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RISE OF FACEBOOK, AMAZON, APPLE, NETFLIX, GOOGLE DURING COVID-19 PANDEMIC

Shivraj Pisal
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RISE OF FACEBOOK, AMAZON, APPLE, NETFLIX,

GOOGLE DURING COVID-19 PANDEMIC

A Thesis

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

in

Information Systems and Technology:

Business Intelligence

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by

Shivraj Gorakh Pisal

August 2021

RISE OF FACEBOOK, AMAZON, APPLE, NETFLIX,

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August 2021

Approved by:

Dr. Benjamin Becerra, Committee Member, Chair

Dr. Conrad Shayo, Committee Member, Reader

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ABSTRACT

The US economy started falling from February 20th, 2020 and continued to fall until March 19th, 2020. On March 19th, 2020, the stock market crashed. All the stocks were at a 3-year low on that day because of the COVID-19 pandemic. Many countries announced lockdowns during that period, which resulted in the stock market suffering a huge loss. Many businesses had to suspend their operations with small businesses suffering the most. Due to the business shut down, many people lost their jobs and unemployment was rampant. This project focuses on why Facebook, Amazon, Apple, Netflix, Google (henceforth, FAANG companies) flourished during the COVID-19 Pandemic and their stocks rose when other small businesses were having a tough time surviving during this period. The project investigated the rise of Facebook, Apple, Amazon, Netflix, and Google during the Covid-19 pandemic. The findings were based on the companies past performances and the rise in revenue of the companies during the pandemic and the restrictions that were placed due to the pandemic. Also, various factors that contributed to their rise were covered. The conclusion was strong online infrastructure, frequent lockdowns during pandemics, trust of investors in FAANG due to their historical records and some socio-economic factors contributed to their growth. Areas for further studies are the post covid analysis of FAANG stocks and their financial growth.

ACKNOWLEDGEMENTS

I would like to acknowledge and extend my deepest appreciation for the support provided by Dr. Benjamin Becerra, Dr. Conrad Shayo, and all others who have provided extra encouragement throughout this research project over the past six months.

DEDICATION

This is dedicated to my parents, my friends and other family members. A special acknowledgement to Dr. Benjamin Becerra and Dr. Conrad Shayo for the continuous support throughout my master’s program.

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CHAPTER ONE

INTRODUCTION

FAANG, COVID-19 Pandemic and Rise in Unemployment

FAANG is an acronym for Facebook, Apple, Amazon, Netflix, and Alphabet (which was previously known as Google), the five most important technology giants in the United States. The technology breakthroughs of these companies have had a significant impact on global economies, since they create jobs, link people, supply goods, and generate entertainment. As a result, a detailed analysis of FAANG stocks adds to the existing body of knowledge. Furthermore, because stock markets are very volatile and are influenced by a variety of known and unknown causes, it is vital to employ adequate tools for assessing their behavior (Jadhav et al., 2021).

The coronavirus disease 2019 (COVID-19) has been spreading over the world since the end of 2019. The first case of COVID-19 was discovered in Wuhan, a city in China, in December 2019. The World Health Organization (WHO) initially issued a global notice on COVID-19 on January 30, 2020(WHO 2020a). The WHO declared it a pandemic as the number of confirmed cases grew to 118,319 cases on March 11th 2020 around the world. Some researchers and media sites commented in March 2020 on how this dreadful epidemic would damage the economies of the afflicted countries (He et al., 2020).

Unemployment in the US was on a rise during the pandemic as lockdowns were imposed in various states and small businesses like restaurants, coffee shops, General stores, shopping malls, and massage parlors were forced to shut down for an uncertain amount of time. Public gatherings were banned, and businesses were forced to carry out operations online. For the businesses mentioned above, it was not possible to conduct operations online since they require people to go to the physical location to conduct business. Despite these tough times, FAANG companies thrived, and their business grew despite the ongoing pandemic (Hobbs,2020).

Problem Statement

This project will attempt to research what led to the success of FAANG companies during the Covid-19 Pandemic when other companies were flailing. More specifically, what were the key factors that helped their business not only survive during the pandemic but also thrive and amass huge profits even during the times of lockdowns?

Research Questions

There are three main questions which this study will answer:

1. How were the FAANG companies doing before the Covid-19 pandemic?
2. Why did the FAANG companies rise during the Covid-19 pandemic?

3. What can emerging tech companies learn from FAANG to survive during such pandemics?

The following is a breakdown of the project's structure. The Literature Review will be covered in Chapter 2, the Project Methodology in Chapter 3, the Research Findings in Chapter 4, and the Discussions and Recommendations in Chapter 5.

