

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

Department of Economics



DIPLOMA THESIS

ECONOMIC ANALYSIS OF SOCIAL NETWORKS AND THEIR
IMPACTS UPON ECONOMY IN CHOSEN REGION

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Department of Economics

Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

Max Smrčka

Economics and Management

Thesis title

Economic analysis of social networks and their impacts upon economy in a chosen region

Objectives of thesis

Objectives of thesis are economic evaluation of social networks which were created just few years ago and their popularity is steadily rising. Particularly, evaluate why social networks became one of the most powerful tool for business activities such are promotional or advertising purposes. Also, numerically estimate impacts of social media upon overall economy.

Methodology

Methodology of this thesis contains study and analyses of chosen information sources. For second, practical part of thesis would be done analyses from multiple points of view. Main focus would be at financial analyses of selected social networks and value of their stocks.

The proposed extent of the thesis

60-80 pages

Keywords

Social network, social media, online marketing, financial analysis, e-business

Recommended information sources

1. Kotler, Philip – Kartajaya, Hermawan – Setiawan, Iwan. Marketing 3.0: From Products to Customers to the Human Spirit, John Wiley & Sons, 2010, 208 pages, ISBN:9780470609798.
2. Evans, Dave. Social Media Marketing: The Next Generation of Business Engagement, John Wiley & Sons, 2010, 408 pages, ISBN:9780470944219.
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4. Fuchs, Christian – Boersma, Kees – Albrechtslund, Anders – Sandoval, Marisol. Internet and Surveillance: The Challenges of Web 2.0 and Social Media, Routledge, 2013, 352 pages, ISBN:9781136655265.

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Statutory Declaration

I, the undersigned, declare that the thesis “Economics analysis of social networks and their impact upon economy in chosen region” is wholly my own work, and only sources I used are listed in the references.

In Prague 19.3.2015

Max Smrčka

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ECONOMIC ANALYSIS OF SOCIAL NETWORKS AND THEIR IMPACT UPON ECONOMY IN CHOSEN REGION EKONOMICKÁ ANALÝZA SOCIÁLNÍCH SÍTÍ A JEJICH DOPAD NA EKONOMII VE VYBRANÉM REGIONU

ABSTRACT

This thesis deals with the social networks and their impact on the economy. Social networks became part of everyone's life in past few years and their impact upon economies is steadily increasing thanks to the technical development of computers along with increasing popularity of mobile devices such as tablet or smartphone. Due to the increasing usage of social media, marketers and companies are able to reach their current and potential customers faster and more easily with relatively low costs which made social media powerful tool for marketing and other purposes. That is why social networks need our attention and why it is necessary to understand how they work.

This thesis is mainly focused on the social network Facebook and its impact upon the economy of the United States because it is an origin country of Facebook. For a practical part, evaluations of the current position of Facebook among social networks in the U.S. was made and extend of Facebook's impact on the U.S. economy in terms of number of jobs created and amount of money generated into an economy was defined.

KEYWORDS

Social network, social media, online marketing, e-business, financial analysis, economic analysis, comparison, economic impact, Facebook

SOUHRN

Tato práce se zabývá sociálními sítěmi a jejich dopadem na ekonomiku. Sociální sítě se staly v posledních několika letech běžnou součástí každodenního života a jejich dopad na světové ekonomiky stále roste díky technickému vývoji počítačů spolu s rostoucí popularitou mobilních zařízení, jako jsou tablety nebo chytré telefony. Vzhledem k rostoucímu využití sociálních médií, jsou obchodníci a firmy schopny dosáhnout svých stávajících i potenciálních zákazníků rychleji a snadněji s relativně nízkými náklady. Zároveň sociální sítě slouží i jako výkonný nástroj pro marketing a komunikaci. To je důvod, proč jim musíme nejen věnovat pozornost, ale také se snažit porozumět principům jejich fungování.

Tato práce je zaměřena především na sociální síť Facebook a její vliv na ekonomiku Spojených stát (jakožto zemi původu na Facebooku). V praktické části je vyhodnocena aktuální pozice Facebooku ve vztahu k ostatním sociálním sítím ve Spojených státech, a zároveň je definován rozsah jeho dopadu na americkou ekonomiku. K tomuto zhodnocení byla využita data jako například počet vytvořených pracovních míst, či objem financí, které přináší ekonomice.

KLÍČOVÁ SLOVA

Sociální síť, sociální média, online marketing, e-business, finanční analýza, ekonomická analýza, srovnání, ekonomická dopad, Facebook

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1. Introduction

Social networks are necessary mean of communication nowadays. Number of the user is increasing by every second and so is the amount of different platforms for social networking. Weaver and Morrison (2008) define social network as a “*structure comprising of at least three interconnected nodes, which are able to communicate with each other and each node is represented either by persons or by objects*”. In real life our social networks are those we build at school, workplace or in any other group where we socialize. In the past few years number of hours spent online has significantly increased and so has the need of creating online social networks. These try to make a virtual copy of our real lives. Social networks use various tools to build virtual communities. In these communities people share even the most intimate information and other various contents such as images, photographs, videos, etc.

Every social network has its own special characteristics; however the main features remain the same in all networks - sharing files such as pictures and videos together with written text. Networks such as Facebook, Google+, and etc. offer also possibilities of creating and managing an event, playing games and so on (Ryan, 2011).

Social networks have become a perfect tool for organizations to promote themselves and for marketing and PR or even HR purposes. Most of the networks offer both free and paid options for marketing and advertising. Social networks are called Web 2.0 applications. This term refers to creation of the content by users themselves. This enable networks' providers to concentrate on development of these networks because they do not have to deal with the content users are exposed to. Due to natural need of people to socialize number of users of various social networks is still increasing (Ryan, 2011). There is a large amount of various social networks; this thesis will introduce only the most known and used ones.

This thesis is focused on social network Facebook and its impact upon the economy of the United States (as a country of origin of Facebook). It examines position of Facebook among social networks in the U.S. and its impact the U.S. economy in terms of number of jobs created and amount of money generated in the economy. In order to answer questions posed both fundamental and technical analyses will be made. The will be followed by stock analysis for Facebook and other competing social networks. Finally evaluation of the

development of prices of stock will be made. Also the specific event, which led to significant rises or falls of shares will be presented. For definition of Facebook's position among other social networks comparison of social networks both worldwide and in the U.S. will be made. Data such as monthly active users, revenues, development of audience and others will be used.

2. Objectives and Methodology

2.1 Objectives

This thesis deals with the social networks and their impact on the economy. Social networks became part of everyone's life in past few years and their impact upon economies is steadily increasing thanks to the technical development of computers along with increasing popularity of mobile devices such as tablet or smartphone. Due to the increasing usage of social media, marketers and companies are able to reach their current and potential customers faster and more easily with relatively low costs which made social media powerful tool for marketing and other purposes.

Author has chosen to focus on social network Facebook and its impact upon the economy of the United States because it is an origin country of Facebook. Research questions to be answered focus on position of Facebook among social networks in the U.S. and to what extend does Facebook impact the U.S. economy in terms of number of jobs created and amount of money generated into an economy.

2.2 Methodology

Methodology of this thesis comprises of examining Facebook with fundamental and technical analysis followed stock analysis for Facebook and other competing social networks in order to evaluate development of prices of stock as well as the events which lead to significant rises or falls of shares. Another part focuses on the comparison of social networks both worldwide and in the U.S. The comparison includes information about monthly active users, revenues, development of audience and others. From these comparisons, author was able to evaluate position of Facebook among social media in the U.S.

To better understand to which social media people are attracted the most, author decided to include demographic comparison of audience in the U.S. with data from Pew Research Center based in the U.S.

For the final part of the thesis, the economic impact upon the U.S., author has chosen to critically review two studies which both dealt with the question what is the most suitable approach to evaluate economic impact of any social media.

3. Literature Review

3.1 Social networks

3.1.1 History

It is difficult to track the very origins of social networking but Furht (2010) believes that basics were set in 1954 when J.A. Barnes needed to describe complicated hierarchy of relationship in one Norwegian fishing village. While trying to name all the relationship he came up with the term “social network” as a network of different relationship in the society.

Technology that first enabled people to connect themselves was ARPA NET where people communicated via emails. But the idea was the same, every person had some network of contacts and communicated with people he or she really knew (Rutledge, 2008). In the late eighties Finnish student Jarko Ojkarinn presented system known under abbreviation IRC which stands for Internet Relay Chat. This system connected Finnish universities but soon it gained users worldwide. IRC built basics for chat we know today. Then experts in CERN invented World Wide Web and real online cooperation and communication among people started (Rutledge, 2008).

In 1991 the first website were published and in 1995 there were more than 20 million connected users worldwide. The first predecessor of social networks was server classmates.com founded in 1995. Its purpose was connecting of students and graduates and enabling them to stay in touch. However, this server did not offer an option of creating a personal profile.

The first predecessor of online social networks we know today was project sixdegrees.com. This program dealt with the idea that all people in the world know each other through six connections (Rutledge, 2008).

In 1999 platforms Blogger and LiveJournal were founded. These platforms together with sixdegrees.com enabled users to create their own profiles and connect with other people. In 2001 server sixdegrees.com was closed and replaced by platform such as MySpace. MySpace used to be the most popular social network for very long time it has been losing its popularity since 2004 when web pages such as Facebook, YouTube and Twitter were launched (Ellison and Boyd, 2013).

3.1.2 Classification

Social networks can be divided into five main categories according to their focus. The basic types of social networks are according to Ellison and Boyd (2013):

- Social networks create online social community. This category comprises of blogs, video blogs (vlogs), chats, etc.
- Business networks that connect people from business and serve for an exchange of information.
- Social bookmarked systems share information and they are mainly used for reading articles in the form of bookmarks.
- Voted web pages where content is shown according to its ranking, which is made by readers. Higher ranking means higher visibility.
- News networks where people read news and are enabled to comment articles or share them.

3.2 *Individual social networks*

Following part of the thesis is dedicated to introduction of social networks, which have significant impact on the society. Beside Twitter, which is the most important social network for this thesis, other social networks are introduced. Thank to their significance and importance in today's world networks Facebook, YouTube, LinkedIn and MySpace were chosen.

3.2.1 Facebook

Facebook is definitely a king among all social networks. Harvard student Mark Zuckerberg founded it. He and his two roommates and classmates from Harvard, Chris Hughes and Eduardo Saverin had an idea to create a community site for all students of Harvard. Its name- "Facebook" refers to leaflets, which are given to freshmen (first year students) to inform them about studies and classmates and which were called Facebooks. These leaflets had to familiarize students with each other by providing them pictures of other students and some basic information about them. These three students launched a website www.thefacebook.com in February 2004. It remarked enormous success when more than half of all students registered into website during first month of its existence. Its success and popularity was the reason why it soon spread among other prestigious universities such as Yale, Columbia and Stanford. In that time Mark Zuckerberg decided to leave the university and focus only on Facebook and its business potential. In August 2005 the name of the website was changed into simply www.facebook.com and its founders invested \$20,000 into purchase of new domain. In October 2005 Facebook expanded and captured students from universities in Mexico and United Kingdom. Number of users was increasing rapidly and founders of the website decided to enable all people to become its users. Only condition was age restriction- users had to be older than thirteen years. Since August 11th, 2006, Facebook has been enabling anyone over 13 years to register (Lusted, 2011).

Its main features were tools for easier organization of events and communication of people. Facebook started to cooperate with Microsoft and these two companies agreed to cooperate in an advertising system they designed together. This system was based on banner advertising and sponsored links. Advertisers were enabled to choose a target group and advertisements were designed specifically for chosen target groups (Lusted, 2011).

Facebook introduced chat functionality in 2008 and button "Like" one year later. During four years of its existence it gained 350 million users, only in the Czech Republic number of users increased from 150,000 in January 2009 to 1.7 million in November. In 2011 Facebook agreed to cooperate with Skype and introduced both group video chat and

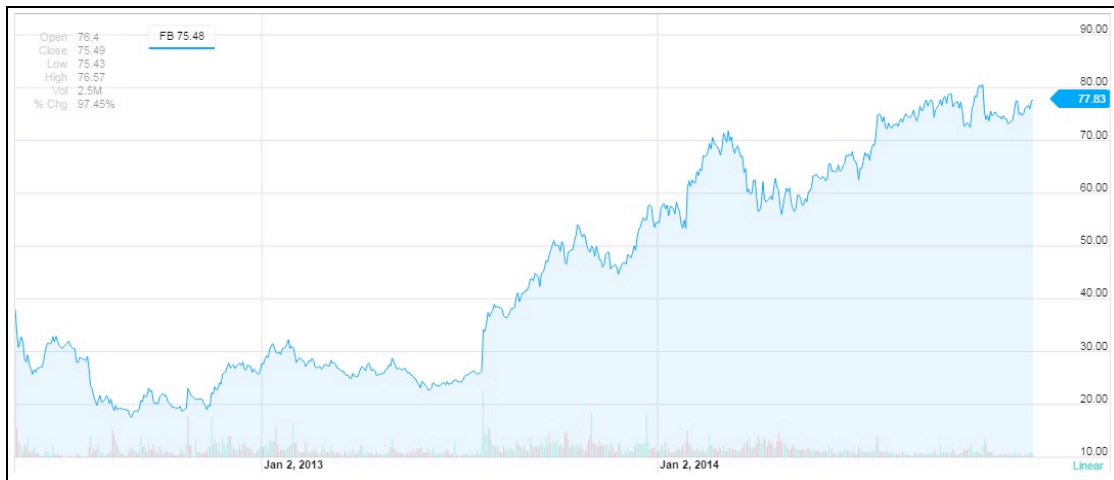
improved chat. It also introduced new way of personal profiles- profile “Timeline” where all posts are shown chronologically. Since 2012 it has been offering shares to public, initial value in May 2012 was \$38 per share. At the very first day of opening purchase of shares to public it offered shares in the amount of \$105.2 billion (Lusted, 2011).

3.2.1.1. Facebook Inc. on the Stock Market

Facebook filed for the IPO on February 1st 2012 and applied for a \$5 billion IPO which would be one of the largest offerings in the history of technology. The IPO raised \$16 billion making it the third largest in history of USA. The shares began trading on May 18th under the symbol “FB” as the stock struggled to stay above the IPO price for most of the day, but set a record for the trading volume of an IPO (460 million shares). The first day of trading was influenced by technical issues that prevented orders from going through and according to some experts, only the technical problems and artificial support from underwriters prevented the stock price from falling below the IPO price on the day.

The first trading day of Facebook shares was very dramatic and problematic as well because on the 22nd May, just four days after beginning of trading, the Yahoo! Finance web reported that during IPO process, three Facebook’s lead underwriters named Morgan Stanley, JP Morgan and Goldman Sachs cut their earnings forecasts for the Facebook and shortly after this report, the stock began to fall significantly. Financial Industry Regulatory Authority (FINRA) chairman Rick Ketchum and Securities and Exchange Commission chairman Mary Schapiro immediately called for an investigation of the suspicious circumstances of the IPO process. While under investigation, the IPO was often compared to pump and dump scheme which involves artificially inflating the price of a stock through false and misleading positive statements, in order to sell the cheaply purchased stock at a higher price.

The graph below shows development of stock prices from 18th May until December 18th 2014.



Graph 1: Facebook Inc. Stock Chart

Source: Yahoo Finance, 2014

3.2.2 Twitter

Twitter is a free social networking micro blogging service that allows registered members to send short posts called tweets. Twitter members can broadcast tweets and follow other users' tweets by using multiple platforms and devices. Tweets and replies to tweets can be sent by cell phone text messages, desktop client or by posting at the Twitter website.

The default settings for every user of Twitter are public which means that everyone can follow everyone which is different from other social networks as Facebook or LinkedIn where members need to approve social connections. However, all users have option to set up its profile according to their needs or preferences. To weave tweets into a conversation thread or connect them to a general topic, members can add hash tags to a keyword in their post. The hash tag is expressed as #keyword.

Tweets, which may include hyperlinks, are limited to 140 characters, due to the constraints of Twitter's Short Message Service (SMS) delivery system. Because tweets can be delivered to followers in real time, they might seem like instant messages to the novice user. But unlike instant messages that disappear when the user closes the application, tweets are also posted on the Twitter website. They are permanent, they are searchable and they are public. Anyone can search tweets on Twitter, whether they are a member or not (Ryan, 2011).

Twitter was founded on March 21st 2006 by Jack Dorsey, Evan Williams, Noah Glass and Biz Stone in California in the USA. Its headquarters is located in San Francisco, California and currently has more than 25 offices around the whole world. Only after one year after Twitter creation, the company experienced rapid growth. During 2007, there were about 400,000 tweets posted in each quarter which was much more than expected by the founders but next year was even better. In 2008, amount of posted tweets in each quarter of a year escalated to 100 million. The growth was considered incredible but next two years were better again. In February 2010, Twitter users were sending more than 50 million tweets per day and by March 2011; there was about 140 million tweets per day.

3.2.2.1 Twitter Inc. on the stock market

On September 12th 2013, Twitter announced that it filed papers with the U.S. Securities and exchange Commission. Twitter planned to raise \$1 billion as the basis for its stock market debut. On October 15th 2013, Twitter declared that it would list on the New York Stock Exchange (NYSE), disproving speculations that Twitter is going to list on the NASDAQ exchange. Many experts viewed this decision as a reaction to the botched IPO of Facebook. Day before the first trading day, Goldman Sachs issued 70 million shares priced at \$26 per share. On November 7th 2013, the first trading day of Twitter shares under symbol "TWTR" opened at \$26.00 and closed at \$44.90, giving the company a valuation of around \$31 billion. This figure was \$18.90 above the IPO and Twitter ended with a market capitalization of \$24.46 billion.

The graph below shows development of stock price for the first year, dated from November 7th 2013 until November 7th 2014.



