cases.¹¹³

The essence of finding out how Google manages to achieve and maintain monopoly is the fact that users prefer to go with the known rather than trying something new even though the new could be better.

So what can be done? Is this the right path to go or the only one? Is there anything to do? These are some questions, which may be answered in the future but for now, the only thing to do seems to be adaptation to the new evolution of what once was customer sovereignty.

¹¹³ not official analysis regarding property right

Schlussfolgerung

Monopole gab es auch vor der Online-Ära und gibt es immer noch. Was sich geändert hat ist es, dass heutzutage das Internet ein Unternehmen unterstützt, Online-Marktanteile zu gewinnen. Für den Benutzer ist es einfacher etwas zu finden, was er/sie braucht, ohne man zu einem ortbezogenen Laden bzw. zu einer Bank u.a. gehen zu müssen.

Online-Unternehmen werden immer stärker und die Monopole scheinen keine Konkurrenz zu haben. Selbst wenn es beliebig Wettbewerb gibt, ist es schwieriger den Online-Markt als den normalen Markt zu erschließen.

Zusammenfassend, nach der Durchführung einer Meta-Analyse und Literaturrecherchen bin ich zu der Schlussfolgerung gekommen, dass Internet die Monopole verstärkt.

Online basierte Monopole, in diesem Fall Google, welches das Beispiel dieser Masterarbeit ist, ist viel schlauer als vorher geworden, und wird von jeder einzelnen Person verwendet. Online-Suchmaschinen basieren sich auf Vorschläge oder Empfehlungen entsprechend der vorherigen Suchen. Auch die Anzeigen, die auf laufenden Webseiten (Pop-up) erscheinen, sind mit der vorherigen Suche verbunden. Diese Anzeigen sind auf Schlüsselwörter basiert und werden von Dritten an Google bezahlt, um ihre Produkte beworben zu haben.

Kein Mensch wird hinter diesem Verfahren benötigt, da die gesamte Arbeit von Algorithmen und automatisierten Werkzeugen und, in der Regel, ohne Zeitdruck durchgeführt wird. Es besteht trotzdem ein Risiko, das nicht vermieden werden kann: die Privatsphäre des Anwenders.

Unternehmen, wie Google, führen das Leben der Anwender und sind fast unersetzbar geworden. Benutzer spielen eine große Rolle bei dem Erfolg der Online-Unternehmen, auch wenn das für sie zu einem großen Mangel an Privatsphäre führt.

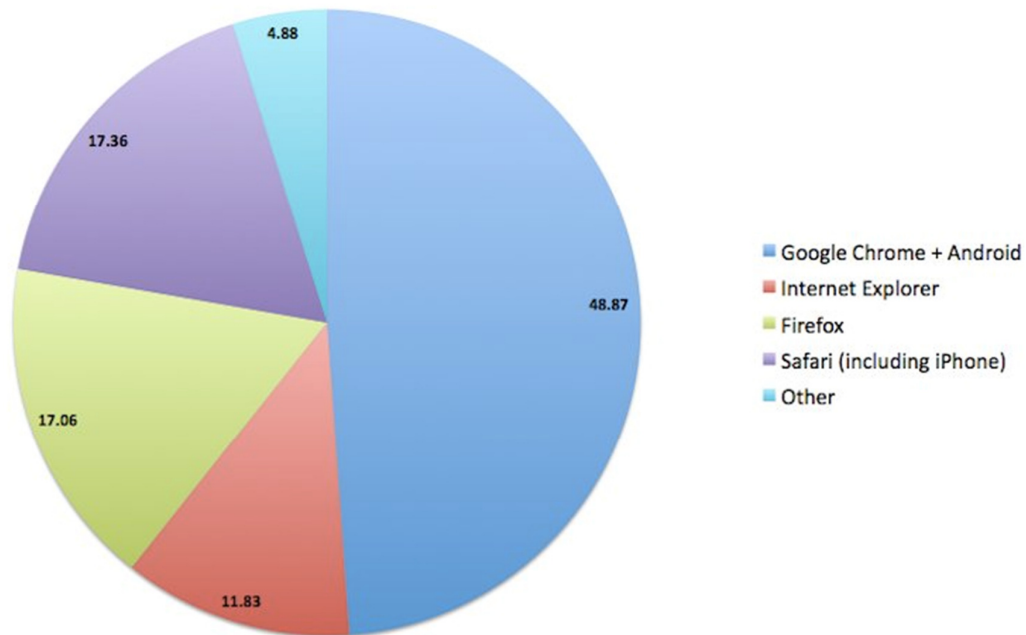
Google gibt eine Informationensequenz bezüglich der Quellen weiter. Ob diese Informationensequenz die Interesse der Anwender berücksichtigt oder nicht könnte als Verbraucher, Zweifel entstehen. Denn auch wenn es eine bestimmte Menge an Information gibt, bedeutet nicht, dass es unbedingt die richtige Information ist.

Der Verbraucher erlaubt den Suchmaschinen mehrere vertrauliche Informationen über sich zu bekommen, aber es gibt keine Regelung, dass diese Informationen nicht gespeichert und verwendet werden können. Die einzige Regelung bezüglich der Privatsphäre ist es, dass die Suchmaschine diese vertrauliche Informationen nur in bestimmten Fällen verwenden werden dürfen.