CHAPTER TWO

LITERATURE REVIEW

FAANG

FAANG comprises Facebook, Amazon, Apple, Netflix, and Alphabet (which is earlier familiar as Google). All these are big tech companies running their businesses for more than a decade now. Most of their business operates online with the IT offices operating in various cities all over the world. Amazon and Apple operate in the e-commerce space selling their products online all over the world. Facebook is a social media company having two divisions namely Facebook Financial and Facebook Technologies with headquarters in Menlo Park, California, United States. Netflix is a company that provides streaming services and hosts movies, serials, shows on its platform with headquarters in Los Gatos, California. Google (now Alphabet) is a search engine and a big technological firm that provides internet services and has various products such as hardware and software and is headquartered in Mountain View, California.

About FAANG Stocks

In finance, the abbreviation "FAANG" refers to five big American technological companies: Facebook (FB), Amazon (AMZN), Apple (AAPL), Netflix (NFLX), and Alphabet (GOOG) (formerly known as Google). The term was coined by Jim Cramer, the host of CNBC's Mad Money, in 2013, when he praised these companies for "completely dominating in their marketplaces." FANG was the initial acronym used, with Apple (the second "A" in the alphabet) added in 2017 (Fernando, 2021).

The five FAANG businesses are among the world's most valuable corporations, with a combined market capitalization of nearly $5.6 trillion as of Aug. 13, 2020, in addition to being well-known among consumers. Some believe the FAANG stocks are in the midst of a bubble, while others believe their recent financial and operational performance justifies their hegemony. (Fernando, 2021).

Why FAANG are so Popular

For people used to social media, Facebook is a common name since 2004, and it provides a platform for connecting with people from different parts of the world and keeping in touch with the people we cannot meet daily. Facebook has a user base of around 2.85 million which makes it popular.

Amazon is the queen of e-commerce and currently, it is ruling the e-commerce space single-handedly. No other competitor is even close. Amazon was launched in 1994 and the founder Jeff Bezos was far beyond his time,he saw an opportunity to grow his business during the internet boom. Ever since then Amazon has never looked back and has been growing ever since (Hall, n.d.).

Whenever we think of innovation and creativity the first name that comes to mind is Apple. Apple has always been the forerunner in the technology space when it comes to launching innovative products and cutting-edge technology. Starting with personal computers and then in the modern era ruling the electronics space with their Smartphones and Smartwatches, Apple has come a long way. Apple tops the list of companies which have a market cap in trillions (Lee, 2014).

Netflix is a popular name in the household thanks to the streaming services it has been proving over the years. Founded in 1997, and only to become popular after 2010 with the rise of Internet users in the world, Netflix now offers streaming services in 190 countries in the world with some exceptions. The main business of Netflix is to stream a variety of movies and series through its movie library and later in 2013, it began its in-house production by launching a series. Netflix has the biggest market cap in the entire entertainment industry (Bond, 2021).

Alphabet Inc. is the parent company of Google. Founded in 1998, Google was not so popular as a search engine back then. At the time of Google, there were already search engines like Netscape, Yahoo, WebCrawler, Lycos, LookSmart, Ask.com and MSN Search already existed. Google's PageRank algorithm was the most powerful algorithm of that time and that formed the basis for Google to be the most popular and reliable search engine in the world. With the passing of time, Google moved from being a search engine to now having eight products (McFadden, 2020).

Importance and Dominance of FAANG in US Market

The FAANG stocks come under the Standard and Poor (S&P) index containing the 500 biggest companies listed on the stock exchange in the US. S&P 500 stands for those 500 companies in the index. In 1957 the S&P expanded from 233 to 500 companies and hence was renamed to S&P500. As of 31st December 2020, the S&P500 had a market cap of 33.4 trillion USD (Scheid, 2020)

FAANG stocks dominate the S&P500 as they make up 15% of the S&P500. These stocks are so powerful that they can influence the stock market single-handedly. FAANG are also called Blue chip stocks. Blue chip stocks means stocks belonging to the tech industry. Blue chip stocks are considered to give good profits and have good backing from the analysts due to their strong background and their presence in the market for over two decades (Scheid, 2020).

Unemployment during the COVID-19 Recession

When COVID-19 struck the world, to stop the virus from spreading, governments implemented lockdowns and stay-at-home orders. As a result of these orders, the world economy took a blow. So did the U.S economy. Until February 2020 the U.S stock market was enjoying its bull run for 11 long years and this trend ended once Covid hit. Because of this many people lost their jobs, and it triggered the largest unemployment in the history of the U.S since 1948.

Figure 1 below is a chart that shows the historical unemployment rate from 1950 to 2020 (Falk et al., 2021).