Graph 2: Twitter Inc. Stock Chart
Source: Yahoo Finance, 2014

3.2.2.2 Instagram

Instagram is an online photo and video sharing service for mobile phones and tablets. It enables users to share their photos and videos not only on Instagram but also on variety of other social media such as Facebook, Twitter or Tumblr. Distinctive feature of Instagram are usage of square shape which reminds images by Kodak images and also availability of variety digital filters for modification of photos. Duration of videos is limited to maximum of 15 seconds.

Instagram was created by Mike Krieger and Kevin Systrom in San Francisco, the U.S. and users could start to download it in October, 2010. It is available for the three main platforms for mobile devices which are IOS developed by Apple Company, Android by Google and Windows Phone provided by Microsoft Company. Instagram users are divided almost equally with 49 percent using IOS, 49 percent using Android and 2 percent using Windows Phone.

Instagram gained quickly popularity and in April, 2012 it reached to 200 million active users. Rapid growth of users and increasing popularity was noticed by competition and in late April, 2012 was Instagram acquired by Facebook for approximately \$1 billion

in cash and stock. After the acquisition, Facebook's Mark Zuckerberg stated that they are committed to let Instagram build and develop independently in order to maintain good results in the past.

In December 2014, Instagram announced on their webpage that there were more than 300 million user accounts, sharing over 70 million photos and videos each day (Instagram, 2015).

3.2.3 Google

Google Inc. is a multinational technology corporation based in California, USA. Google's business is mainly focused on areas such as search, advertising, operating systems, software, cloud computing and hardware products. Most of revenues are generated by AdWords which is an online advertising service that influences positioning of results in search results. Google provides its products and services in more than 100 languages and in more than 50 countries, regions, and territories.

According to Google website, the company mission is to *"is to organize the world's information and make it universally accessible and useful"*.

Google was created by Larry Page and Sergey Brin during their study program at Stanford University. The domain name for Google was registered on September 15th 1997 and the company was incorporated on September 4th 1998. At that time, search engines ranked results by counting how many times the search items appeared on the page. Both Page and Brin were determined to improve the search service in order to display more relevant results and finally they came up with new technology called PageRank. This new technology determined website's relevance by the number of pages and importance of those pages.

In the beginning of the year 1999, Brin and Page were still graduate students and decided that the search engine they had developed was taking up too much time and distracted their academic pursuits. They decided to arrange a meeting with Excite CEO George Bell and offered to sell it to him for \$1 million. He rejected the offer and later criticized Vinod Khosla, one of Excite's venture capitalists, because he negotiated with Brin and Page the price down to \$750,000. After this unsuccessful plan, Page and Brin decided they would not sell the search engine and they were exploring other possibilities to fund their idea in order to expand. It did not take a long period until they reached agreement

with major investors including Kleiner Perkins Caufield & Byers and Sequoia Capital. On June 7th, 1999, a \$25 million round of funding was announced.

3.2.3.1 Google on the stock market

After five successful years since the round of funding in 1999, Google decided to go public. The IPO was scheduled on August 19th, 2004 and Google offered 19,605,052 shares under symbol “GOOGL” at the price of \$85 per share. The underwriters of the deal were Morgan Stanley and Credit Suisse. The sale of \$1.67 billion resulted in market capitalization of \$23 billion. Almost ten years later, in January 2014, the market capitalization grew to astronomical \$397 billion.

In the beginning, there were concerns about the IPO because some of Google employees owned shares and many of them became instant paper millionaires. The concerns from shareholders were about change of culture within the company but both co-founders, Page and Brin promised that the culture is going to stay the same. In an effort to maintain the company's working culture, Google decided to appoint a chief culture officer, who also basically serves as the director of human resources management. The purpose of the director of HRM is to develop and maintain the culture and work on customs to keep true to the key values that the Google was founded on which is a flat organization with a collaborative environment.

Google's stock performed very well in last ten years and because both co-founders believe in ongoing future success while maintain majority of voting power, on April 3rd, 2014 they decided to split stock into two stocks: “GOOGL” and “GOOG”. After the split, everyone except Larry Page, Sergey Brin, Eric Schmidt Google's ex-CEO and Executive Chairman, and a few other people own Class A shares (Symbol GOOGL). Class A shares get one vote for each share. There were 279,883,488 Class A shares on January 30, 2014. Their trading symbol became “GOOGL” after the split. Class B shares are largely owned by Brin (23.2 million), Page (23.6 million) and Schmidt (4.6 million) and they get 10 votes per share. In total there were 56,167,343 Class B shares on January 30, 2014. This means that Brin and Sergey have 468 million votes compared to the 280 million Class A shareholders, essentially complete control of the company as they have just over 55% of the total votes (Forbes, 2014).

The graph below shows stock development since August 18th, 2004 until December 19th, 2014.



Graph 3: Google Inc. stock chart
Source: Yahoo Finance, 2014

3.2.3.2 YouTube

YouTube is famous video sharing website founded in California in 2005. The website allows users to upload, view and share videos on YouTube itself or on other social media platforms. In 2006, YouTube was bought by Google for \$1.65 billion, making it the most expensive acquisition of social media. Most of the content on YouTube is uploaded by individuals, but in recent years, media corporations such as CBS, the BBC or Vevo started to offer some of their own material via YouTube as part of YouTube partnership program. Content of YouTube is available to any user of the internet; however, if someone wants to upload, comment or add video to some playlist, there is a need to create Google account which enables user to use all available services of YouTube. Videos which are considered to have potentially offensive content are available only to registered users who are at least 18 years old. For each video are gathered statistics such as view counter and popularity scale which is measured by number of “likes” and “dislikes” for the video. Every registered user can also comment any video which is sometimes problematic because there are many people who are just using rude language, but other users can report these problematic users and YouTube than has to resolve this issue. These statistics are not

only interesting to individual users but also for marketers who can see how their promotional video is doing among other videos and also can get some form of feedback from the comments.

YouTube was founded by Chad Hurley, Steve Chen and Jawed Karim who are all former employees of PayPal. In the beginning it was a venture founded technology startup, backed primarily by investment of \$11.5 million from Sequoia Capital Company. The website grew rapidly in the first year and by July 2006; YouTube announced that there are more than 65,000 new videos uploaded every day with 100 million views per day. These astonishing figures were enough for grasp Google's attention and in October 2006, Google Inc. announced that it had acquired YouTube for \$1.65 billion in Google stock. During announcement of the acquisition, YouTube also revealed three additional separate deals with three media companies which were CBS Corporation, Sony BMG Music Entertainment and Universal Music Group. These three deals allowed their music videos to be watched on YouTube. These deals were very important for YouTube servers because all three media companies had experienced copyright infringement because of the YouTube, but under this new deal, music companies allowed using their music via YouTube in exchange for shared revenue generated from advertisements. With resolving these copyright issues with media companies, YouTube could finalize its agreement with the Google (Rowell, 2011).

3.2.3.3 Google+

Google+ is a social network and identity service owned and provided by Google Inc. Google describes it as a *“social layer that enhances many of its online properties which makes it authorship tool that associates web content directly with its owner or author”*. As usual for Google service, user needs to create Google account in order to use it. Google launched the Google+ service as an invitation-only on June 28th, 2011 but the demand for invites was so high that Google+ opened to public on August 6th, 2011 to everyone aged 18 or higher. After almost three months of operation, Google+ reached 50 million users. This figure was accomplished faster than competing social networks such as MySpace, Twitter or Facebook but it was because already existing registered users of

Google decided to try it which was of course part of Google strategy but it distorts these figures.

Growth analysis at the end of the year 2011 revealed that the Google+ was adding an estimated number of 625,000 new users a day, which may total 400 million members by the end of 2012. Another report which was done in February 28, 2012 revealed information about traffic on the website such as that Facebook users average 7.5 hours on the site per month, Google+ users are only spending approximately 3.3 minutes monthly on Google+ which is massive difference. These figures tell us that the number of users is not the only key indicator of success of social networks because content of the website makes the reason for users to become returning visitors (Ellison, Boyd, 2013).

3.2.4 LinkedIn

LinkedIn is a business oriented social network service founded in 2002 and launched on May 5th, 2003. It is a social network, which mainly focuses on professional networking between companies and individual users, which benefit both sides with possible mutual cooperation. Main principle of this social network is to create account and fill out a profile, which basically works as user's CV and then user can receive job offers from other users or companies. Users of LinkedIn are not only people who are searching for new job opportunity, but also managers, consultants and experts from various fields who are seeking for suitable job applicants. One of the most important tools of LinkedIn is recommendations from former employer and other business partners. When user fills out his or her job experiences, former employer can instantly write comment about it, which could be very helpful to other companies who are considering hiring this particular user. The website is currently available in 20 languages and as of June 2013, the company reported more than 259 million acquired users in more than 200 countries.

Reid Hoffman and founding team members from PayPal Company Allen Blue, Konstantin Guericke, Eric Ly and Jean-Luc Vaillant founded LinkedIn in Mountain View, California in 2003. Reid Hoffman, former CEO of LinkedIn is now Chairman of the board and current CEO is Jeff Wiener who is former Yahoo! Inc. executive. LinkedIn is headquartered in the place of its founding, Mountain View, California with offices in Chicago, New York, Omaha, London and also Dublin, where in 2010 was opened an International headquarters of LinkedIn.

3.2.4.1 LinkedIn on the stock market

In January 2011, LinkedIn filed for an initial public offering (IPO) and traded its first shares on May 19th, 2011 under symbol “LNKD”. The price of IPO was \$45 per share, but during the first day of trade the price rose as much as 171% on the New York Stock Exchange and finished at \$94.25, more than 109% above the IPO price. During 2011, LinkedIn earned \$154.6 million in advertising revenue alone, surpassing Twitter which earned \$139.5 million.

The graph below shows development of stock prices since May 19th 2011 until December 19th 2014.



Graph 4: LinkedIn Stock Chart

Source: Yahoo Finance, 2014

3.2.5 Baidu

Baidu Inc. is a Chinese web service company based in Beijing, China. Baidu offers many services for its users, including a search engine in Chinese language similar to Google search engine. Baidu itself is not a social network but provides social network to its users in similar way as Google created the Google+ social network.

Baidu was created in 2000 by Robin Li and Eric Xu. Both of the co-founders are Chinese citizens who studied and worked in the United States before returning to China. Among Baidu services are services to locate information, products and services

using Chinese-language search terms, such as, search by Chinese phonetics, advanced search, stock quotes, news, images, video and space information, weather information, train and flight schedules and other local information. The wide span of the services is quite similar to Google but due to complexity and difficulty of Chinese language, Baidu took over as the most used search engine in China shortly after entering the market. Baidu is the most used search engine in China, controlling 63 percent of China's market share as of January 2010 and the number of Internet users in China had reached 513 million by the end of December 2011, according to a report by the China Internet Network Information Center.

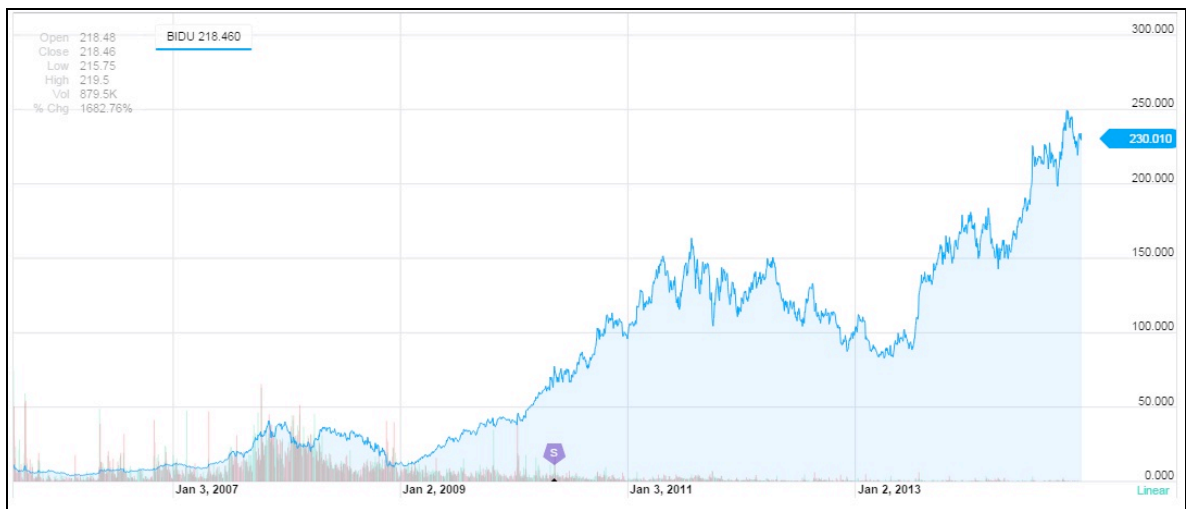
Most of revenues are generated by advertising service called Baidu Tuiguang which is not surprisingly similar to Google AdWords.

3.2.5.1 Baidu on the stock market

IPO of Baidu took place on August 5th, 2005. Underwriters of the deal were Goldman Sachs, Piper Jaffray and Credit Suisse. Initially, 4,040,000 shares were offered at \$27 per share and opened for trading at \$66 per share which was more than double increase. At the end of the first trading day, the price climbed even more and finally stabilized at \$122.54 per share which represented about 350 percent raise, becoming the best performance ever by a Chinese company.

Stock of Baidu performed very well in next few years and five years after IPO, in May 2010, Baidu decided to split stock with ration 10:1 in order to make shares more available to wider audience. Before the split, the company's shares were trading at around \$700 per share, price that was not affordable for many retail investors.

The graph below shows stock development since August 5th, 2005 until December 8th, 2014.



Graph 5: Baidu stock chart
Source: Yahoo Finance, 2014

3.2.6 Renren

The Renren network, formerly known as Xiaonei network is a Chinese social networking service based in Beijing, China. Origin of Renren is quite similar to Facebook because it began also as a college social network. Renren mainly focuses on college students, the key information to make user's profile complex is college, high school, middle school and place of origin. In the year 2013 was announced that 30,000 universities and colleges, 55,000 high schools and 82,000 companies in China and 1,400 universities in 28 other countries are available on Renren's system. According to the official website of Renren, the company's vision is to: "*re-define the social networking experience and revolutionize the way people in China connect, communicate, entertain and shop*".

The social networks for each of these particular colleges, schools and companies have been established. In the supplementary section of personal profiles, users can also put on information about their contact information, hobbies, music, movies, and the groups they joined, etc. To personalize the user's profile, Renren has also developed functions to edit profile music and setting, the feature which Facebook does not have.

According to Renren's report for third quarter of 2014, on September 30th, 2014 there were about 220 million activated users and almost 80 percent of them have accessed it through mobile device (Renren, 2014).

3.2.6.1 Renren on the stock market

Renren's IPO took place on the May 11th, 2011 and before that, the company raised approximately \$750 million. Main underwriters of the deal were Deutsche Bank, Morgan Stanley and Credit Suisse. There were great expectations from the investors since Renren was often called "Facebook of China". Despite the fact that Renren was not profitable at that time, there was quite strong demand for the company, because its CEO Joseph Chen promised that the profitability is going to come very soon. The first trading day was successful as the stock rose almost 57 percent above its IPO price of \$14.

However, the situation changed dramatically because the stock dropped almost by 80 percent over next three years. Main reasons of this significant drop are increasing competition among China's competition social networks and decline of revenues. Generation of revenues became major issue because almost 80 percent of users log in via mobile device and mobile generates only about 10 percent of Renren's online advertising revenues. Despite the struggles of company's stock, CEO Joseph Chen remains optimistic about future. In interview for CNBC in April 2014, Chen stated: " *Building a company for long-term success, you're going to have your own ups and downs. We try consciously to let ourselves not be influenced by the stock price. We try to stay optimistic when the stock is high or low*".

The graph below shows Renren's stock development from May 11th, 2011 until December 12th, 2014.



Graph 6: Renren stock chart

Source: Yahoo Finance, 2014

3.2.7 MySpace

Myspace is social networking service which focuses primarily on music and it is owned by Specific Media LLC and Justin Timberlake. Myspace was founded in 2003 in the Beverly Hills, California, USA by Chris DeWolfe and Tom Anderson. In July, 2005 it was acquired by News Corporation, a media company owned by famous Rupert Murdoch, for \$580 million and from 2005 to 2008, Myspace was the largest social network worldwide and in June 2006 it surpassed Google as the most visited site in the United States. However, the reign did not take a long time because in 2008, Facebook had overtaken Myspace as a leader with the most unique worldwide visitors. Since Facebook entered to the field of social networks, the number of Myspace users steadily declined in spite of many tries to improve site with many redesigns. Myspace had influence on pop culture and music itself and also created gaming platform which basically help companies such as Zynga or RockYou to become successful in online gaming field (Lusted, 2011).

In 2011, Specific Media Group and Justin Timberlake decided to jointly purchase the company for estimated \$35 million. Under new ownership, there have been major changes in the organization in terms of budget cuts and as a result, Myspace reduced the staff to around 200 employees which is massive change compared to 1,600 employees they had in 2009 (Angwin, 2011).

3.3 The Concept of Economic Analysis

Economic Analysis serves as a tool for business monitoring and it traditionally uses historical data for predicting future development. Its main importance is that it is a useful foundation for improving of performance and business' activities. Therefore its outcomes can contribute to increasing productivity and efficiency. Economic analysis is focused either on the enterprise as a whole or on some specific activities or processes. It differs based on the stakeholder it is useful for. Suppliers are mainly interested in organization's solvency, shareholders in profitability for shareholders, managers are focused on activity, liquidity and profitability. Each stakeholder group has its own specific interests and needs and will demand analysis for specific purposes (Synek et al., 2009).