Also, was kann getan werden? Ist das der richtige oder der einzige Weg? Gibt es etwas zu tun? Das sind die Fragen, die erst in der Zukunft beantwortet werden können. Das einzige, was gemacht werden kann ist es, man sich an der neuen Entwicklung der damaligen Kunden Souveranität anzupassen.

Appendices

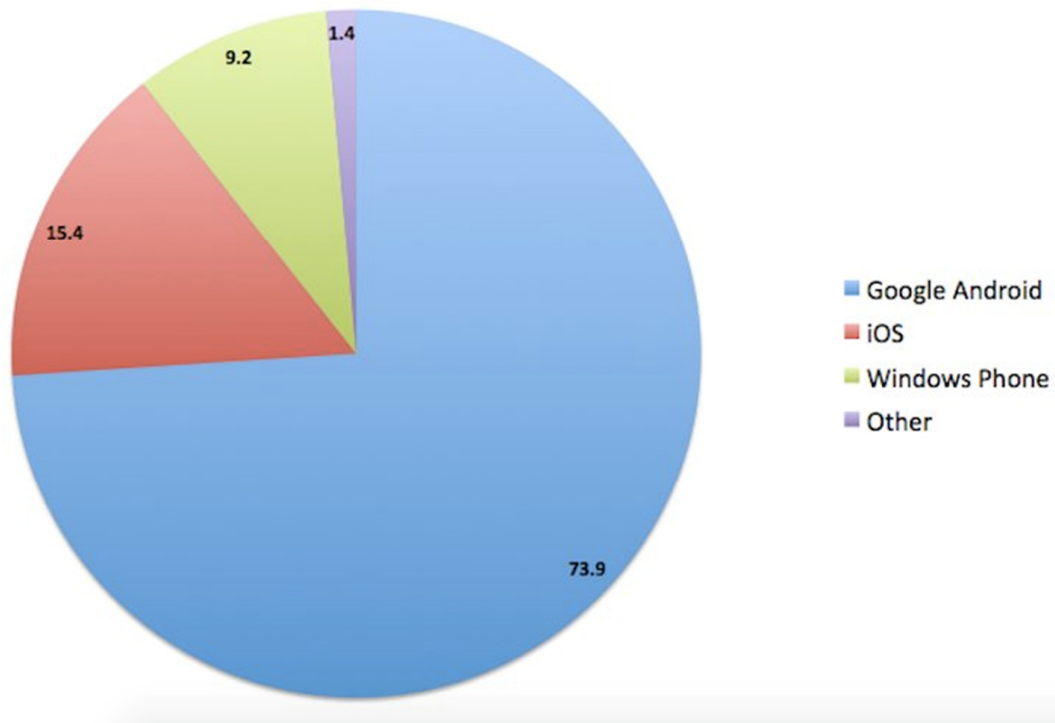
Figure 18: Europe Browser Market Share



Source: Matt Rosoff, data generated by StatCounter¹¹⁴

¹¹⁴ Matt Rosoff -Here's How Dominant Google Is In Europe Nov. 29, 2014

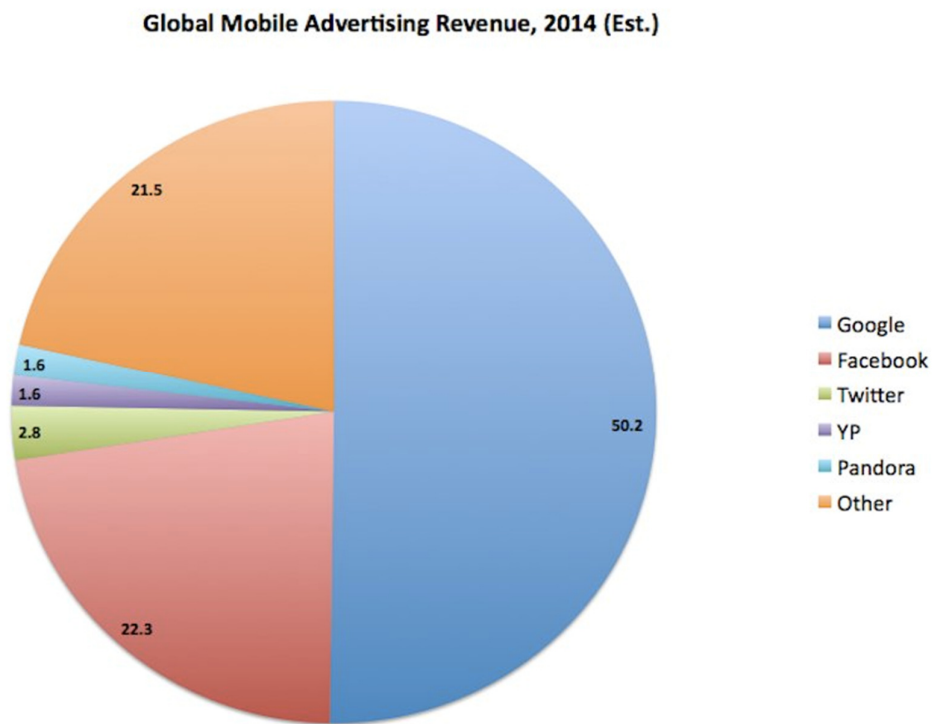
Figure 19: Europe “Big 5” Smartphone Platform Marketshare Oct. 2014