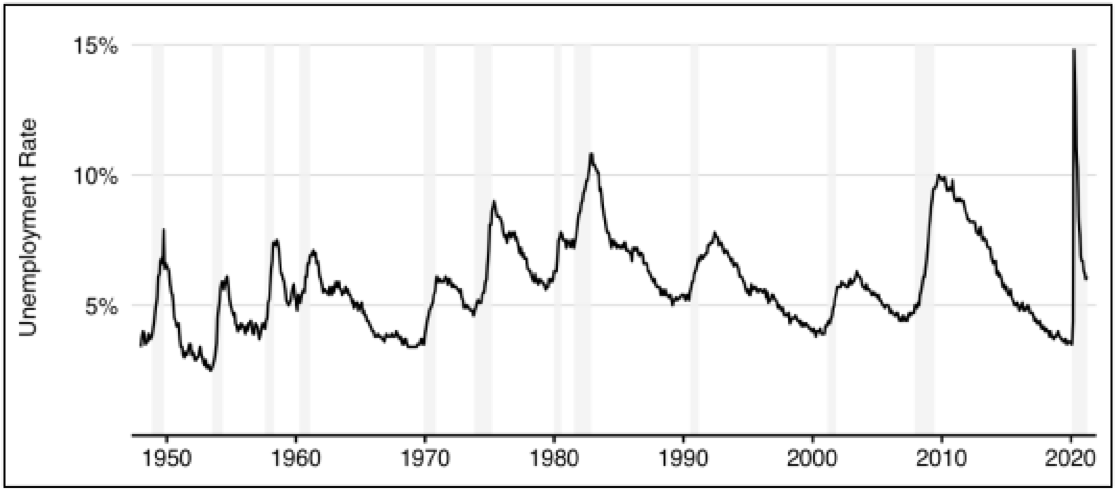

Figure 1. Historical Unemployment Rate. (Falk et al., 2021)
Data ranges from January 1948 until April 2021.

Source: Created by Congressional Research Service (CRS) using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series at https://www.bls.gov/data/.

Notes: According to the National Bureau of Economic Research, shaded regions signify recessionary periods.

Figure 1 shows that there has been a huge spike in unemployment during the 2020 period. The unemployment rose to 14.8% during April of 2020. Even though we can see that the unemployment rate plunged after April 2020 it was still 2.6% more than the unemployment rate which was in February of 2020 (Falk et al., 2021). Consequently, the stock market crash and the financial crisis due to covid-19 is called the covid recession. Before the covid recession, there were other recessions called the Great Recession and the Great Depression. The Great Recession was a period of economic downturn that lasted from 2007 to 2009, following the fall of the US housing bubble and the global financial crisis. The Great Depression happened between August 1929 until March 1933. It happened due to the stock market crash in 1929 and many businesses and individuals lost large amounts of wealth which triggered unemployment and the economy took a setback. Such recessions take place as a result of some events or crisis happening in the financial market and thus giving rise to recessions. Recession and unemployment are directly related to each other. Unemployment starts increasing during the start of the recession and then it is at its peak before it starts to subside(Falk et.al.,2021).

Figure 2 will show the Great Recession of 2007 and we will compare it with the covid recession of 2020. The data range is from November 2007 till April 2021.

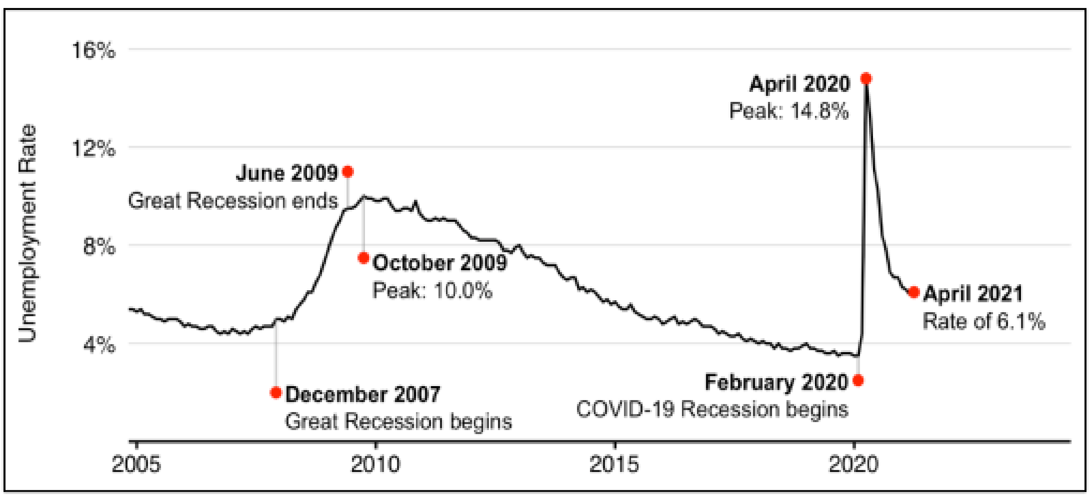

Figure 2. The Great Recession and the Covid-19 Recession Comparison (Falk et.al.,2021).
Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series at https://www.bls.gov/data/.