Typical entities using the outcomes of the analysis are according to Synek et al. (2009) as following:

- Company's management
- Statutory bodies
- Shareholders
- Employees
- Creditors and suppliers
- Trade unions, financial office, statistics, banks, investment companies

Outcomes of the economic analysis can serve as a warning that something is wrong and something has to be changed. That is the reason why it is so commonly used among managers of various organizations and why they use it for decision-making process. Typically these decisions are regarding the organization's activities and can result in improving market position, maintaining market share or even improving performance. Economic analysis can be done either from the inside of an organization when the performer of the analysis has high access to all relevant data and can create complex analysis, or from outside. Analysis made by some external entity usually possesses only limited data and therefore the outcome can be significantly different from the internal one. Any financial decisions should be based on outcomes of the financial analysis. Managing

finances (financial structure and its changes), management and financing of current assets and investments, price and dividend policy enterprise are usually based on results of financial analysis (Synek et al., 2009).

Economic analysis uses three main methods and according to Synek et al. (2009) these are:

- Analysis of absolute indicators
- Percentage analysis technique
- Ratio analysis

3.3.1 Sources of Economic Analysis

Sources of the economic analysis depend on its type. Resources are namely internal or external. Dunning (1974) defines them as follows:

Internal sources are:

- Balance sheet (liabilities and assets of the company, equity)
- Income statement (revenues and expenses resulting in either profit or loss)
- Cash flow statement (incoming and outgoing cash flows)

External sources are:

- Macro data (economic situation in the country, GDP, CPI, etc.)
- Micro data (data from the industry such as competitors' performance)

3.3.2 Users of Economic Analysis

Economic analysis serves to wide range of users, such as business management, statutory bodies, shareholders, employees and trade unions, tax office, banks, investors, business partners and creditors. According to the scope of access to information this spectrum can be further divided to internal and external users. Internal user is company's management, which has the access to the most sensitive information. Based on the outcomes of the economic analysis operational, tactical and strategic plans of the company are made. However, managers are the only people who know exactly how the company is

really doing and what is its strategic direction. External users are natural or legal entities, which cooperate or deal with the company and primarily require stability, liquidity, and fulfillment of delivery times, good negotiations and credibility (Dunning, 1974).

Typical entities using the outcomes of the analysis are according to Synek et al. (2009) as following:

- Internal
 - Company's management
 - Shareholders
 - Employees
- External
 - Creditors and suppliers
 - Statutory bodies
 - Trade unions, financial office, statistics, banks, investment companies

3.3.3 Methods of Financial Analysis

There are different methods how to analyze financial environment of the company. There are two main types of the analysis and these are vertical or horizontal.

Vertical analysis is focused on different items in the same time period. Vertical analysis is also known as “analysis of the structure” for it expresses percentage shares of individual items compared to, for instance revenues. It shows percentage share of that given item as a share of total assets, revenues or other category in chosen financial statement of the company. Vertical analysis identifies problematic areas of the company without regard to inflation. It only deals with percentage expression of share and enable managers to easily compare performance of some items compared to competitor. Vertical analysis comprises also benchmarking, comparison with the best competitors in given sector (Plewa and Friedlob, 1995).

Horizontal analysis, which is sometimes called “analysis of the trend” is focused on one item in different periods. It shows how different items have been developing and its main goal it to predict future development. It is based on a base year and shows percentage change in different periods or it uses indexes chain. Therefore it enables managers to see if

some items have been developing in positive or negative direction. Horizontal analysis can for instance show how assets have been growing (Plewa and Friedlob, 1995).

3.3.4 Ratio Indicators

Ratio indicators express numerical relationships between different activities of the company. For numerical expression of these items, managers use data from financial statements. Ratios are divided into different categories based on the field of the interpretation; Růčková (2008) divides them as follows:

- Profitability indicators

Profitability indicators show how much of profit is generated by a company with employment of given resources such as assets or equity.

- Return on Assets (ROA), equal to $EBIT/Assets$
- Return on Equity (ROE)
- Return on Sales (ROS)
- Return on Capital Employed (ROCE)

- Liquidity indicators

Liquidity indicators show ability of the company to convert its assets into cash. They also indicate company's ability to pay short-term liabilities. These indicators show time, which company needs for converting assets into cash, but also degree of liquidity of particular assets. They also comprise level of cash in the company's assets.

- Current Ratio, equal to $Current\ Assets/Current\ Liabilities$
- Quick Ratio, equal to $Current\ Assets - Inventory/Current\ Liabilities$

- Activity indicators

Activity indicators show company's ability to use assets in efficient way. Activity indicators can be expressed in two ways, either as turnover or the time of turnover. Turnover is the amount of rotations of the assets for a specified period (usually one year). Time of turnover expresses the amount of days that it takes to turn. Generally, the higher

values of these indicators are, the better. High values of activity indicators refer to high ability of managers to manage these items.

- Turnover of Assets, equal to $\text{Revenues}/\text{Assets}$
- Inventory Turnover, equal to $\text{Inventory}/(\text{Revenues}/360)$
- Maturity period of receivables, equal to $\text{Receivables}/(\text{Revenues}/360)$
- Business Deficit, equal to Maturity period of receivables-liabilities

- Solvency indicators (Leverage)

Solvency indicators evaluate financial stability of the company. They compare assets, equity and foreign capital and show degree of company's solvency. Solvency ratios monitor relationships between equity and debt. The proper balance between financing a business by debt or equity is not known yet, nevertheless it is important for managers to monitor solvency indicators and interpret them properly.

- Debt to Equity Ratio, equal to $\text{Debt}/\text{Equity}$
- Equity Ratio, equal to $\text{Equity}/\text{Total Assets}$
- Interest Coverage, equal to $\text{EBIT}/\text{Interest expense}$

- Market value indicators

Market value indicators express company's value on the market and they evaluate company on the stock exchange. Potential investors when assessing potential return on investment namely use them.

- Book Value, equal to $\text{Equity}/\text{number of ordinary shares}$
- Earnings per share, equal to $\text{Profit after taxation}/\text{number of ordinary shares}$
- Price earnings ratio, equal to $\text{market price of shares}/\text{EPS}$
- Dividend Yield, equal to $\text{Dividend per share}/\text{market value of share}$

- Analysis of working capital

This analysis is used for determining capital needs (for current assets) in order to ensure that company has enough sources for covering current liabilities. Key term in this

analysis is Working capital management. The concept of working capital is defined by the fact that this capital is constantly circulating (working) - the money becomes supplies, then work in process, finished goods, accounts receivable, and once again money. Working capital can be distinguished as gross working capital, which represents all of the current assets of the company, and net working capital, which is the difference between current assets and current liabilities (Růčková, 2008).

- Net working capital (NWC), equal to current assets - current liabilities

Net working capital is related to the golden rule of financing. It implies that if funding for current liabilities should not be more expensive than necessary, it says that long-term resources finance long-term assets and current assets are financed by short-term funds. According to the value of net working capital, there are three strategies of corporate financing. These are according to Růčková (2008):

- Conservative
- Aggressive
- Neutral

For the conservative strategy of corporate financing, there is an equation that the Net Working Capital is higher than 0. Short-term assets of the company are funded and long-term sources. This is a situation that is indeed safer (there is a lower risk of insufficient financial resources), on the other hand, it is relatively expensive (long-term funds are more expensive compared to short-term resources).

If Net Working Capital is lower than 0 it refers to an aggressive strategy. Because of a relative lack of long-term liabilities, the company focuses primarily on short-term funding sources. Even for this strategy there are certain advantages and disadvantages. Financing is cheaper, which is cheaper due to lower cost of short-term resources. However, there is a higher risk than in case of functioning at conservative strategy (collapse of short-term sources can cause short-term threat to the stability of the company).

The strategy is neutral if Net Working Capital is equal to 0. This means that fixed assets are financed by long-term sources of short-term assets and short-term funds. This strategy corresponds to the golden rule of financing (Růčková, 2008).

3.3.5. Balancing Rules

Balancing rules are according to Synek (2007) general recommendations for financial managers for decisions regarding corporate financing. These rules do not determine the optimal size of capital needs, but its structure. These rules are:

- The golden rule of financing

It is a rule mentioned in any book for financial managers. It includes ideas such as fixed assets should be covered by long-term resources, etc. In milder concepts it is understood that assets are fixed assets and long-term financing is equity. The stringent concepts imply that permanent current assets are part of fixed assets and long-term resources include also long-term foreign capital.

- The golden rule of balancing risks

In milder approaches of financial analysis this rule requires that the ratio of own capital to foreign capital should be equal to 1:1. The stricter approach demands own resources to be higher than foreign sources.

- Golden pari rule

This rule is based on the thought that long-term liabilities should be covered by own capital (equity).

3.3.6 Analysis of Stocks

Every shareholder is interested in the price of his or her stock portfolio and therefore has to continuously analyze his or her stocks and try to predict its development in terms of prices. Analysis of stock can help shareholders to make decisions regarding selling or keeping stocks and potential shareholders to decide whether to buy that particular share or wait. Main focus is on buying at least price possible and sell at highest price possible. Stock analysis can help in these cases by using historical data for predicting future. Analysis of stocks can be either fundamental or technical. Some experts believe there is also a third kind of stock analysis, psychological (Thomsett, 1998). This chapter will introduce them all.

- Fundamental Analysis

Fundamental analysis deals with the question whether a particular share is over or under valued. It helps investor to decide if it is a right time to take advantage of the inefficiencies in the market and buy share, which is valued less than it should be. This analysis determines the intrinsic value of a share since it is a key feature in determining share's under or over valuation (Thomsett, 1998).

It comprises analysis of the macro environment (global analysis), micro environment (sectoral analysis) and internal analysis of the company (strategic and financial analysis). These analyses should reveal trends and developments in these particular sectors and serve as hints for decision-making process (Thomsett, 1998).

- Technical Analysis

Technical analysis is focused on market a whole, in contrast with the fundamental one. It does not include sudden phenomena and temporary trends such as temporal political instability. It uses only data created by market such as prices, trading volumes, stock indices and technical indicators. It monitors, evaluates and examines past and present data, from which is possible to determine the future by technical predicting tools. It uses mathematical functions to predict future. It assumes that prices are moving in trends, behavior of the market is repeating and prices include all information in the market (supply and demand and their reflection into price of share). It does not focus on reason why is price changing; it only wants to know when it is likely to change (Thomsett, 1998).

- Psychological Analysis

Third method of stock analysis is focused also on human behavior and behavior of the crowd. It also includes assumptions about economic development such as GDP, GPI, supply and demand, but it tries to predict how people would buy or sell shares in terms of other people. It assumes that when people are in a crowd, they lack rational thinking and they behave in the same way as others. French expert Gustave Le Bon who was sociologist, psychologist, but also mathematician and physician set foundations for this analysis. He believed that aggregate behavior of investors is crucial when it comes to shares' price. More people demand that particular share; more people are likely to be

attracted to buy it too. The main point of psychological analysis is the examination and analysis of the facts, how the investor's characteristics, personality, intellect and emotions affect investment behavior and decision (Thomsett, 1998).

4. Practical Part

Based on theoretical background provided in the first part of this thesis, author has chosen to evaluate an economical impact of Facebook Inc. Company in the United States of America. Facebook is by far the most powerful social media in the U.S. market which is currently the most mature market in the social media field. Because of this reasons, author decided to focus on economical impact of Facebook in the U.S.

4.1 Description of Facebook Company

Facebook, Inc. was established in Delaware in July 2004. According to the annual report for year 2013, the company's mission is "*to make the world more open and connected*".

There are now more than one billion users who connect to Facebook in order to communicate and share content with their friends and family. However, it is not just a social media for basic users; it is also platform for developers and programmers for creating applications and websites which are able to have connection with Facebook in order to reach as many people as possible. Marketers can create pages there and share content among users with ease and minimal costs with high potential of delivering messages to desirable amount of users.

As of 2013, Facebook's popularity is still increasing as well as number of visitors and revenues which is only going to strengthen its position among social media into the future.

4.1.1 Overview

According to the Facebook annual report from 2013, they build its products to support its mission in order to create value for:

- **Users** – to enable people who use Facebook to be connected with their friends, to discover and learn what is going on around the world and to share and express what is important to them and to people they care about.

- **Marketers** – to enable marketers to engage with more than 1.2 billion users based on the information they have provided on their account such as age, location or interest. Facebook offers marketers benefits such as targeted reach, engagement and others.
- **Developers** – to enable developers to use its services to build, grow and monetize their web and mobile applications that are integrated with Facebook.

4.1.2 Strategy

Even though Facebook is still in the early stages to accomplish its mission to make world more open and connected, it offers many opportunities for users, marketers and developers in order to make their cooperation faster and easier.

According to Facebook annual report 2013, main selected elements are:

- **To expand global user community** – as of 2013, there were around 1.2 billion users from nearly every country in the world. With rising technical development, more and more people are connected to the internet every day. Facebook focuses on expanding to the regions where its popularity is not as high as in Europe or North America such as Brazil, India or Mexico. With positive development of increasing audience from Asia, Facebook is on good way to remain the world's most popular social network.
- **Ad Analytics and Facebook Insights** – These two services for marketers and developers represent essential tools to analyze targeted audience and design suitable campaign to reach as many targeted users as possible. Ad analytics allow marketers to see which ads were clicked by users the most and least which is essential information for anyone who is trying to be successful with advertising on social media.
- **To make mobile products involvement with easy availability** – Usage of mobile devices is increasing every year and in our digital age it is expected to remain this way. Therefore, Facebook invests into the development of mobile products such as

functions of smart phones. Essential is cooperation with mobile providers, hardware and software producers in order to make using Facebook easy and fun for everybody everywhere.

- **Allowing developers to create social products via Facebook platform** – Applications such as games which users can play against or with each other became quite popular because of the level of interaction among its users. It is also a very productive way to increase advertising business.
- **Privacy and Sharing** – Privacy of users is one of the main focuses for Facebook since every user has different needs and preferences. Every user has an option to set up an account according to its preferences in terms of what they want to share and with whom they want to share it. These are basics of control, transparency and responsibility.

4.2 Fundamental Analysis

For fundamental analysis of Facebook Company, the author of the thesis has chosen to use information from the online website investing.com which focuses on performance of companies in terms of development of stock prices and other useful financial information. Although currently the latest published annual report and income statement are for year 2013, the portal investing.com has already data for 2014 which are not official but are still valid and accepted.

4.2.1 Income Statement

Income statement is a financial statement that reveals information about a company's financial performance over a specific accounting period. It includes information about revenues and expenses with help of operating and non-operating activities. Net profit or losses are also included.

4.2.1.1 Total Revenue

Revenues represent the amount of money that company receives during specific period including discounts for returned merchandise. It is calculated by multiplying the price of goods and quantity of goods sold.

Figures are in millions of USD.

Period Ending:	2014 31/12	2013 31/12	2012 31/12	2011 31/12
Total Revenue ▾	12466	7872	5089	3711
Revenue	12466	7872	5089	3711
Other Revenue, Total	-	-	-	-
Cost of Revenue, Total	2153	1875	1364	860
Gross Profit	10313	5997	3725	2851

Table 1: Total revenue

Source: <http://www.investing.com/equities/facebook-inc-income-statement>

The table above shows very positive development of revenues as well as gross profit. Majority of revenues are generated by advertising and while the number of Facebook users is still increasing, revenues are likely going to increase as well in the future.

4.2.1.2 Total Operating Expenses

Operating expenses are category of expenditures which occurs as a result of company's ordinary activities. Control and management of operating expenses is usually on of the key responsibilities in terms of how much could be operating expenses reduced without affecting the company's ability to compete in the market.

Figures are in millions of USD.

Period Ending:	2014 31/12	2013 31/12	2012 31/12	2011 31/12
Total Operating Expenses ▾	7472	5068	4551	1955
Selling/General/Admin. Expenses, Total	2454	1778	1788	707
Research & Development	2633	1415	1399	388
Depreciation / Amortization	232	-	-	-

Table 2: Total operating expenses

Source: <http://www.investing.com/equities/facebook-inc-income-statement>

Operating expenses are increasing quite significantly because Facebook is still expands worldwide which cost quite a high amount of money. Also in 2014, investment into research and development was almost doubled as Facebook tries to develop new services which would strengthen its position as a leader among social media.

4.2.1.3 Net Income

Net income represents company's total earnings and is calculated by computing revenues and adjusting for the cost of doing business such as depreciation, interest, taxes and other expenses connected to business.

Figures are in millions of USD.

Period Ending:	2014 31/12	2013 31/12	2012 31/12	2011 31/12
Operating Income	4994	2804	538	1756
Interest Income (Expense), Net Non-Operating	-84	-51	-60	-71
Gain (Loss) on Sale of Assets	-	-	-	-
Other, Net	-	1	16	10
Net Income Before Taxes	4910	2754	494	1695
Provision for Income Taxes	1970	1254	441	695
Net Income After Taxes	2940	1500	53	1000

Table 3: Net income

Source: <http://www.investing.com/equities/facebook-inc-income-statement>

The table above shows not only net income but also operating income and amount for income taxes. Again, Facebook almost doubled its net income during 2014 which is a great result which only increased value of the company and dividends for shareholders.

4.2.2 Balance Sheet

Balance sheet is a financial statement that reveals information about company's assets, liabilities and shareholders' equity. These three divisions give investors information what company owns and owes as well as the information about the amount invested by shareholders. Balance sheets need to follow formula where total liabilities plus total equity must be equal to total assets.

4.2.2.1 Total Assets

Total assets include short term and long term assets which represent tangible and intangible item which company owns. Assets are bought to increase value and benefits of the company while also generating cash flow. Assets can be manufacturing equipment or plant as well as it can be purchased software.

Figures are in millions of USD.