Source: Matt Rosoff, data generated by Kantar Worldpanel¹¹⁵

¹¹⁵ Matt Rosoff -Here's How Dominant Google Is In Europe Nov. 29, 2014

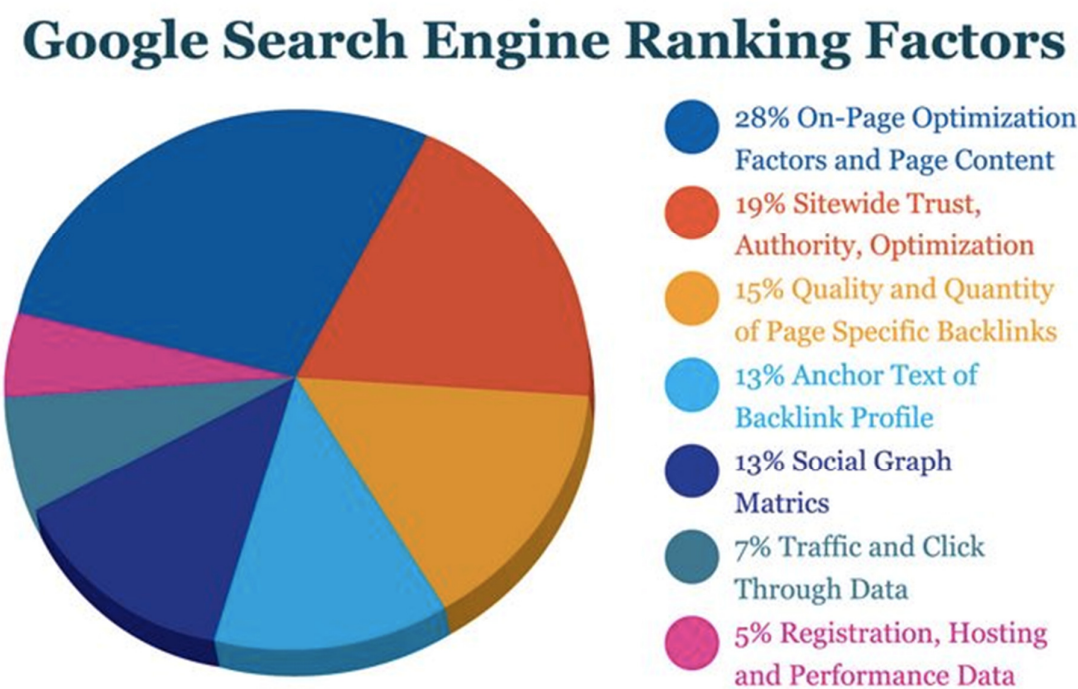
Figure 20: Global Mobile Advertising Revenue 20014



Source: Matt Rosoff, data generated by StatCounter¹¹⁶

¹¹⁶ Matt Rosoff -Here's How Dominant Google Is In Europe Nov. 29, 2014

Figure 21: Google Search Engine Ranking Factors



Source: The Periodic Table of SEO Success Factors July 3, 2015¹¹⁷

¹¹⁷ The Periodic Table of SEO Success Factors July 3, 2015

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Anhang

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Education Background

- | | |
|------------------|---|
| 10/2010 | University of Vienna, Austria |
| | MSc International Business Administration, major Electronic Business, |
| 10/2007- 07/2010 | The Academy of Economic Studies, Bucharest, Romania |
| | BSc Business Administration in Foreign Languages, German section, |
| 09/2003- 06/2007 | German College of Bucharest “Goethe” |
| | Matura |
| 09/2000- 06/2001 | Hohere Internatschule des Bundes Wien 3 |
| | (2 nd grade Gymnasium) |

Work Experience

01/2016 – 09/2016 **IBM Österreich, Vienna, Austria**

Software Security Sales Assistant/Quality Analyst

09/2015 – 12/2015 **IBM Österreich, Vienna, Austria**

European Software Deployment Project Office

Since 09/2014 **AIESEC Vienna, Austria**

Alumni

09/2014- 12/2014 **startUs, Vienna, Austria**

. Community Manager/ Sales - Volunteer

08/2013- 07/2014 **Google, Dublin, Ireland**

. Content Reviewer (Ad Exchange Quality Evaluator)

09/2012- 12/2012 **Mgi recruitment, Dublin, Ireland**

Recruitment Consultant

07/2012- 09/2012 **Mgi Recruitment, Dublin, Ireland**

Marketing Advertising & Business Development (Internship)

04/2009-10/2009 **Unicredit Tiriack Bank, Bucharest, Romania**

Direct Sales Agent

03/2009 **S&T Romania, Bucharest, Romania**

Internship for the University

01/2008- 02/2009 **S&T Software, Bucharest, Romania**

Assistant Manager with German