Figure 2 shows that the Great Recession had less unemployment than the Covid-19 Recession. At its peak the unemployment during the Great Recession was 10.0% although it took 18 months to reach that peak from the start of the recession. During the Covid-19 recession however, unemployment was at 14.8% during the peak period and it took only 2 months to reach that peak since the start of the recession. This shows us that the Covid-19 recession had a huge impact on unemployment, and it had the worst unemployment records (Falk et al., 2021).

CHAPTER THREE

METHODOLOGY

Research

For this project various search engines were used such as Google Scholar and Google Search which are free web search engines. For research regarding the first question: “How were the FAANG companies doing before the Covid-19 pandemic?” Keywords such as FAANG, Stock Market, Unemployment during pandemic, COVID-19, Apple, Google, Amazon, and Netflix were used.

To research the second question: “Why did the FAANG companies rise during the Covid-19 pandemic?”, the keywords such as Earnings of FAANG, Revenue during COVID-19, Stock market prices, Subscriber growth, Iphone12, Google ad’s revenue, Screen time and Social Media consumption were used.

The table given below includes the articles/materials found during the keyword search for each question :

Table 1. Keyword Search Based on Theme

Search Engine	Key words	Main theme	No. of articles found	No. of relevant articles	Author(year)
Google Scholar	FAANG	Definition	2	2	Fernando(2021) Hobbs(2020)

Google	Stock Market	Definition	2	2	Liu(2020) Hobbs(2020)
Google	Unemployment during pandemic	Information	1	1	Falk(2021)
Google	COVID-19	Information	1	1	Wang(2020)
Google	Apple	Background & Earnings	3	3	Sullivan(2021) Bary(2021) Lee(2014)
Google	Google	Background & Earnings	2	2	Wakabayashi (2021) McFadden (2020)
Google	Amazon	Background & Earnings	4	3	Egan(2020) Takefman (2021) Don(2021)
Google	Netflix	Background & Earnings	6	3	Bond(2021) Ponciano(2020) Owens(2020)

Google	Earnings of FAANG	Factors Contributing to the Rise of FAANG	8	6	Fernando(2021) Hobbs(2020) Sullivan(2021) Wakabayashi (2021) Egan(2020) Owens(2020)
Google	Revenue during COVID-19	Factors Contributing to the Rise of FAANG	10	5	Fernando(2021) Hobbs(2020) Sullivan(2021) Statt(2021) Ponciano(2020)
Google	Stock market prices	Factors Contributing to the Rise of FAANG	4	3	Jadhav(2021) Wang(2020) Egan(2020)
Google	Subscriber growth	Factors Contributing to the Rise of FAANG	2	1	Bond(2021)
Google	Google ad’s revenue	Factors Contributing to the Rise of FAANG	2	1	Wakabayashi (2021)

Google	Social Media consumption	Factors Contributing to the Rise of FAANG	2	2	Watson(2020) Statt(2021)
Google	S&P500	Dominance of FAANG	2	2	Hobbs(2020) Egan(2020)
Google	Post-COVID workplaces	Work from Home	1	1	Erb(n.d)
Google	Remote work frequency	Work from Home	1	1	Mlitz(2021)
Google	Media usage during Covid-19	Media Consumptio n	3	3	Hutchinson (2020) Watson(2020) Statt(2021)

The articles were selected based on a theme. The theme was to research the popularity of FAANG, their dominance in the stock market, and their financial background. To answer the research questions about the growth of FAANG pre and during the covid period, the theme was to search about factors that lead to the rise of FAANG. Topics such as unemployment, social media consumption, work from home, remote work productivity were also searched, which led to the selection of the articles mentioned in the above table. Topics such as new trends in the Information technology sector and digital revolution were also searched, which was the theme to answer question three of the research. Topics such as new trends in the Information technology sector and digital revolution were also searched which was the theme to answer question three of the research.

Hardware used for this Project

To complete the project, I had used my laptop which is HP15 – DY0013DX Series, a 15.6” Inch Screen laptop with Touch input, Intel Core i5, 12 Giga bit (GB) RAM, web camera, 256 GB SSD with Windows 10 operating system).

CHAPTER FOUR

RESEARCH FINDINGS

Figure 3 shows us the rise of FAANG in the last five years from 2015 to 2020. According to Hobbs(2020), FAANG companies always had a strong base, and they were always performing well thanks to their strong leadership and innovations, they always showed growth in the stock market. You can see by how much these stocks have risen in the last five years; the numbers are just staggering.