Period Ending:	2014 31/12	2013 31/12	2012 31/12	2011 31/12
Total Current Assets ▾	13670	13070	11267	4604
Cash and Short Term Investments	11199	11449	9626	3908
Cash	-	1044	-	-
Cash & Equivalents	4315	-	2384	1512
Short Term Investments	6884	10405	7242	2396
Total Receivables, Net	1678	1160	1170	547
Accounts Receivables - Trade, Net	1678	1109	719	547
Total Inventory	-	-	-	-
Prepaid Expenses	793	461	471	149
Other Current Assets, Total	-	-	-	-
Total Assets ▾	40184	17895	15103	6331
Property/Plant/Equipment, Total - Net	3967	2882	2391	1475
Property/Plant/Equipment, Total - Gross	-	4142	3273	1925
Accumulated Depreciation, Total	-	-1260	-882	-450
Goodwill, Net	17981	839	587	82
Intangibles, Net	3929	883	801	80
Long Term Investments	-	-	-	-
Note Receivable - Long Term	-	-	-	-
Other Long Term Assets, Total	637	221	57	90
Other Assets, Total	-	-	-	-

Table 4: Total assets

Source: <http://www.investing.com/equities/facebook-inc-balance-sheet>

The table above shows that Facebook total current assets did not increase significantly during 2014 but total assets more than doubled. The most significant change over 2013 is the “Goodwill” asset which is intangible asset that represents company’s reputation, brand, domain names and others. Reason for this extreme increase of goodwill is acquisition of WhatsApp messaging service for mobile devices.

4.2.2.2 Total Liabilities

Total liabilities are calculated as the aggregate of all debts for which is company liable for. They include short term and long term liabilities along with other which corporations may incur. Short term liabilities are usually liabilities which are due within one year or less. Long term liabilities are longer than one year and include e.g. loans, leases and others.

Figures are in millions of USD.

Period Ending:	2014 31/12	2013 31/12	2012 31/12	2011 31/12
Total Current Liabilities ▾	1424	1100	1052	899
Accounts Payable	378	268	234	234
Payable/Accrued	-	-	-	-
Accrued Expenses	866	555	277	239
Notes Payable/Short Term Debt	-	-	-	-
Current Port. of LT Debt/Capital Leases	114	239	365	279
Other Current liabilities, Total	66	38	176	147
Total Liabilities ▾	4088	2425	3348	1432
Total Long Term Debt	119	237	1991	398
Long Term Debt	-	-	1500	-
Capital Lease Obligations	119	237	491	398
Total Debt	233	476	2356	677
Deferred Income Tax	-	-	-	-
Minority Interest	-	-	-	-
Other Liabilities, Total	2545	1088	305	135

Table 5: Total liabilities

Source: <http://www.investing.com/equities/facebook-inc-balance-sheet>

Liabilities of Facebook have stable increasing development with exception in 2012 year when there was long term debt of \$1500 million which has been paid off in one year.

4.2.2.3 Total Equity

Equity represents company's total assets minus total liabilities. It is an amount by which is company financed through shares.

Figures are in millions of USD.

Period Ending:	2014 31/12	2013 31/12	2012 31/12	2011 31/12
Total Equity ▾	36096	15470	11755	4899
Redeemable Preferred Stock, Total	-	-	-	-
Preferred Stock - Non Redeemable, Net	-	-	-	615
Common Stock, Total	-	-	-	-
Additional Paid-In Capital	30225	12297	10094	2684
Retained Earnings (Accumulated Deficit)	6099	3159	1659	1606
Treasury Stock - Common	-	-	-	-
ESOP Debt Guarantee	-	-	-	-
Unrealized Gain (Loss)	-	-	-	-
Other Equity, Total	-228	14	2	-6

Table 6: Total equity

Source: <http://www.investing.com/equities/facebook-inc-balance-sheet>

Facebook's equity has more than doubled in 2014 because of significant increase of "Additional Paid-In-Capital" which include purchases of building, vehicles and others. Retained earnings also doubled last year which is very good result.

4.2.3 Cash Flow Statement

Cash flow statement provides aggregate data that include all cash inflows received from both ongoing operations and external investments sources as well as all cash outflows which were used to pay for business activities and investments.

Figures are in millions of USD.

	2014	2013	2012	2011
Period Ending:	31/12	31/12	31/12	31/12
Period Length:	12 Months	12 Months	12 Months	12 Months
Net Income/Starting Line	2940	1500	53	1000
Cash From Operating Activities ▾	5457	4222	1612	1549
Depreciation/Depletion	1243	1011	649	323
Amortization	-	-	-	-
Deferred Taxes	-210	-37	-186	-
Non-Cash Items	1746	1072	1587	221
Cash Receipts	-	-	-	-
Cash Payments	-	-	-	-
Cash Taxes Paid	-	82	53	197
Cash Interest Paid	-	38	38	28
Changes in Working Capital	-262	676	-491	5
Cash From Investing Activities ▾	-5913	-2624	-7024	-3023
Capital Expenditures	-1831	-1362	-1235	-606
Other Investing Cash Flow Items, Total	-4082	-1262	-5789	-2417
Cash From Financing Activities ▾	1571	-667	6283	1198
Financing Cash Flow Items	1796	-280	-1624	603
Total Cash Dividends Paid	-	-	-	-
Issuance (Retirement) of Stock, Net	18	1504	6777	1026
Issuance (Retirement) of Debt, Net	-243	-1891	1130	-431
Foreign Exchange Effects	-123	8	1	3
Net Change in Cash	992	939	872	-273

Table 7: Cash flow statement

Source: <http://www.investing.com/equities/facebook-inc-cash-flow>

Cash flow statement of Facebook shows differences among all the categories of it. Some of them are insignificant as Facebook still expands and increases number of users. “Cash From Investing Activities” fluctuates throughout the four year period which is happening because of high number of investments and acquisitions.

4.2.4 Ratios

Ratios are great way how to compare company's performance in contrast to other companies in the same industry. Author of the thesis has chosen again to use data from website investing.com because of availability of current figures. On the tables with ratios there are displayed two types of ratios which are "TTM" and "MRQ" ratios. "TTM" stands for "trailing two months" which means that the financial figures are reported in timeframe of past 12 months to show company's performance over the year. "MRQ" stands for "most recent quarter" which denotes the measurement of a performance metric using data from previous quarter.

4.2.4.1 Valuation Ratios

Name	Company	Industry
Valuation Ratios ▾		
P/E Ratio TTM	73.82	36.98
Price to Sales TTM	17.7	8.53
Price to Cash Flow MRQ	60.86	46.9
Price to Free Cash Flow TTM	60.86	39.58
Price to Book MRQ	6.11	5.77
Price to Tangible Book MRQ	15.56	10.39

Table 8: Valuation ratios of FB

Source: <http://www.investing.com/equities/facebook-inc-ratios>

Table of valuation ratios provides useful comparison versus the industry and as it clear from the figures, Facebook performs very well in its industry. Price to earning ratio is twice as high as industry average which is remarkable result. Other valuation ratios are also significantly higher than industry average except Price to Book ratio which is not significantly higher.

4.2.4.2 Profitability Ratios

Name	Company	Industry
Profitability ▾		
Gross margin TTM	82.73%	63.98%
Operating margin TTM	40.06%	24.1%
Pretax margin TTM	39.39%	32.44%
Net Profit margin TTM	23.58%	23.06%

Table 9: Profitability ratios of FB

Source: <http://www.investing.com/equities/facebook-inc-ratios>

Profitability ratios table shows again that Facebook performs well among other in the industry such as in case of Operating margin and Gross margin ratios which are quite ignorantly higher than the industry average. These two ratios suggest that Facebook is able to pay for its fixed costs such as interest on debt.

4.2.4.3 Management Effectiveness Ratios

Name	Company	Industry
Management Effectiveness ▾		
Return on Equity TTM	11.34%	20.36%
Return on Assets TTM	10.12%	10.9%
Return on Investment TTM	10.58%	12.86%

Table 10: Management effectiveness ratios of FB

Source: <http://www.investing.com/equities/facebook-inc-ratios>

The table above shows that Facebook has almost the same figures as industry average except of ROE ratio where industry average is almost twice as high as in case of Facebook. ROE measures how much how shareholders earned for their investment to the company. In case of Facebook the figure is significantly lower than industry average because it has declined by almost 5 percent since Q2 2014.

4.2.4.4 Financial Strength Ratios

Name	Company	Industry
Financial Strength ▾		
Current Ratio MRQ	9.6	4.99
LT Debt to Equity MRQ	0.33%	38.04%
Total Debt to Equity MRQ	0.65%	43.29%

Table 11: Financial strength ratios of FB

Source: <http://www.investing.com/equities/facebook-inc-ratios>

Current ratio which is often called liquidity ratio measures a company's ability to pay its short term payments and obligations. Facebook has almost twice as high liquidity ratio than is industry average which is very good result. Even better is Total Debt to Equity ratio where Facebook, thanks to low debt has great results.

4.3 Stock Analysis

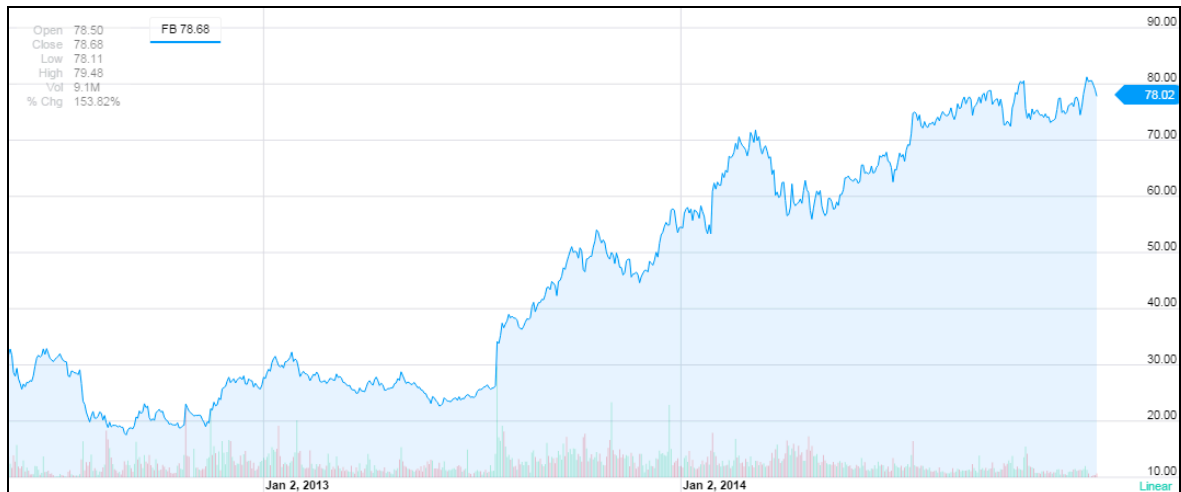
Stock analysis is the most commonly used method to observe and correct timing trading with stock. Stock analysis provides various charting methods and technical indicators to analyze given stock. Analysis of stock history is important because the most of stock movements are repeated over some time and stock quotes move mainly in trends. For analysis of Facebook stock, author has chosen to use interactive chart provided by website Yahoo Finance which enables to set up various settings in order to provide desired information.

4.3.1 Charting Methods

Charting methods provide useful overview of stock development. Every method is suitable for different information. Line chart is the most suitable to see stock development over longer periods of time where as Candlestick chart is suitable when searching for wide spread of daily or monthly stock prices.

4.3.1.1 Stock price development

The following graph shows the development of FB stock prices since the first day of trading which was on the 22nd May, 2012 until 31st December, 2014.



Graph 7: FB stock price development

Source: Yahoo Finance, 2015, <http://finance.yahoo.com/>

From the graph is visible that FB stock prices were not really stable during first year on stock exchange, because investors were not sure if Facebook would fulfill their promises which were significant increase of net income and revenues. However, the stock price of FB shares soared by almost 25 percent on the 25th July, 2013 to \$33 per share, the price which has not been reached since January 2013. The reason for this dramatic increase was that Facebook had reported second quarter revenue of \$1.8 billion, exceeding expectations of \$1.6 billion.

Since the mentioned increase, the price of shares is steadily increasing for Facebook thanks to increasing net income and revenues.

4.3.1.2 Candlestick chart

Candlestick chart is used for observing information about stock price for selected period. The candlestick itself contains information: the highest price for the day, open or closing price and the lowest price of day. The body of candlestick is green if stock closed higher than it was opened and it is red if the price closed lower than it was opened. This

charting method is more useful for shorter periods, where it is better to spot dispersion between prices.

On the graph below are displayed daily candlesticks for one year, beginning on the 31st December, 2013 and ending on the 31st December, 2014.



Graph 8: FB candlestick chart

Source: Yahoo Finance, 2015, <http://finance.yahoo.com/>

Although there was a period during the second quarter of 2014 where the price was decreasing and stock price often closed lower than it was opened, the situation stabilized and since then the price is increasing steadily.

4.3.2 Technical Indicators

4.3.2.1 Moving average (SMA)

SMA or simple moving average is arithmetic, moving average that is calculated by adding together the closing price of the safety for a number of time periods and then dividing this total by the number of time periods. Short-term averages react quickly to changes in the price of the underlying, whereas long-term averages are slow to react. Basically, it serves as the average stock price over a certain period of time.

On the graph below is displayed simple moving average for a period of one year, beginning on the 31st December, 2013 and ending on the 31st December, 2014.



Graph 9: FB simple moving average

Source: Yahoo Finance, 2015, <http://finance.yahoo.com/>

The simple moving average for FB stock prices in mentioned one year period shows some fluctuation with increasing tendency which is very positive indicator for Facebook and other interested parties.

4.3.2.2 Bollinger band

Bollinger band developed by and named after famous technical trader John Bollinger are bands which represent two standard deviations away from a simple moving average. Purpose of these bands is to adjust to the market conditions. When the market becomes more unstable, the bands further away from the average and when the market is stable, the bands move closer to average.

Bollinger band is one of the most popular techniques for technical analysis. It provides useful information about the market, mainly if the market is overbought or oversold.

On the graph below is displayed Bollinger band for a period of one year, beginning on the 31st December, 2013 and ending on the 31st December, 2014.



Graph 10: FB Bollinger band

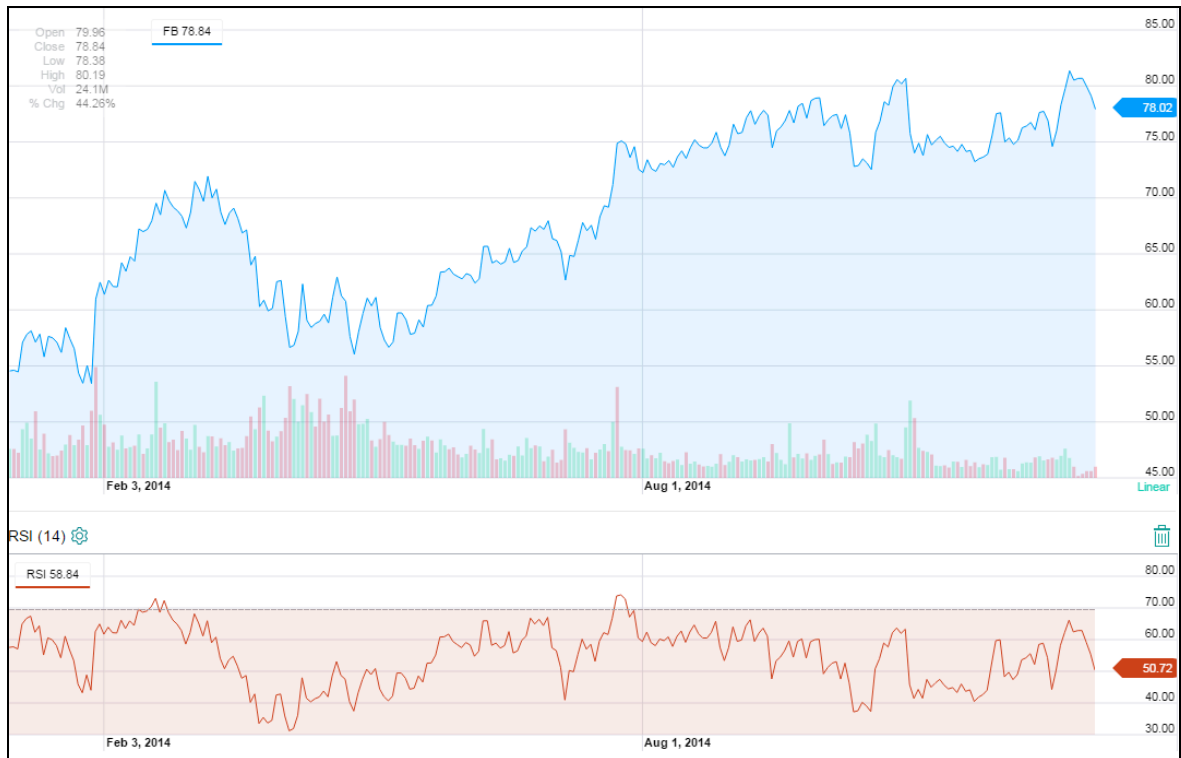
Source: Yahoo Finance, 2015, <http://finance.yahoo.com/>

In case of Facebook, Bollinger bands are following trend of simple moving average as the move along it. With exception of already mentioned second quarter of 2013, the bands are moving quite steadily without extreme fluctuations.

4.3.2.3 Relative strength index (RSI)

Relative strength index is a technical momentum indicator that compares the strength of recent gains to recent losses in order to determine whether is asset overbought or oversold. RSI has range from 0 – 100 and asset is considered to be overbought when the RSI approaches the 70 level, denoting that it may be getting overvalued and is a suitable candidate for backing off. Likewise, if the RSI approaches 30, it is a sign that the asset may be getting oversold and therefore expected to become undervalued.

On the graph below is displayed relative strength index period of one year, beginning on the 31st December, 2013 and ending on the 31st December, 2014.



Graph 11: FB relative strength index
Source: Yahoo Finance, 2015, <http://finance.yahoo.com/>

On the graph above, RSI is located under the stock price development and more or less copies it which is directly visible on the graph.

4.4 Audience analysis

Monthly active users (MAU) metric is one of the ways how to measure success of social networks. It is a metric which takes into account the number of unique users who visited website in the past 30 days.

Daily active users (DAU) metric is another useful metric which is suitable for Facebook because of large number of users.