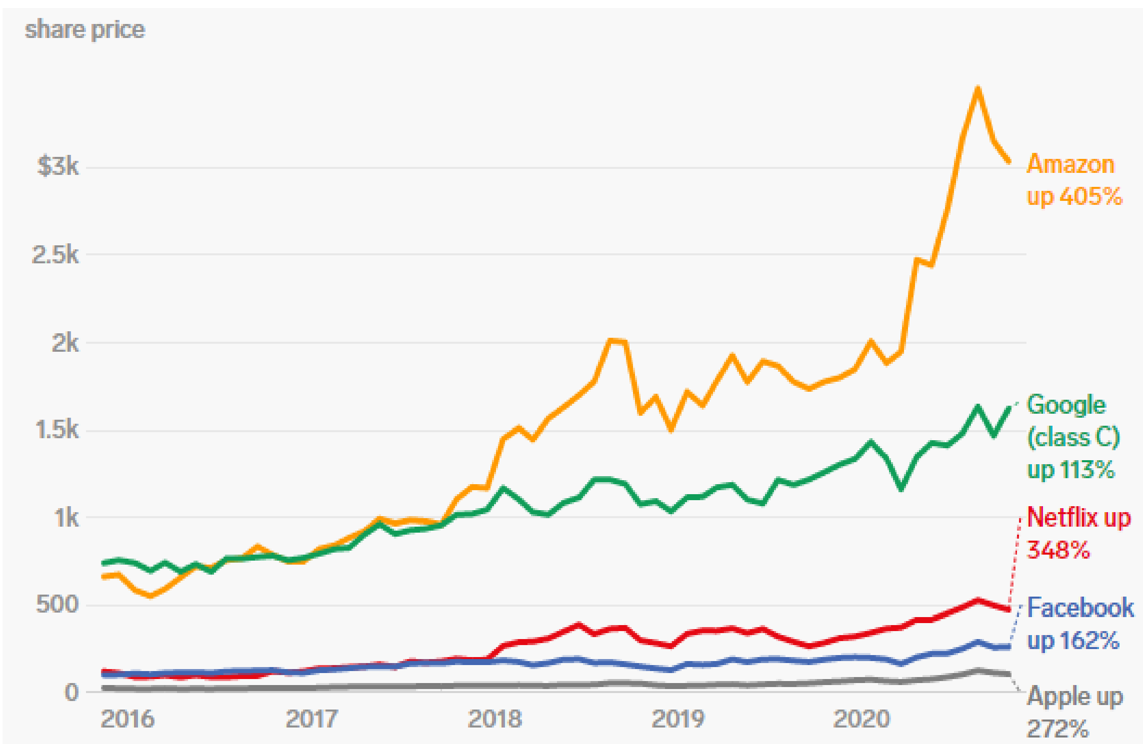

Figure 3. Growth of FAANG in the Last 5 Years(Hobbs, 2020).
Data Source & Chart : investing.com

Table 2 Various Financial Performance of the FAANG.

	Netincome(in Billions)	Revenue(in Billions)	Assets(in Billions)	Stakeholder Equity(in Billions)	Profit Margin(%)	Asset Efficiency(%)	Leverage	Return on Equity(ROE) in %
Facebook	29.14	86	159.32	128.29	33.88	0.54	1.24	22.71
Amazon	21.33	386	321.2	93.4	5.53	1.2	3.44	22.84
Apple	57.41	274.51	354.05	66.22	20.91	0.78	5.35	86.7
Netflix	2.76	25	39.28	11.07	11.04	0.64	3.55	24.93
Google	40.26	181.69	319.62	222.54	22.16	0.57	1.44	18.09

The financial performance of any organization can be measured by dividing its net income by its Shareholder equity. This term or equation is called Return on Equity. ROE is the abbreviation. Since Shareholder's equity is calculated by subtracting debt from the company's assets, ROE can also be called Return on net assets. Thus, ROE is viewed as a measure of a corporation's profitability with stockholders' equity (Fernando, 2021).

If a return on equity is greater than 14%, it is said to be a good ROE. Generally, the S&P500 have ROE of 14% which is not great and not poor. Anything below 10% is considered to be poor ROE. Referring to figure 4, in the year 2020, FAANG averaged an ROE of 35.054% which is way better than the S&P500 standard of 14%. This shows that FAANG were performing well during 2020 which happens to be the year when the pandemic began. Individually, Apple had the highest ROE in 2020 and the lowest ROE among FAANG was Alphabet (known as Google).

Factors Contributing to the Rise of FAANG during COVID-19

When COVID-19 was declared a pandemic in March 2020, the only way to contain the virus without vaccines was to convince people to stay at home. On various levels, lockdowns were announced, and stay-at-home orders were given to people. During these times traveling and gatherings were not permitted. People were stuck in their houses, and they had all the time in the world. People from the Information Technology field who can do their work online sitting in their houses were not affected by the lockdowns. That gave rise to a new work culture called "work from home" (Egan, 2020).

<u>Work from Home</u>

Figure 4 demonstrates a study conducted by (Mlitz, 2020) in which 365 respondents were interviewed about how their frequency of working from home changed before covid-19 and after covid-19.

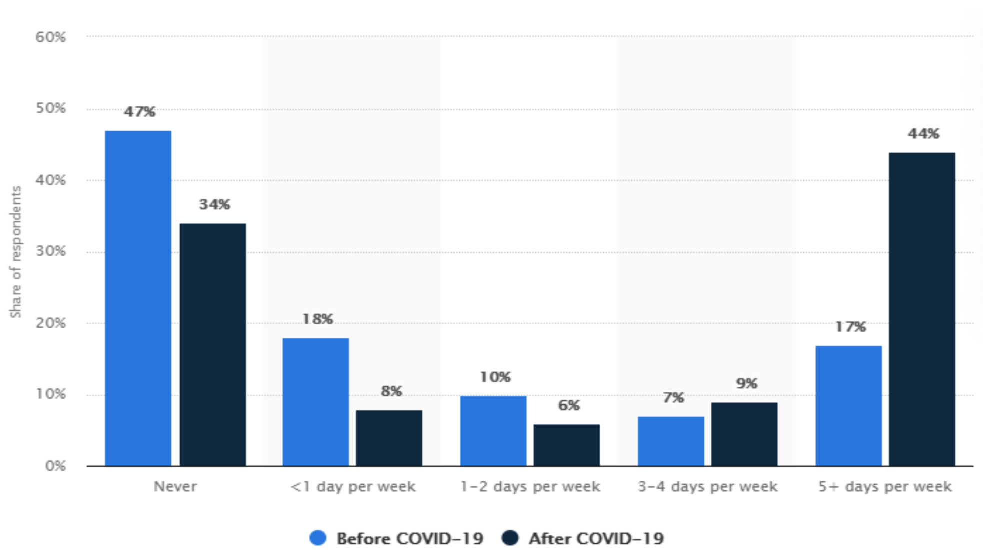

Figure 4. Remote Work Frequency (Mlitz, 2020)
Source. statista.com

Figure 5 demonstrates how the work from home culture has changed the IT workforce forever.

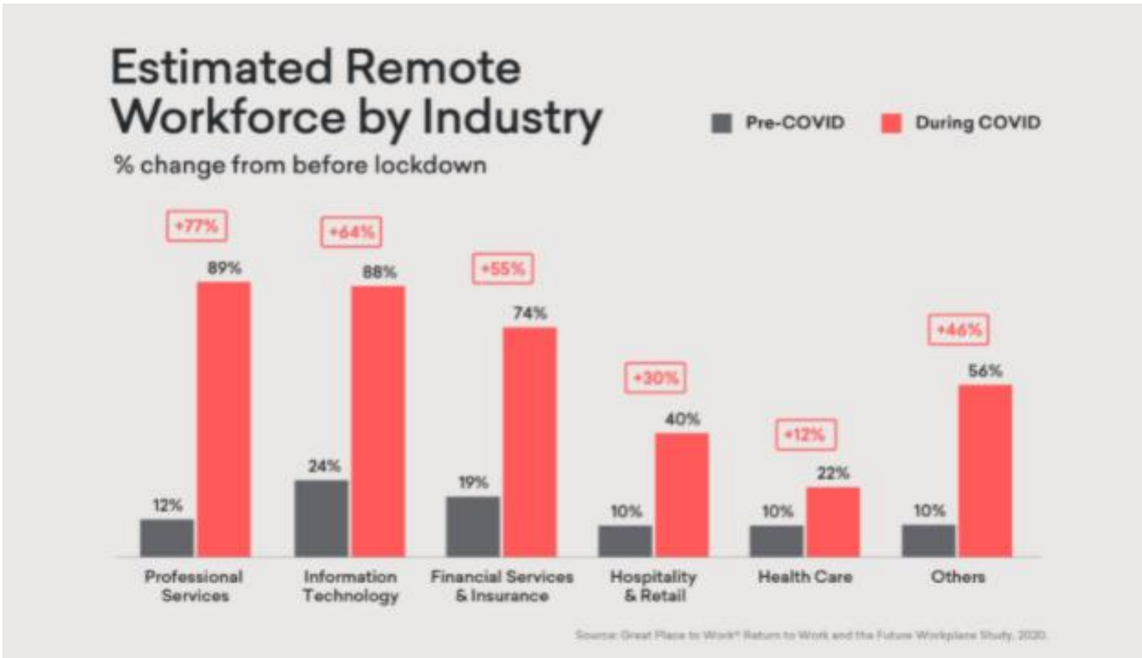

Figure 5.Work from Home Across Industries (Erb, 2021).
Source: Great place to work? Return to Work and the Future workplace Study (2020).