4.4.1 Monthly Active Users

Facebook defines mobile active user as: *“a registered Facebook user who logged in and visited Facebook through our website or a mobile device, used our Messenger app, or*

took an action to share content or activity with his or her Facebook friends or connections via a third-party website or application that is integrated with Facebook, in the last 30 days as of the date of measurement. MAUs are a measure of the size of our global active user community“.

4.4.1.1 Monthly Active Users Worldwide

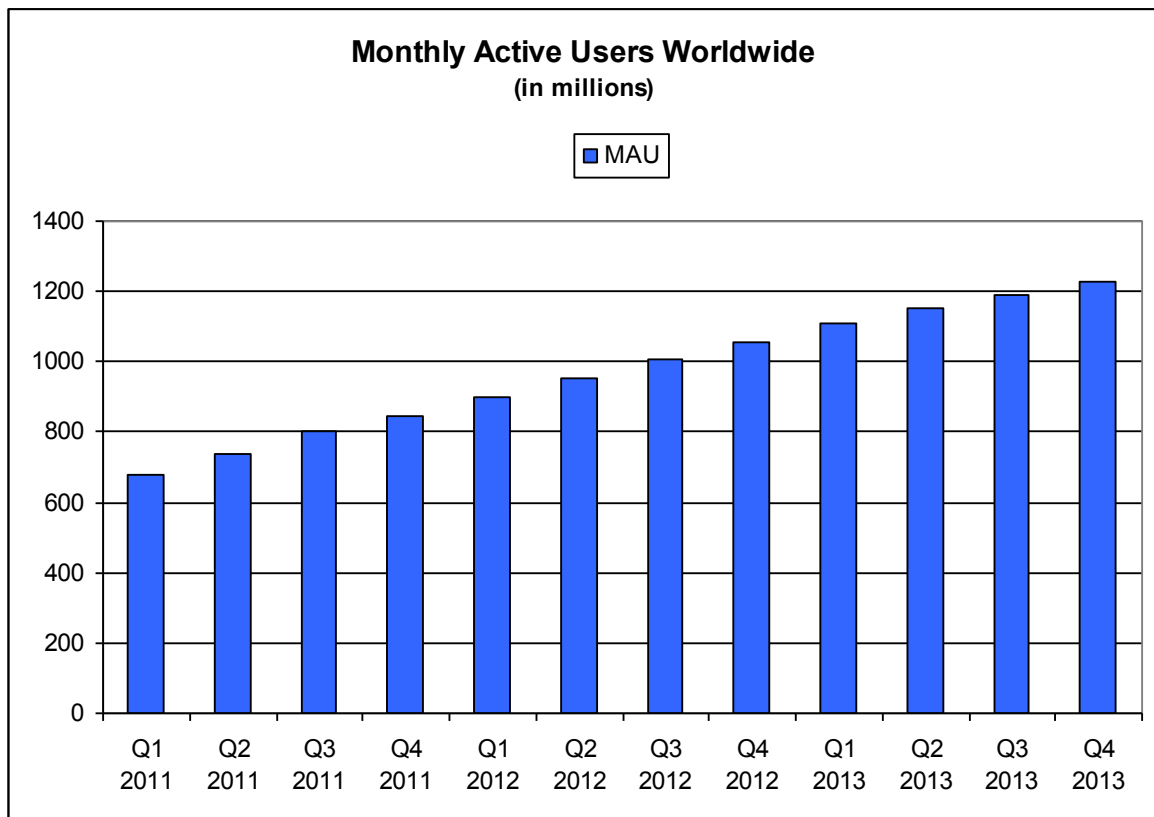


Chart 1: Facebook monthly active users worldwide

Source: Facebook annual report 2013, Author's processing via MS excel 2003

The chart above shows that there is steady growth of Facebook's monthly active users which suggests that it still attracts both new and already existing users which is very good sign into the future.

4.4.1.2 Monthly Active Users by Region

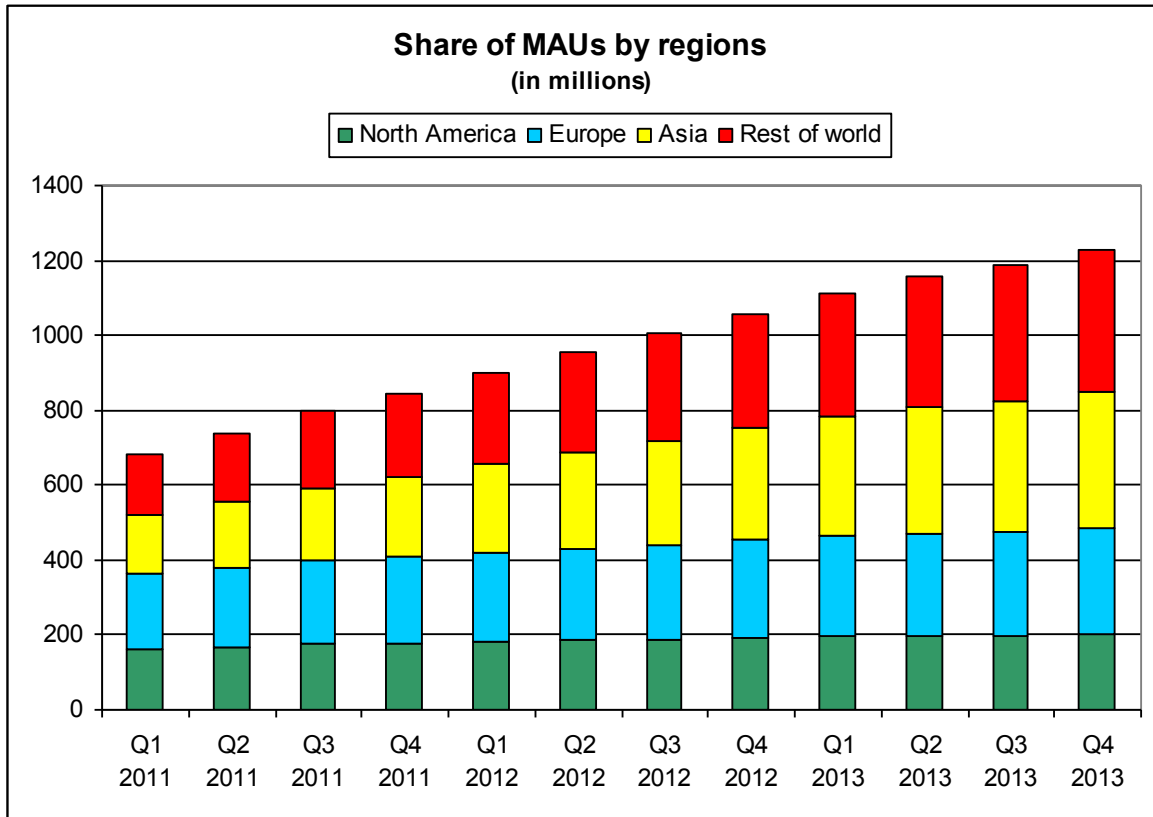


Chart 2: Facebook monthly active users by region

Source: Facebook annual report 2013, Author's processing via MS excel 2003

The chart above shows that number of Facebook users is increasing mostly in Asia and in the rest of the world while number of users from the North America is increasing only by negligible amount. In Europe there is also growth but it is insignificant as well compared to the development in Asia and the rest of the world.

4.4.2 Daily Active Users

Facebook defines daily active user as: *“registered Facebook user who logged in and visited Facebook through our website or a mobile device, used our Messenger app, or took an action to share content or activity with his or her Facebook friends or connections via a third-party website or application that is integrated with Facebook, on a given day”*.

4.4.2.1 Daily Active Users Worldwide

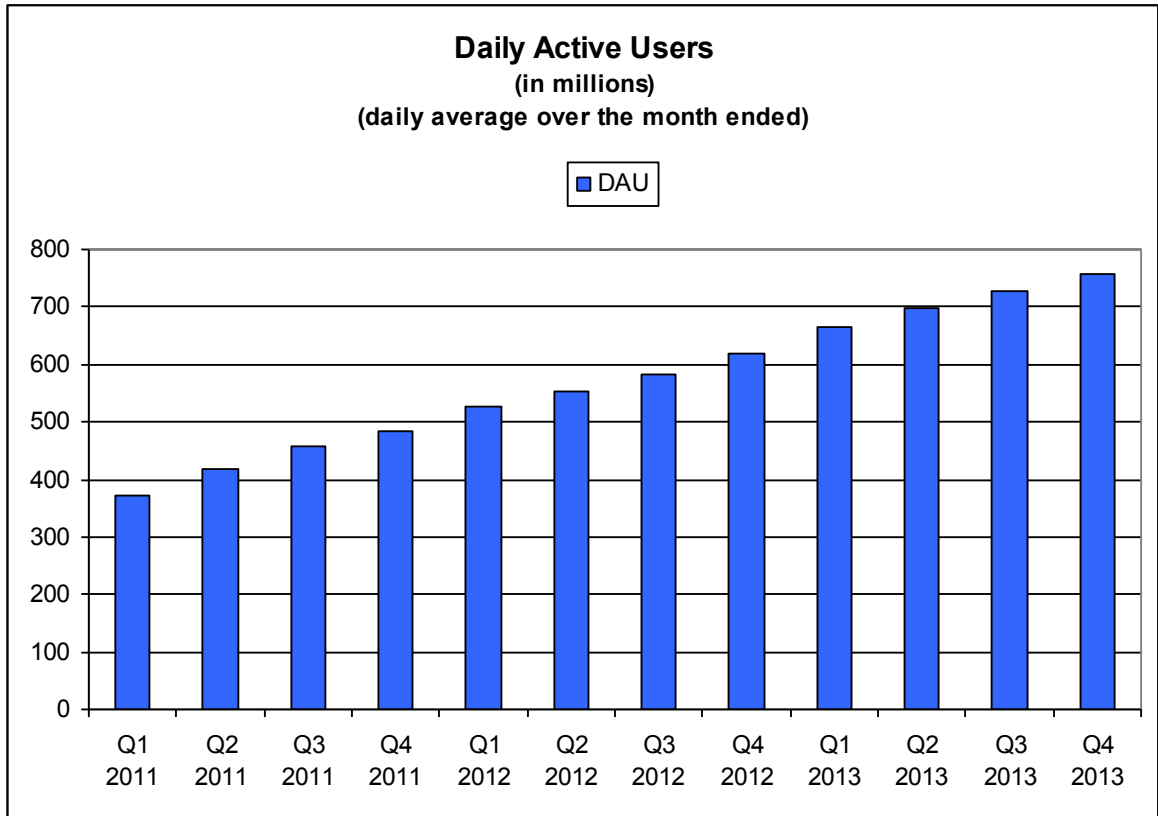


Chart 3: Facebook daily active users worldwide

Source: Facebook annual report 2013, Author's processing via MS excel 2003

Since Facebook has steady growth of MAUs, it is no surprise that there is growth of DAUs as well. Facebook is doing the right moves to keep content interesting enough for users to come back a visit pages more often.

4.4.2.2 Daily Active Users by Region

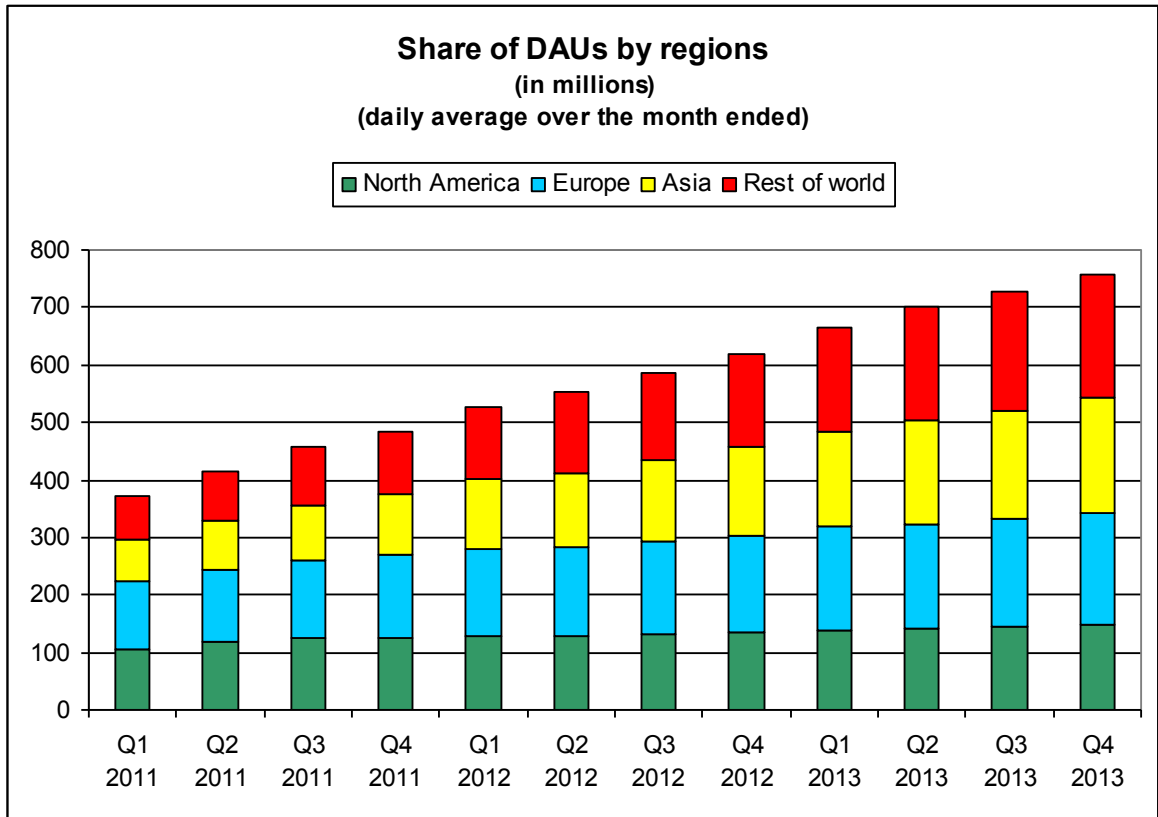


Chart 4: Facebook daily active users by region

Source: Facebook annual report 2013, Author's processing via MS excel 2003

In the chart above, there is similar development of DAUs as it was in MAUs by regions. Amount of users from Asia region and the rest of the world are increasing significantly while North America region stagnates.

4.4.2.3 Mobile Daily Active Users

Facebook defines mobile DAU as: “a user who accessed Facebook via a mobile application or via versions of our website such as *m.facebook.com*, whether on a mobile phone or tablet, on a given day”.

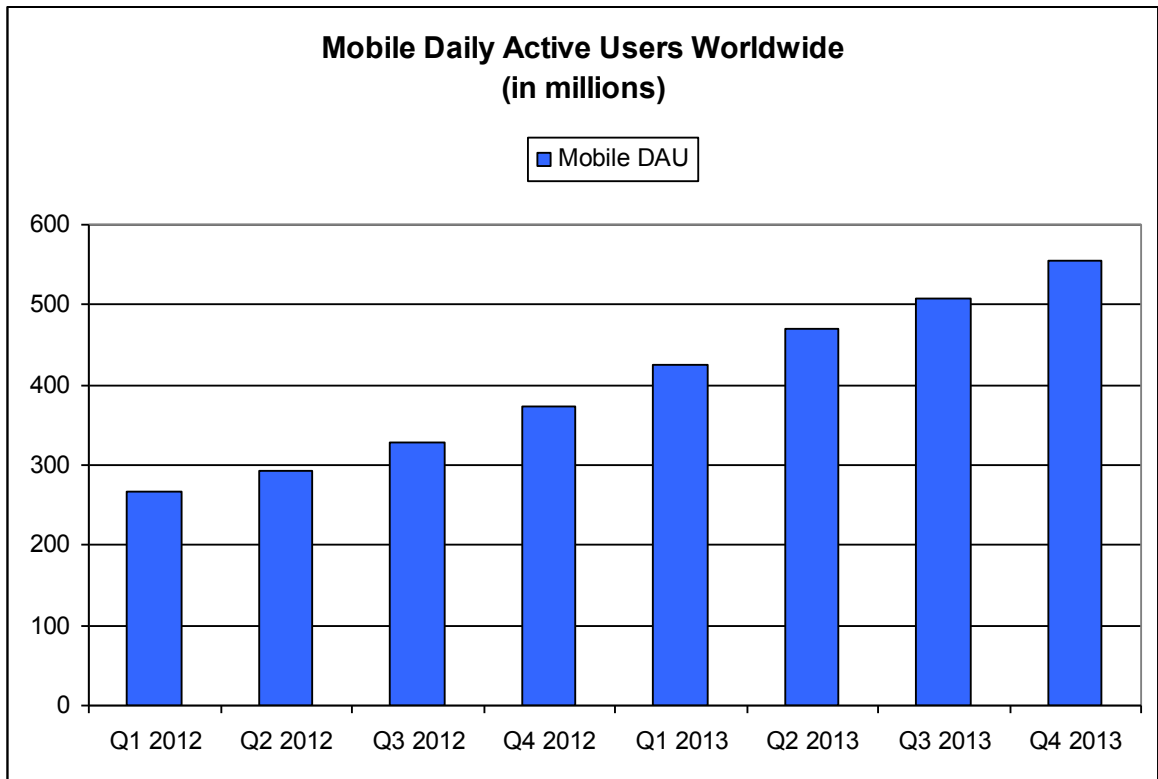


Chart 5: Mobile daily active users worldwide

Source: Facebook annual report 2013, Author’s processing via MS excel 2003

With fast technical development in last couple of years, people tend to connect to social media more and more with mobile device such as mobile phone or tablet. Facebook focuses a lot on their application for Android OS, Apple IOS and Windows Phone for mobile devices in order to achieve great experience of its users.

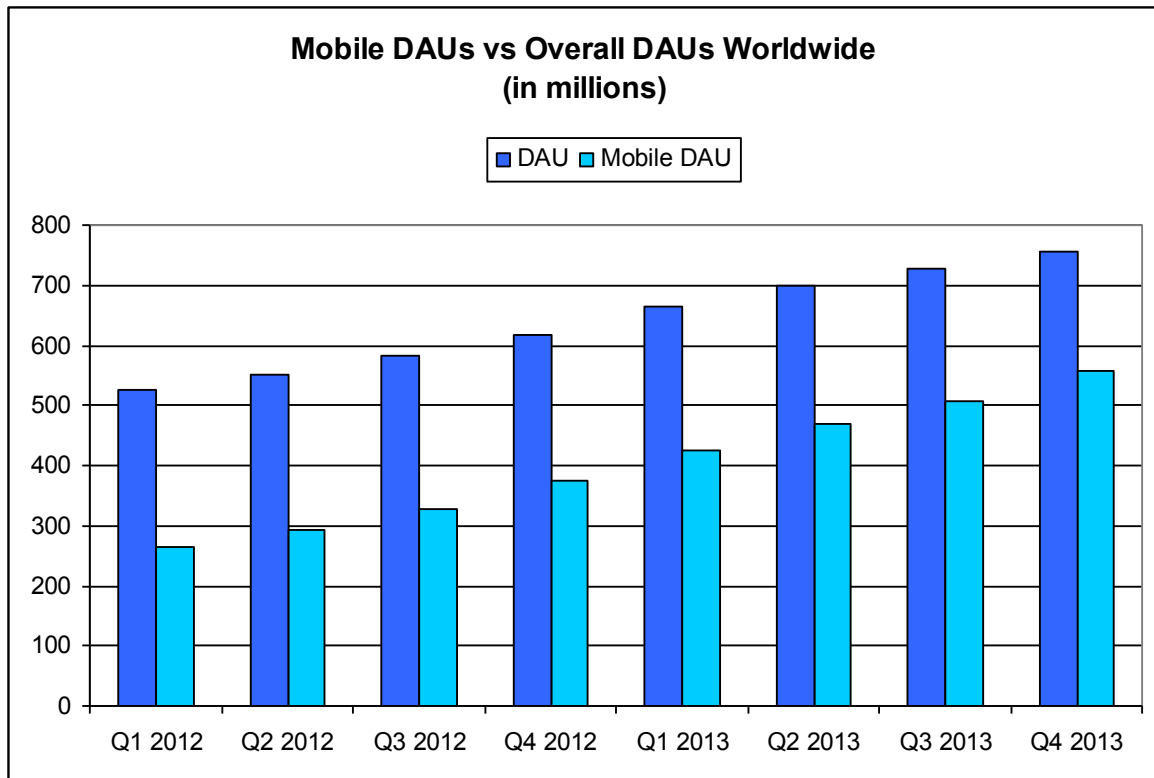


Chart 6: Mobile daily active users vs. overall daily active users worldwide
 Source: Facebook annual report 2013, Author's processing via MS excel 2003

The chart above shows share of mobile DAUs compared to overall number of DAUs. The share of mobile DAUs is increasing with each quarter which shows that users are getting use to connect more to Facebook via mobile device than from other devices. Facebook is of course aware of this fact and focuses more on the development on services for mobile devices. It regularly updates its application in order to achieve greater experience for each user.

4.5 Comparison with other social networks worldwide

For this chapter, author of a thesis decided to compare Facebook with two main competitors in the U.S. which are Twitter and LinkedIn. Although there are other social networks such as YouTube, Google+ or Instagram, they are not included because the first two named are owned by Google Inc. and Instagram is owned by Facebook Inc. For comparison of social networks, author has chosen to include only networks which are

direct competition of Twitter and are traded on the stock exchange market. These requirements fulfill both Twitter and LinkedIn social networks.

4.5.1 Stock

For comparison of stock, author has chosen period of one year, beginning on November 7th, 2013, which was the first trading day of Twitter shares, until November 7th, 2014. Graph shows percentile difference between prices of shares of selected companies and price at which Facebook was on the given date which was \$47.56 per share.



Graph 12: Comparison of stock development
Source: Yahoo Finance, 2014, <http://finance.yahoo.com/>

The graph shows development of stock for all three companies and as it is visible, in the beginning of Twitter trading, the situation among these sites was quite equal but at the end of the year 2013, Twitter stock grew rapidly and achieved its maximum on December 26th at \$74.73 per share.

During this growth, LinkedIn stock decreased while Facebook stock slowly increased. However, in next six months the situation changed because Twitter stock plummeted while both Facebook and LinkedIn stock decreased slowly. During the second half of the year the situation stabilized as prices of stock of all three companies increased with Twitter and LinkedIn both trailing significantly to Facebook stock which performed by far the best among them during the second half of the year 2014.

4.5.2 Monthly active users

For comparison of user traffic on the selected social networks, author has chosen to compare MAU metric. As mentioned in chapter before, it is the metric which measures number of unique visitors per month.

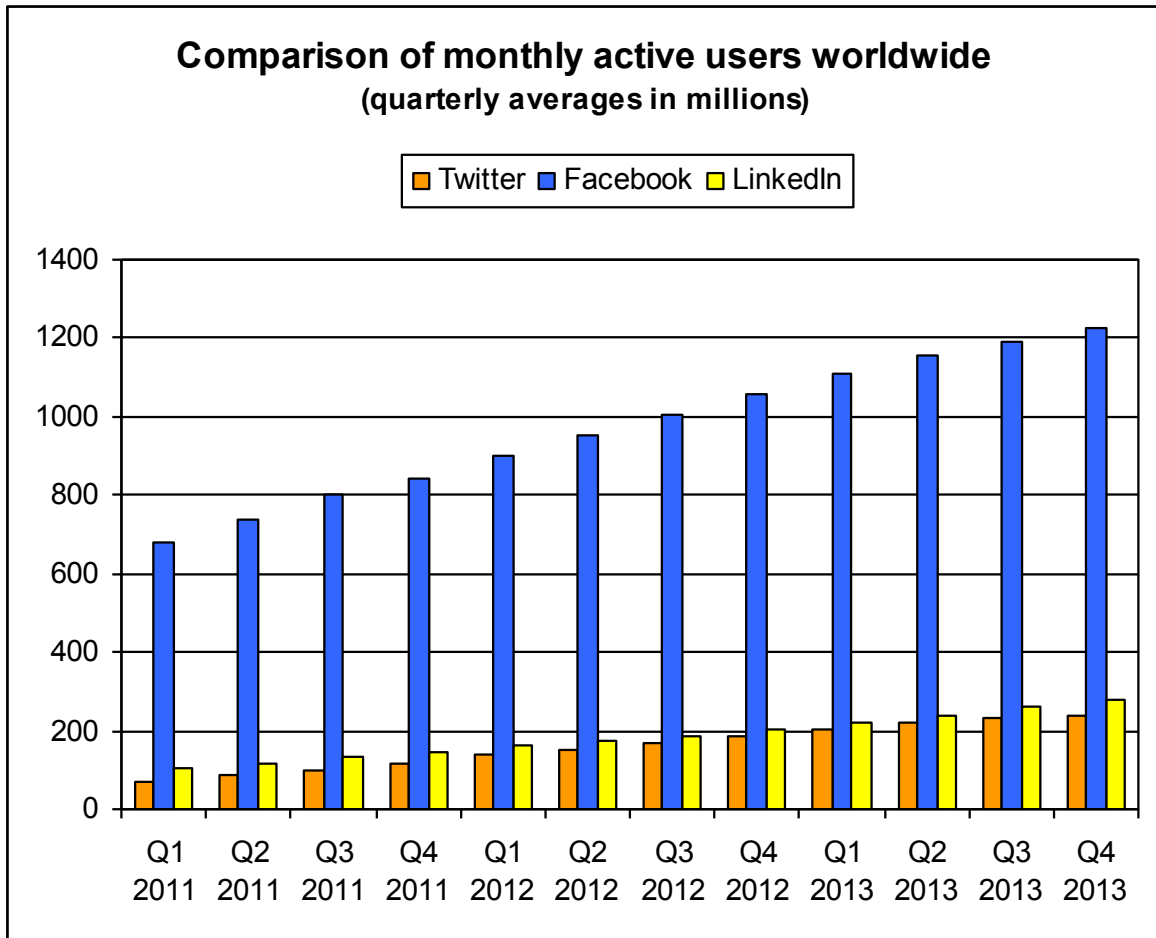


Chart 7: Comparison of monthly active users worldwide

Source: Facebook annual report 2013, Twitter annual report 2013, LinkedIn annual report, Author's own processing, MS excel 2003

The chart above shows that Facebook is undisputed leader among these three social networks. Although MAU amount is increasing for all selected networks, Facebook's growth has been much higher with much higher number of already existing users. Both Twitter and LinkedIn are not likely to catch up with Facebook unless they developed some new technology or service which would make Facebook users shift at their side.

Main reason for this disparity is probably caused by complexity of Facebook services including Facebook messenger which people use more and more on their mobile phones which could make SMS messages obsolete in the future.

4.5.3 Revenues

All three selected networks gain majority of their revenues from advertisements. On the social networks, the advertisements are usually working on the pay for click basis, the revenues are highly influenced by the number of visitors and since Facebook has the most visitors, it has also the most revenues among there three networks.

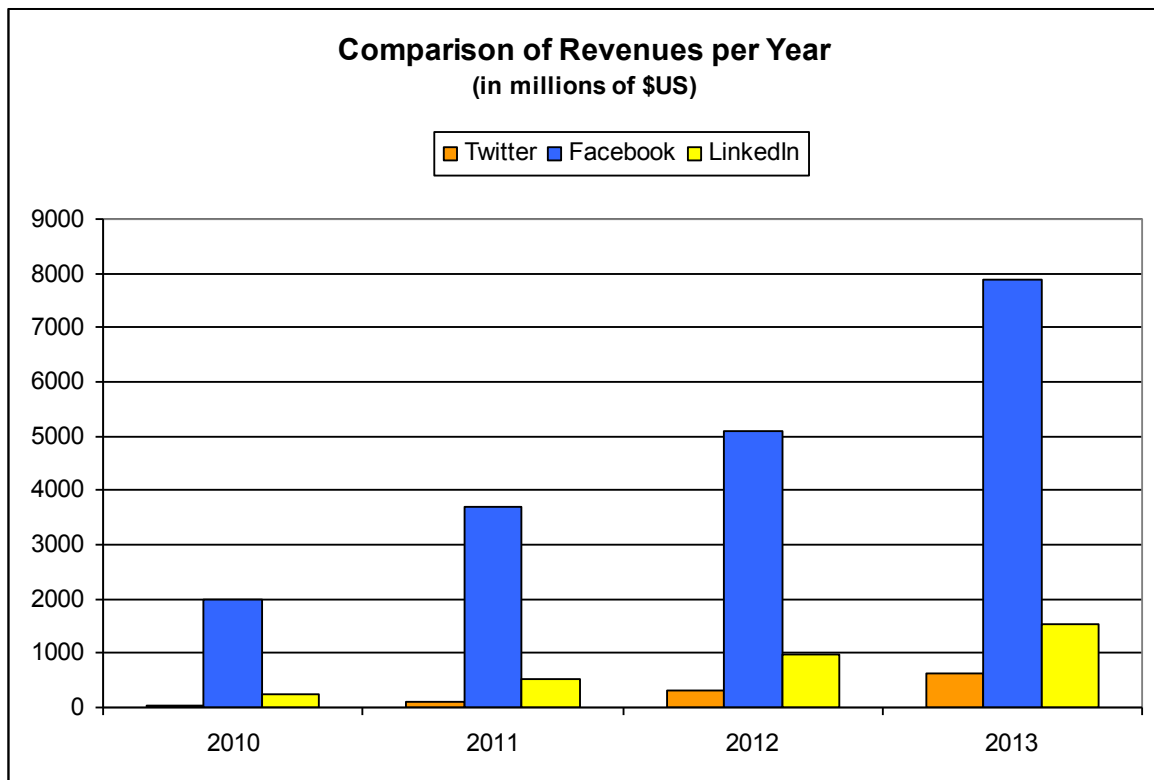


Chart 8: Comparison of revenues per Year

Source: Facebook annual report 2013, Twitter annual report 2013, LinkedIn annual report, Author's own processing, MS excel 2003

The chart above shows that revenues are increasing for all thee networks which is not surprising since they all have increasing growth of users. However, the difference between Twitter and LinkedIn is higher than expected because the difference of visitors per month is not significant. LinkedIn seems to be more effective with usage of

advertisements, but it could change in the future if Twitter accomplishes to finalize partnerships with American major sport leagues which they have been working on.

4.5.4 Net Income

Net income is calculated by taking revenues and subtracting the cost of doing business, depreciation, interest, taxes and other expenses. It is an indicator how profitable the company is over certain period of time. It is also used for calculation of earning per share.

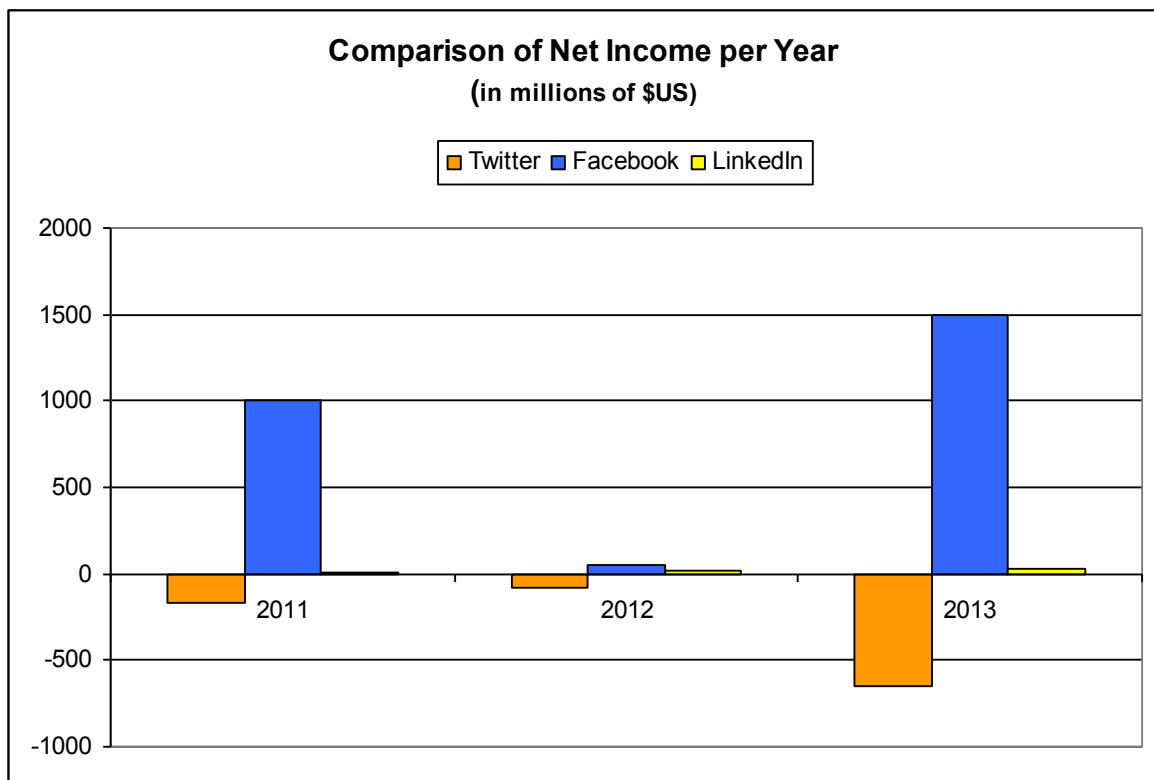


Chart 9: Comparison of Net Income per Year

Source: Facebook annual report 2013, Twitter annual report 2013, LinkedIn annual report, Author's own processing, MS excel 2003

The chart above shows again the huge difference between Facebook and two others. LinkedIn net income is quite low but it is still positive with low but increasing trend. Facebook had low net income in 2012 due to more than double total costs and expenses as it had in 2011, but in 2013 Facebook had slightly higher total costs and expenses but the revenues grew much more which significantly increased net income of the company.

Twitter had increased revenues in all of the past three years but there was high increase of total costs and expenses in 2013, caused by significant investments into research and development as well as into sales and marketing which influenced negatively resulted net income. With these investments however, Twitter expects significant increase of revenues into the future which would transform net income into positive figures.

4.5.5 Number of Employees

Number of employed people by the company is useful indicator how company performs. The faster growth of company's employees suggests faster development of company in terms of offered services or higher growth of the company.