<u>Graph Interpretation</u>

Figure 5 shows us pre covid and during covid, the workforce that was deployed on remote work. Various industries such as Information Technology, Healthcare, Retail, and others were included in the study. It is evident from the chart that the percent change in the remote workplace is very significant in proving that covid-19 forced companies to improve and increase their remote work options and make them available to each and every person. This change was necessary and a must for the organizations with no existing remote work options to survive the pandemic (Erb, 2021).

Rise in Numbers of Remote Work:

The numbers tell us that on average across all the industries only 16% of the people were working remotely or rather had the option to work remotely. Whereas if you look at them during the covid phase, 65% of people had access to remote work. The most important industries such as Professional services had 77% increase, Information Technology had 64% increase and Financial Services & Insurance sector had 55% increase since the pre covid period (Erb, 2021).

Increased Productivity:

A lot of people had the idea before that if work were assigned remotely then productivity would decrease as people would be more comfortable and distracted in their house or wherever they choose to work. But contrary to that, a study interviewed 79 top executives from 56 companies of the Fortune 500 group, 30% of the executives said that work from home increased the productivity of their teams, 50% of them had to say that the productivity remained the same and 20% had mixed answers depending upon their company situation (Erb,2021).

In House Media Usage during the Pandemic:

Figure 6 demonstrates the survey conducted by statista.com for the in-house media usage during the covid-19 pandemic.(Watson,2020)

Characteristic	Worldwide	Italy	Spain	France	Germany	China	United States
Watching more news coverage	67%	67%	63%	50%	60%	77%	43%
Watching more shows/films on streaming services (e.g. Netflix)	51%	53%	58%	31%	21%	63%	42%
Watching more TV on broadcast channels	45%	55%	43%	53%	35%	46%	42%
Spending longer on messaging services (e.g. WhatApp, Facebook Messenger, etc)	45%	60%	61%	24%	22%	59%	17%
Spending longer on social media (e.g. Facebook, Instagram, Twitter etc)	44%	52%	49%	27%	21%	50%	32%
Spending more time on computer/video games	36%	41%	48%	39%	21%	29%	29%

Figure 6. In House Media Consumption. (Watson,2020)
Source: statista.com

Figure 6, the consumption of the USA for Streaming services and Spending time on messaging services, the numbers are 42% and 32% respectively. These numbers indicate that nearly half of the people in the US were consuming social media(Facebook) and using streaming services(Netflix) frequently during the COVID-19 pandemic when the stay-at-home orders were in place and lockdowns were announced (Watson,2020).

<u>Increased Consumption of FAANG:</u>

The people who lost their jobs or people who were given temporary leave from their jobs due to the COVID-19 had a lot of downtime. The effect of this was there were a lot of activities going on in the online space. A lot of people were spending their time on social media like Facebook, families were spending their time watching Netflix and many people during the pandemic bought the subscription for Netflix (“The rise of faang stocks explained and the reasons”).

Since people were staying in their houses and following stay-at-home orders, the number of people shopping on Amazon increased during this time. People need a lot of stuff even though they are staying home. The fact that they cannot go to the shopping mall or places such as Lowe's and Home Depot, triggered the people to start ordering things online. One of the reasons could be that they do not want to go out in public and expose themselves to the virus (“The rise of faang stocks explained and the reasons”).

During the initial time when COVID-19 was just declared as a pandemic, people were panic buying things, so that they could stock themselves just in case the lockdown goes on for months and all the essential stores like grocery and restaurants are closed for a longer time. At that time there was a shortage of Masks and sanitizers as well. Due to this reason, most people decided to stay home and shop things online to avoid meeting people face to face and increasing the risk of getting infected with the Covid-19 virus (“The rise of faang stocks explained and the reasons”).

<u>Earnings of Facebook during COVID-19:</u>

Owing to the covid-19 pandemic and the stay-at-home orders Facebook saw a profitable year ending for 2020. At the beginning of the year, the revenue was not that good as compared to the revenue at the end of the year. More screen time seemed to be the leading factor for the increase in revenue for Facebook in the year 2020 (Statt, 2021).

The fourth-quarter earnings of Facebook gave some staggering numbers. The company reported a gain of $11.2 billion. The income during that time was over $28 billion. The increase year over year was 53% and 31% respectively.

In terms of utilization, Facebook is on the rise. Additional 1.84 billion users were using the company's services. The frequency was at least once a day during December 2020, an increase of 11% year over year. At least 2.8 billion individuals visit Facebook minimum once in a month’s time, as of December 31st,2020, a 12 percent increase from the previous year (Statt, 2021).