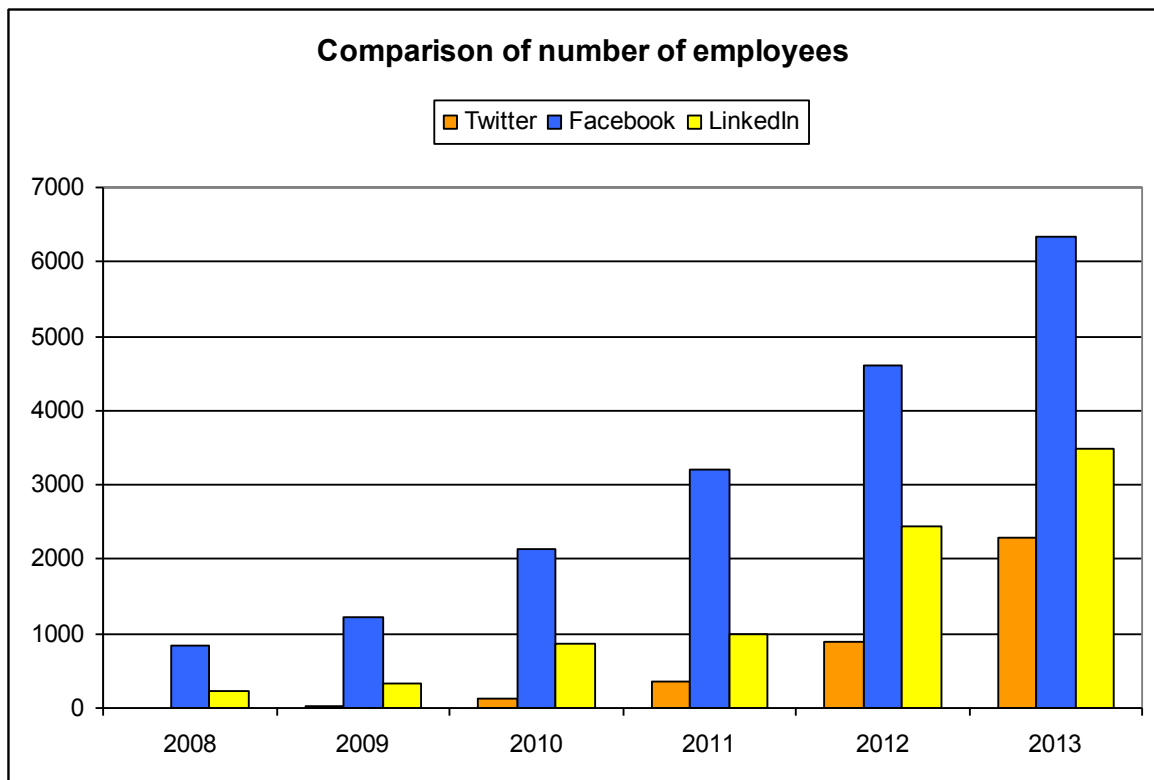


Chart 10: Comparison of number of employees

Source: Facebook annual report 2013, Twitter annual report 2013, LinkedIn annual report, Author's own processing, MS excel 2003

The chart above shows again that Facebook is many steps ahead of its competitors, but it is necessary to take into account that Twitter had only 8 full time employees in 2008 compared to 850 employed at Facebook in the same year. However, both Facebook and LinkedIn employed significantly more people after their entrance into the stock market so Twitter is expected to do the same thing and increase number of employees in 2014.

Facebook has the most employees among these three selected companies because not only they have the most monthly active users but also have many subdivisions in the company which create many job opportunities.

4.5.6 Age distribution

Age distribution among social media users is important indicator for any social media in order to focus on the age group which is represented the most. Social media are likely to be used more by people younger than 40 years old because older people tend to use more traditional media for communication and obtaining news such as television or newspapers.

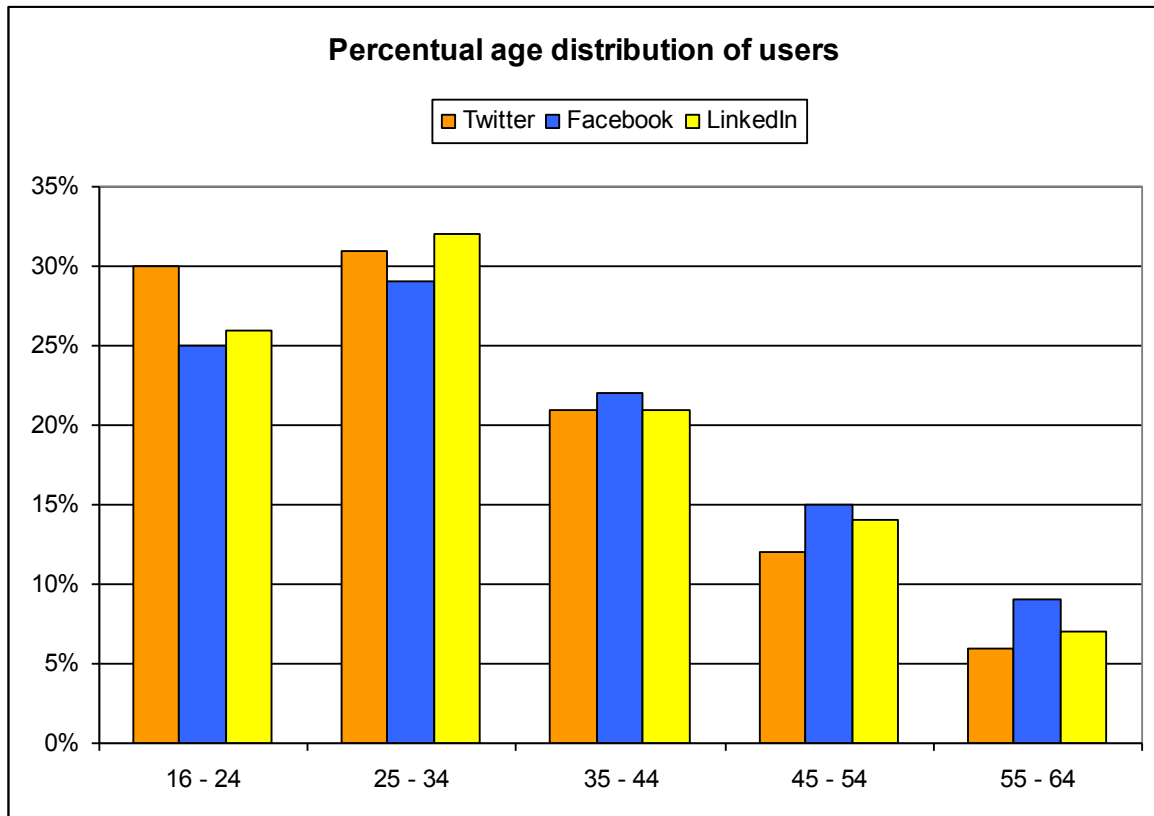


Chart 11: Comparison of age distribution

Source: Facebook annual report 2013, Twitter annual report 2013, LinkedIn annual report, Author's own processing, MS excel 2003

The chart above shows that indeed, these three selected social media are most used by people in age category from 16 to 34 years which is not surprising. From these five age categories, Facebook has higher share of its users in three upper categories then other

selected social media. Twitter is mostly used by younger people while LinkedIn's audience has the highest share in age category from 25 to 34 years which is expected since LinkedIn is social network focusing on rather younger people who are currently studying high school or college and people looking for job opportunities.

4.6 Demographic comparison in the US

For demographic comparison of social media in the United States of America, author of this thesis decided to use data provided by Social Media Report 2014, which was created by Pew Research Center with collaboration with the University of Michigan.

The results are based on data from telephone interviews done by Princeton Survey Research Associates International from September, 2014. Telephone interviews were conducted in English and Spanish by landline (1,002) and cell phone (1,001, including 594 without a landline phone). For results based on the total sample, it can be safe to say that with 95% confidence that the error attributable to sampling is plus or minus 2.5 percentage points. For results based on Internet users (n=1,597), the margin of sampling error is plus or minus 2.9 percentage points.

In the tables are displayed comparisons over the year with significant changes marked by an asterisk.

4.6.1 Facebook

Facebook users

Among online adults, the % who use Facebook

	2013	2014
All internet users	71%	71%
Men	66	66
Women	76	77
White, Non-Hispanic	71	71
Black, Non-Hispanic	76	67
Hispanic	73	73
18-29	84	87
30-49	79	73
50-64	60	63
65+	45	56*
High school grad or less	71	70
Some college	75	71
College+ (n= 685)	68	74*
Less than \$30,000/yr	76	77
\$30,000-\$49,999	76	69
\$50,000-\$74,999	68	74
\$75,000+	69	72
Urban	75	71
Suburban	69	72
Rural	71	69

Table 12: Demographics of Facebook users

Source: Pew Research Center survey, 2014, <http://www.pewinternet.org/2015/01/09/social-media-update-2014/>

In the over year comparison, Facebook did not experience many significant changes. Two notable changes are an increase of users aged 65+ by 11 percent and increase of users who attend college by 6 percent. The first one is probably caused by an increasing curiosity of senior citizens who are trying to get use to social media and the second one is not that surprising because students tend to use social media quite a lot, especially for communication which is very easy with high usage of Facebook.

4.6.2 Twitter

Twitter users

Among online adults, the % who use Twitter

	2013	2014
<i>All internet users</i>	18%	23%*
Men	17	24*
Women	18	21
White, Non-Hispanic	16	21 *
Black, Non-Hispanic	29	27
Hispanic	16	25
18-29	31	37
30-49	19	25
50-64	9	12
65+	5	10*
High school grad or less	17	16
Some college	18	24
College+ (n= 685)	18	30*
Less than \$30,000/yr	17	20
\$30,000-\$49,999	18	21
\$50,000-\$74,999	15	27*
\$75,000+	19	27*
Urban	18	25*
Suburban	19	23
Rural	11	17

Table 13: Demographics of Twitter users

Source: Pew Research Center survey, 2014, <http://www.pewinternet.org/2015/01/09/social-media-update-2014/>

Unlike Facebook, Twitter experienced much more significant changes in the over the year comparison. Increases of users aged 65+ and college students are similar to Facebook, but others are not. Especially increases of men audience and users in the urban area by 7 percent are interesting and both of them can be connected to Twitter's partnership with American major sport leagues. Perhaps the most interesting are changes in the category of salaries where the increase of better paid users is interesting indicator for advertisers who use Twitter, because this change represents higher purchase power.

4.6.3 LinkedIn

LinkedIn users

Among online adults, the % who use LinkedIn

	2013	2014
All internet users	22	28%*
Men	24	28
Women	19	27*
White, Non-Hispanic	22	29*
Black, Non-Hispanic	30	28
Hispanic	13	18
18-29	15	23*
30-49	27	31
50-64	24	30
65+	13	21*
High school grad or less	12	12
Some college	16	22
College+	38	50*
Less than \$30,000/yr	12	15
\$30,000-\$49,999	13	21*
\$50,000-\$74,999	22	31
\$75,000+	38	44
Employed	27	32*
Not employed	12	21*
Urban	23	32*
Suburban	26	29
Rural	8	14

Table 14: Demographics of LinkedIn users

Source: Pew Research Center survey, 2014, <http://www.pewinternet.org/2015/01/09/social-media-update-2014/>

LinkedIn experienced quite a few significant changes during a year, such as overall increase of internet users as well as increase in women audience. Increase of younger users under 29 years is expected since the main focus of LinkedIn is to connect people and offer job opportunities. All these increases in audience suggest that people trust LinkedIn more than before and also that they explore more job opportunities than in the past because LinkedIn makes it easier for companies to find suitable workforce among its users.

4.7 Economic impact of Facebook in the United States of America

Estimation of economic impact of social media such as Facebook is very complex and difficult task with many approaches possible. Since Facebook does not provide detailed information about its users, author of this thesis has chosen to base it on the already existing analysis which tried to estimate how many jobs and money were generated by Facebook in the U.S.

4.7.1 Facebook's global economic impact by Deloitte

This report has been prepared and created by Deloitte LLP for estimation of global economic impact of Facebook Inc. The report was published in January 2015. In the report, Deloitte states that: *“the scope of our work has been limited by the time, information and explanations made available to us. The information contained in the Report has been obtained from Facebook Inc. and third party sources that are clearly referenced in the appropriate sections of the Report. Deloitte has neither sought to corroborate this information nor to review its overall reasonableness”*.

This statement is quite usual because the chosen methodology raises many questions by experts in the economy field and Deloitte is aware of that.

Although there may be flaws in the report, there are still many information and interesting approaches how to estimate economic impact of social media and Deloitte decided to create three broad impacts which influence the economy which are:

- Marketing effects – the economic impact of Facebook for businesses that use it as marketing platform to connect with consumers and build brand value
- Platform effects – the impact in the developer app economy
- Connectivity effects – the impact created through the sale of mobile devices and internet connectivity

4.7.1.1 Marketing effects

Marketing effects estimate the impact from businesses usage of Facebook marketing tools to make online and offline sales and to increase awareness of their brand.

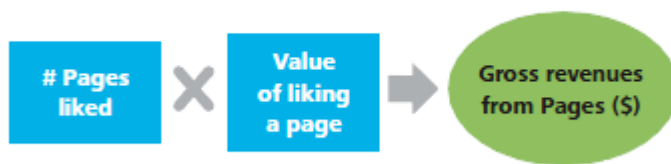
Facebook provides marketers of all sizes the ability to reach an audience of more than 1.2 billion users through a set of products that connect businesses and people including pages and targeted advertising.

According to the report, marketing effects can be differentiated into the three groups:

- Page engagement
- Targeted advertising
- Referrals

Page engagement

Sales from page engagement are estimated as a product of the total sales of businesses with pages and the sales uplift estimated due to their engagement on pages. The total sales of businesses that have Facebook page are estimated by using revenues of the private sector in the economy based on national statistics.

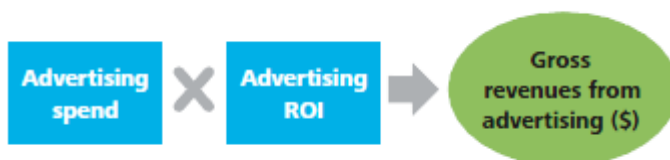


Picture 1: Page engagement formula

Source: Facebook's global economic impact by Deloitte, 2015

Targeted advertising

Businesses' direct sales from paid advertising on Facebook are estimated from the amount of advertising spend by businesses on the platform and estimated country's level of average Return on Investment of advertising (ROI).

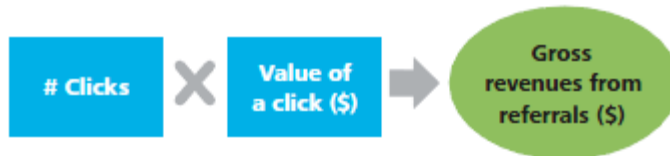


Picture 2: Targeted advertising formula

Source: Facebook's global economic impact by Deloitte, 2015

Referrals

Owners of website can boost their revenue as a result of extra organic website traffic referred from Facebook. The approach of evaluation of links to third party websites varies by the type of website. The values are multiplied by the total number of clicks provided by Facebook to estimate gross revenue from referrals.



Picture 3: Referrals formula

Source: Facebook's global economic impact by Deloitte, 2015

Results

After calculating mentioned three areas of marketing effects, Deloitte's estimation revealed that in 2014, Facebook enabled \$81 billion impact in the U.S. along with the 816,000 created jobs through a mix of active advertising spent and high page engagement.

Country impact – Marketing effects¹²

Country	Econ. Impact (bn)	Jobs ('000)
US	\$77.6	816

Picture 4: Total marketing effects

Source: Facebook's global economic impact by Deloitte, 2015

4.7.1.2 Platform effects

Platform effects estimate the economic impact from 3rd party products and services. The Facebook platform provides app developers with significant opportunities for monetization of their apps which enables more economic activity and creation of new job opportunities.

The Facebook platform allows developers to build plug-ins, apps and games that are available for people on Facebook as well as on the mobile devices. The value of the app economy enabled by Facebook is estimated by considering three types products provided by the platform which are:

- Non-monetized apps
- Monetized apps
- Social plug-ins for sharing of content from websites

Non-monetized apps

Apps that are integrated with Facebook but do not use Facebook app install advertising or in app purchases. The analysis considers only apps with more than 1000 monthly active users to exclude apps and products that may not be financially practical as advised by Facebook subject matter experts.



Picture 5: Non-monetized apps formula

Source: Facebook's global economic impact by Deloitte, 2015

Monetized apps

Monetized apps use the Facebook payment processing system for in-app purchases is determined by using Facebook data on total revenue from in-app purchases, excluding Facebook's 30% commission payment.



Picture 6: Monetized apps formula

Source: Facebook's global economic impact by Deloitte, 2015

Social plug-ins

Social plug-ins provide website developers and publishers the ability to incorporate Facebook’s commenting, liking and sharing features. These features can positively influence indicators such as traffic on the website, time spent on site and increase revenues.



Picture 7: Social plug-ins formula

Source: Facebook’s global economic impact by Deloitte, 2015

Results

Deloitte estimated that in 2014 in the U.S., Facebook created economic impact of \$8.2 billion along with creation of 126,000 jobs. It is the largest impact among all individual countries which is a result of an active community both in Silicon Valley and the rest of the country.

Country impact – Platform effects

Country	Econ. Impact (bn)	Jobs ('000)
US	\$8.2	126

Picture 8: Total platform effect

Source: Facebook’s global economic impact by Deloitte, 2015

4.7.1.3 Connectivity effects

Connectivity effects create economic impact through Facebook – motivated internet usage and purchases of mobile devices. Since Facebook is one of the most popular services on both desktop and mobile, Deloitte believes that many people are influenced by Facebook when deciding about purchasing of mobile device or faster internet connection. Deloitte established three main areas of connectivity impact which are:

- Devices
- Mobile broadband
- Fixed broadband

Devices

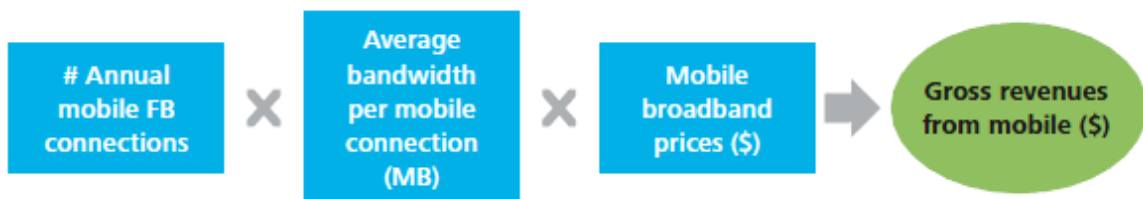
According to Deloitte, Facebook creates higher demand for the sale of devices. The analysis estimates the value of smartphones, tablets and feature phone sales that are motivated by Facebook. The approach for this analysis takes into account country level data provided by Facebook including the number of people who use the service at least once a month.



Picture 9: Connectivity effect of devices
 Source: Facebook’s global economic impact by Deloitte, 2015

Mobile broadband

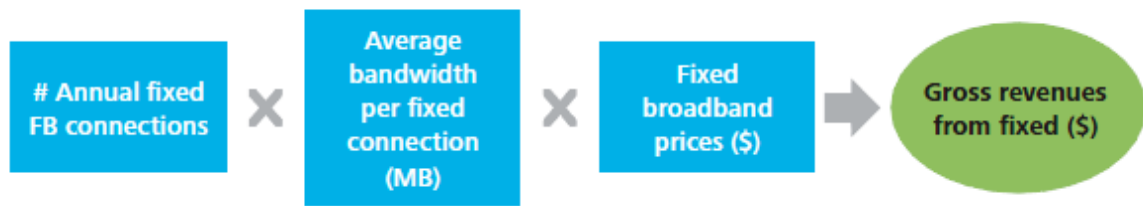
The value of broadband sales attributable to Facebook is based on data consumed by different devices when accessing Facebook. The analysis uses number of connections made to Facebook and estimated costs per megabyte for the bandwidth which were consumed. Gross revenue is derived by multiplying the estimated bandwidth consumption and average mobile bandwidth prices.



Picture 10: Connectivity effect of mobile broadband
 Source: Facebook’s global economic impact by Deloitte, 2015

Fixed broadband

The number of connections that use fixed broadband connectivity is estimated by using Facebook’s country level data on the figures of MAUs on mobile devices and computers.



Picture 11: Connectivity effect of fixed broadband

Source: Facebook’s global economic impact by Deloitte, 2015

Results

Deloitte estimated that in 2014, in the U.S., connectivity effect of Facebook created economic impact of \$13.8 billion along with creation of 135,000 jobs, which is again, the strongest impact among all individual countries.

Country impact – Connectivity effects

Country	Econ. Impact (bn)	Jobs ('000)
US	\$13.8	135

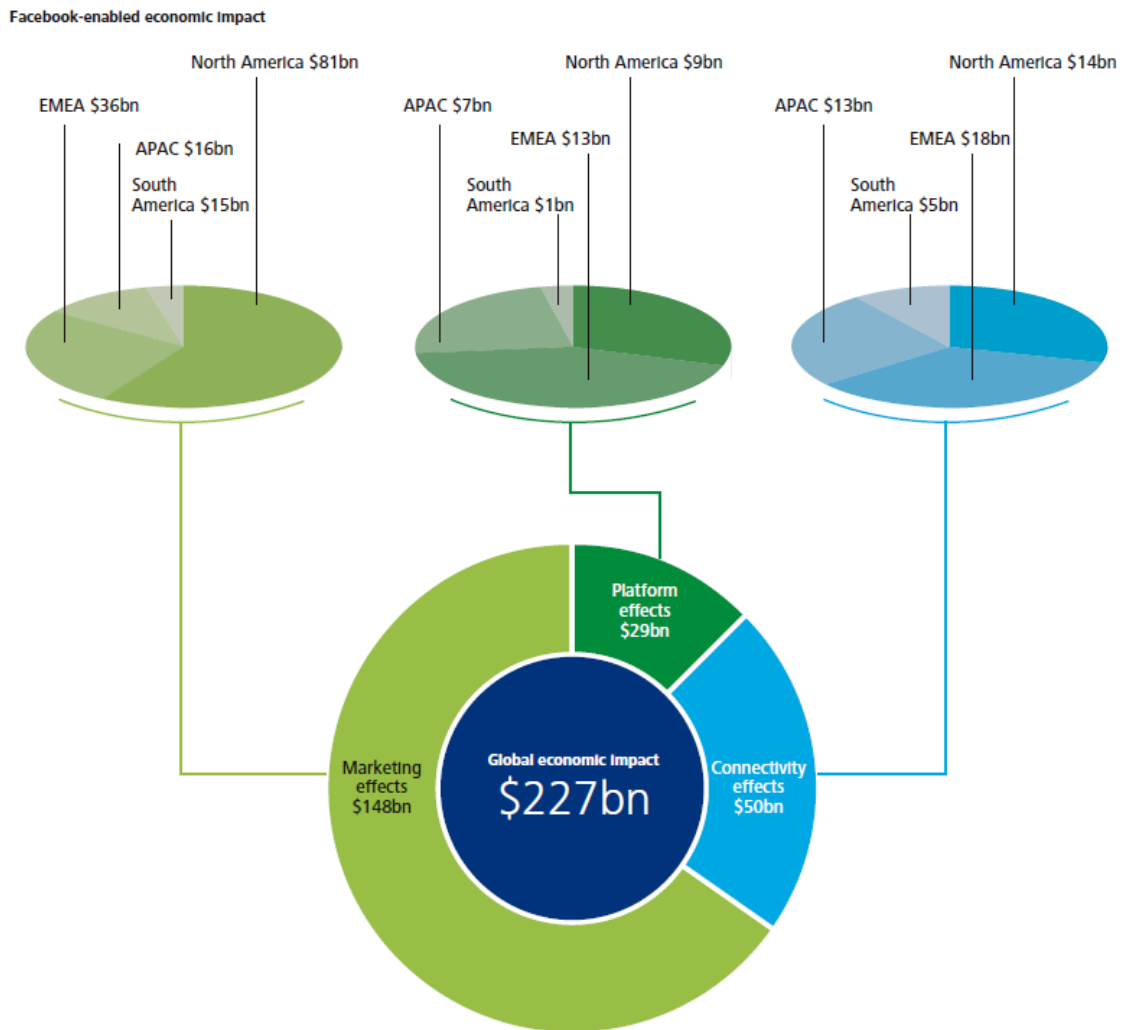
Picture 12: Total connectivity effect

Source: Facebook’s global economic impact by Deloitte, 2015

4.7.1.4 Summary

In order to summarize the information provided by Deloitte’s report, here are the most notable findings:

- Facebook enabled \$227 billion of global economic impact and 4.5 million jobs in 2014
- The United States are estimated to capture the largest share of economic impact of \$100 billion along with the more than 1 million created jobs



Picture 13: Total global economic impact of Facebook
 Source: Facebook's global economic impact by Deloitte, 2015

4.7.1.5 Criticisms

The report raised many critical opinions by independent economists because of chosen approach and usage of questionable assumptions. Another critical point is that Facebook hired Deloitte to make this report which many economists consider as just tool to make Facebook look better and possibly increase value of the stock.

Wall Street Journal asked for opinions of selected economists:

- Stanford economist Roger Noll stated that: "The results are meaningless, Facebook is an effect, not a cause, of the growth of Internet access and use."

- George Mason University professor Tyler Cowen agreed with Noll’s remarks and added:” *The social network likely has significant economic impact but the numbers are inflated. The value of smartphones is that they help you read a Facebook – in addition to other benefits – not vice versa. Calculations included in the study have often really bad reasoning.*

4.7.2 The Facebook App Economy

The analysis “The Facebook App Economy” was created in September, 2011 by Robert H. Smith School of Business at the University of Maryland with help of Center for Digital Innovation, Technology and Strategy.

Although this paper is more than three years old, it offers interesting approaches in evaluation of economic impact by Facebook in the U.S. The paper focuses on the App Economy which would be quite similar as the “Platform effects” included in report issued by Deloitte.

Applications (Apps) have become source of revenues for many developers and since it quite easy to create new apps, especially for developers who have experience, the study argues, the App economy of Facebook has significant impact on the economy. One of the statements describes the development which leads to the economic impact: “*Anyone can build an app on Facebook and begin earning revenue. If the app becomes popular, developer may hire additional developers to add new features. If the app becomes even more successful, the founder may hire even more developers to build a second or third or fourth app. And if that single developer becomes a blossoming company, then it must hire financial managers, a legal team, a public relations team, and clerical staff. Ultimately, many jobs are created, and the company contributes significant value to the economy*”.

4.7.2.1 Data

The dataset includes the number of developers based in the U.S., MAUs, DAUs and credit of each app. Data were available for 25,345 apps and 8,308 companies and the data therefore represents the U.S. companies and the U.S. unique users.

MAU	Count of Firms	Percentage	Count of Firms	Percentage
0-1,000,000	128	86.49%	8273	99.58%
1,000,000-2,000,000	8	5.41%	19	0.23%
2,000,000-3,000,000	4	2.70%	7	0.08%
3,000,000-4,000,000	2	1.35%	2	0.02%
4,000,000-5,000,000	1	0.68%	2	0.02%
6,000,000-7,000,000	3	2.03%	3	0.04%
7,000,000-8,000,000	1	0.68%	1	0.01%
More than 8,000,000	1	0.68%	1	0.01%
Total	148	100.00%	8308	100.00%

Table 15: Dataset of companies

Source: The Facebook App Economy, University of Maryland, 2011

4.7.2.2 Estimation

The estimation of the employment impact consists of three major components:

- Direct employment – jobs created in the app industry
- Indirect employment – jobs created in other sectors of the economy
- The economic value of those created jobs

Direct employment

The number of employees of single each company is computed as the number of developers and number of active users (MAU and DAU). Using data of 148 companies, the following models were created.

<p>Model 1: $NoEmployee = \alpha \cdot DAU + \beta \cdot NoDeveloper$ Model 2: $NoEmployee = \alpha \cdot MAU + \beta \cdot NoDeveloper$ Model 3: $\log(NoEmployee) = \alpha \cdot \log(1 + DAU) + \beta \cdot \log(NoDeveloper)$ Model 4: $\log(NoEmployee) = \alpha \cdot \log(MAU) + \beta \cdot \log(NoDeveloper)$</p> <p>The following shows the estimation results:</p>				
	Model 1	Model 2	Model 3	Model 4
α	3.61E-5 (<.0001)	1.04E-5 (<.0001)	0.2887 (<.0001)	0.2404 (<.0001)
β	0.6344 (<.0001)	0.5857 (<.0001)	0.3074 (0.0018)	0.2671 (0.0022)
n			148	
$R\text{-squared}$	0.4414	0.4324	0.8515	0.8730
* p-value in the parentheses				

Table 16: Model formulas and estimation results

Source: The Facebook App Economy, University of Maryland, 2011

Model with the highest R-squared is the most suitable one and in this case it is model 4. Using model 4, the estimation revealed that the total number of people employed by a third party developers is equal to 53,434.

Indirect employment

According to the study, there are two ways how to approach creation of job in other sectors:” *First, jobs are created at businesses that supply app developers. Second, jobs are created as a result of household spending based on the income earned by employees at both app developers and businesses supplying app developers*“.

There were many studies which researched employment multipliers for related industries. For communication sector, the study used three seen on the table below.

Multiplier	Number of employees
2.42	129,310
2.52	134,654
3.41	182,210

Table 17: Indirect employment estimation

Source: Own construction via MS word, The Facebook App Economy, University of Maryland, 2011

Assuming these multipliers, calculation of the total number of employees in other sectors supported by the direct employment in the app industry was done and the results are on the table above.

Economic value – Direct employment

The economic value of both direct and indirect employment generated by Facebook App Economy is based on the salaries and benefits paid.

The figures for salaries were obtained from various sources and there were three figures. The first one was collected from 63 companies with available data and the mean value of average wage is \$66,762. The second one was for startup companies where the national level average salary of startup companies is \$61,000 and the last one is for startup companies in the IT sector which is \$64,300.

The benefits were calculated with help of the Bureau of Labor Statistics which reported that salary accounts for approximately 70% of compensation thus the multiplier of 1.43 was used to derive overall compensation (salary + benefits).

Direct Employment	Average Salary	Average Compensation	Total Compensation App Industry
	\$66,762	\$95,470	\$5,101,325,812
53,434	\$64,300	\$91,949	\$4,913,202,866
	\$61,000	\$87,230	\$4,661,047,820

Table 18: Economic value of direct employment

Source: The Facebook App Economy, University of Maryland, 2011

The table shows that the impact in the App industry was between \$4.66 billion and \$5.10 billion.

Economic value – Indirect employment

For jobs created in other sectors, the national average wage of \$40.712 reported by the U.S. Social Security Administration was used. Using the same multiplier of 1.43, the computation of total average compensation for employee resulted in \$58,218.

Direct Employment	Indirect and Induced Employment	National Average Compensation	Total Compensation (Indirect and Induced Employment)
	129,310		\$7,528,169,580
53,434	134,654	\$58,218	\$7,839,286,572
	182,210		\$10,607,901,780

Table 19: Economic value of indirect employment

Source: The Facebook App Economy, University of Maryland, 2011

4.8 Results and discussion

4.8.1 Results from fundamental analysis

Facebook is currently the most successful social network and results from the fundamental analysis support this statement. Revenues and net income are steadily increasing over the past four years as well as its equity. When it comes to ratios, in most categories, Facebook performs better than the industry average and in some cases is more than doubled which is great result for Facebook and its investors. Ratio analysis revealed that Facebook is very strong in terms of finances because current ratio of 9.6 is almost double as industry average 4.99 which means that Facebook's ability to pay its short term payments and obligations is much better than the industry average. Also, thanks to the low debt, the ratio for total debt to equity is astonishing 0.65% compared to industry average of 43.29%, which is quite amazing result.

4.8.2 Results from comparison of other social networks

The comparison of Facebook with other social networks Twitter and LinkedIn proved that Facebook performs much better than the other two. Since Facebook offers wider range of services than both Twitter and LinkedIn, it is not surprising that Facebook has the most users, the highest revenues and also the highest number of employees among these three social networks.

However, comparison of age distribution showed that people aged 16 -34 tend to prefer more other social networks. One of the reasons is with no doubt that teenagers do not want to share their photos and thought with older people such as their parents and they are looking for alternative networks which are not popular among age group 35+. Facebook needs to address this issue if it wants to remain a social media leader in next decade.

4.8.3 Results of study by Deloitte

In order to calculate share on GDP of Facebook activities, it is necessary to obtain GDP for the latest year which is 2013 and according to the World Bank, the GDP for the U.S. is \$16.7 trillion.

Report by Deloitte	Jobs created	Economic Impact in \$ (EI)	Share on GDP
Marketing effects	816 000	77 600 000 000	0,46%
Platform effects	126 000	8 200 000 000	0,05%
Connectivity effects	135 000	13 800 000 000	0,08%
Sum	1 077 000	99 600 000 000	0,59%

Table 20: Facebook's share on GDP

Source: Facebook's global economic impact by Deloitte, 2015, Own processing via MS excel

After calculating share of Facebook on GDP in the U.S. which is equal to 0.59 % it is safe to assume that the impact is not as significant as Facebook and Deloitte want it to be but it is still quite significant because the GDP of the U.S. is an astronomical figure which is the highest worldwide. There is no doubt that power of Facebook is strong, especially on the internet and if Facebook holds on its development and position among social media, it is likely to become even more successful and useful social network for marketing and other purposes.

While Facebook has dominant position in the U.S., its main focus is now on to developing countries, mainly India where are still many people without internet and therefore there is a huge potential for user growth.

4.8.4 Results of the App Economy of Facebook study

The results of all mentioned data and factors can be perceived from different points of view. The conservative estimate of the employment impact in 2011 in the U.S. resulted in 182,744 full time jobs with total employment value of \$12.19 billion as a result of the Facebook App Economy.

Using the higher and more aggressive estimates, the Facebook App Economy helped to create 235,644 jobs, adding an economic value of \$15.71 billion to the U.S. economy in 2011.

4.8.5 Comparison of impact on GDP

Both studies took very interesting approach to estimate economic impact of Facebook in the U.S. and both estimated that the impact is quite significant. Unfortunately, the second study covers only the App Economy which is similar to Platform effects analysis included in the first study so it is possible to compare just one effect from three which are in the study by Deloitte.

First step is to adjust GDP, which in the U.S. is increasing to get more optimal results. Author has chosen to use GDP trailing one year to get better results.

The U.S.	Study #1 2013	Study #2 2010
GDP (in billions \$)	16 768 100 000	14 964 400 000
GDP Ratio 2013/2011	1,120532731	

Table 21: Comparison of GDP for the U.S.

Source: World Bank, Own processing via MS excel

After calculating ratio between these two years, adjusted economic impact can be calculated as well. The figures from the App Economy study are counted as sum of conservative and aggressive estimates divided by two in order to get balanced estimate between those two extremes values.

The U.S.	Jobs created	Economic Impact in \$ (EI)	EI in \$ adjusted	Share on GDP
Study #1 Platform effect	126 000	8 200 000 000	8 200 000 000	0,05%
Study #2 App Economy	209 194	13 950 000 000	15 631 431 598	0,10%

Table 22: Comparison of economic impact

Source: Own processing via MS excel

The results from both studies differ in figures and it is interesting that The App Economy of Facebook study found out more created jobs and almost doubled economic impact even though the study is three years older than the other one because while Facebook experience steady rise in both users and revenues, author of this thesis expected than the study by Deloitte would have higher figures in terms of economic impact. However, the table compares just economic impact of Apps which are available on Facebook and does not compare other areas where Facebook creates an economic impact.

5. Conclusion

Since its establishment in 2005, Facebook has become a leader among social media during last ten years of its existence and even though other social media tried to copy its pattern and services, there is still no other social network with more than one billion users. Although there are companies such as Google or Baidu (in China) which are very popular and more successful than Facebook, only Facebook is pure social network while the other two started as search engine before expanding with creation of its own social networks.

Fundamental analysis included in this thesis supports that Facebook is a leader among social media, but needs to address issue of teenagers leaving Facebook because of wide range of people using it, including their parents.

While Facebook influence social life of its users because it enables them to connect and communicate much easier than ever before, it has also impact upon economies around the world. Economic impact of social media is quite hard to research due to the wide range of area where social media operate, but author of this thesis chose to review and evaluate studies done by professionals, especially the one created by Deloitte. The report of global economic impact by Deloitte provides many useful insights while on the other hand include variety of questionable assumptions. Despite these issues, Deloitte proved that Facebook has significant impact in the U.S. even though the impact is not likely as high as it is stated in the report. According to Deloitte, in 2014, Facebook enabled creation of more than one million jobs while generating more than \$100 billion into the U.S. economy which equals to 0.59 % share of total GDP. As mentioned before, the percentage share looks quite small but given the enormous \$16.7 trillion GDP output of the U.S. the result is more significant than it seems.

After comparing one of the field or effects of Facebook impacts which is the platform effect from the first study with the App Economy included in the second study, it is safe to say that at least in this case, the approach was right despite the fact that both studies came up with different results because there is a difference of three years in between them and environment of social media is a dynamic one.

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