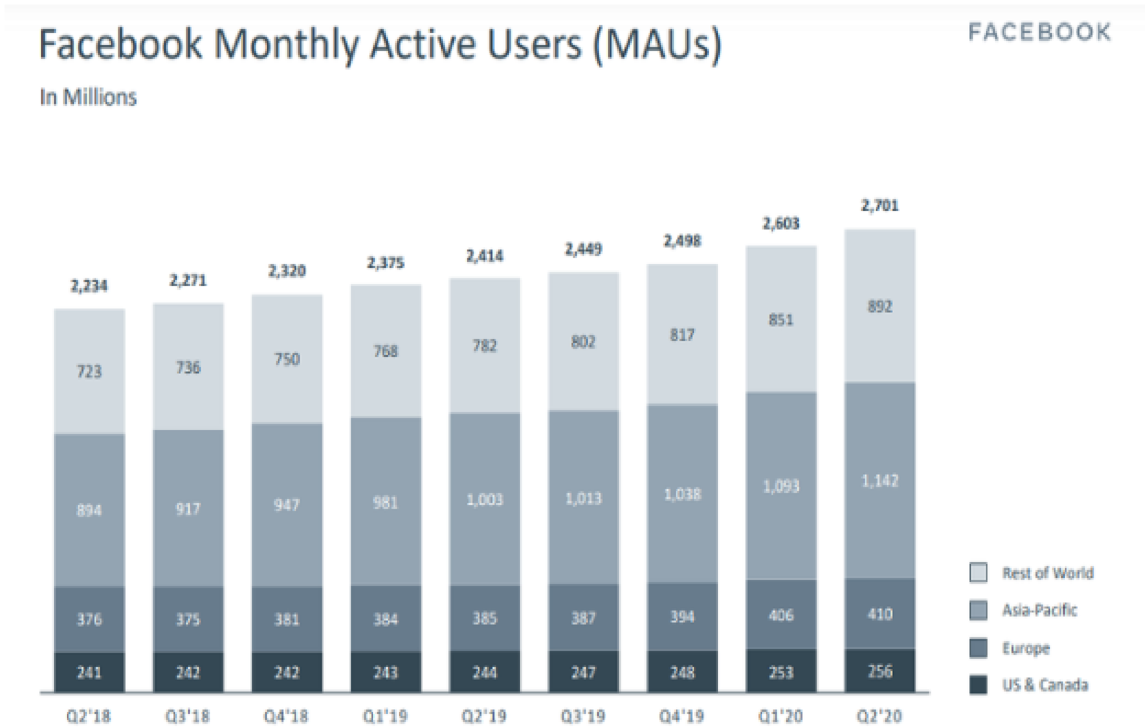

Figure 7. Facebook Growth in Users (Hutchinson, 2020).

Figure 7 shows us that the number of people using Facebook increased largely during Quarter 1 of 2020 and Quarter 2 of 2020 leading to increased revenue for Facebook (Hutchinson, 2020).

Earnings of Netflix during COVID-19:

$235 billion, that is the market capitalization of Netflix the day before it reported its 3rd quarter income for 2020. It was up by close to $100 billion in 2020, putting the oldest streaming company among the S&P 500's top 20 firms. Netflix's market cap during 2020 was even ahead of media heavyweights such as Walt Disney. Netflix's stock grew by more than 60% since January 2020.The S&P 500 saw an increase of merely 6.5% during 2020. Reed Hastings, the company's millionaire founders, and CEO has received over $2 billion as a result of the outbreak (Ponciano, 2020).

Netflix announced in July 2020 that it had gained 26 million subscribers during the first six months of 2020. The numbers increased by 10 million in the first quarter and almost 16 million in the second quarter. The reason being people confined to their homes faced with government imposed stay at home orders considered Netflix for entertainment rather than going to the movies or seeing live shows. The early rise of Netflix's membership base drew the attention of Wall Street investors. That is when the Netflix stocks soared during the beginning of the covid-19 pandemic (Ponciano, 2020).

According to a survey conducted by analyst Alex Giaimo, since the COVID-19 outbreak, a poll of 1,500 Netflix members found that their participation has grown "substantially." Before COVID-19, the number of people who subscribed to Netflix and watched more than 10 hours per week was 16%. During the pandemic, the number grew to 38%. According to analyst John Blackledge, following a phenomenal first quarter, Netflix has added more than double its paid internet advertising guide. As the pandemic widespread, Netflix shares have risen 35% so far. As the reopening’s are uneven and there are restrictions on outdoor activities in the social environment, people choose to stay home; hence, people will still be inclined towards Netflix for entertainment. (Owens et al., 2020).

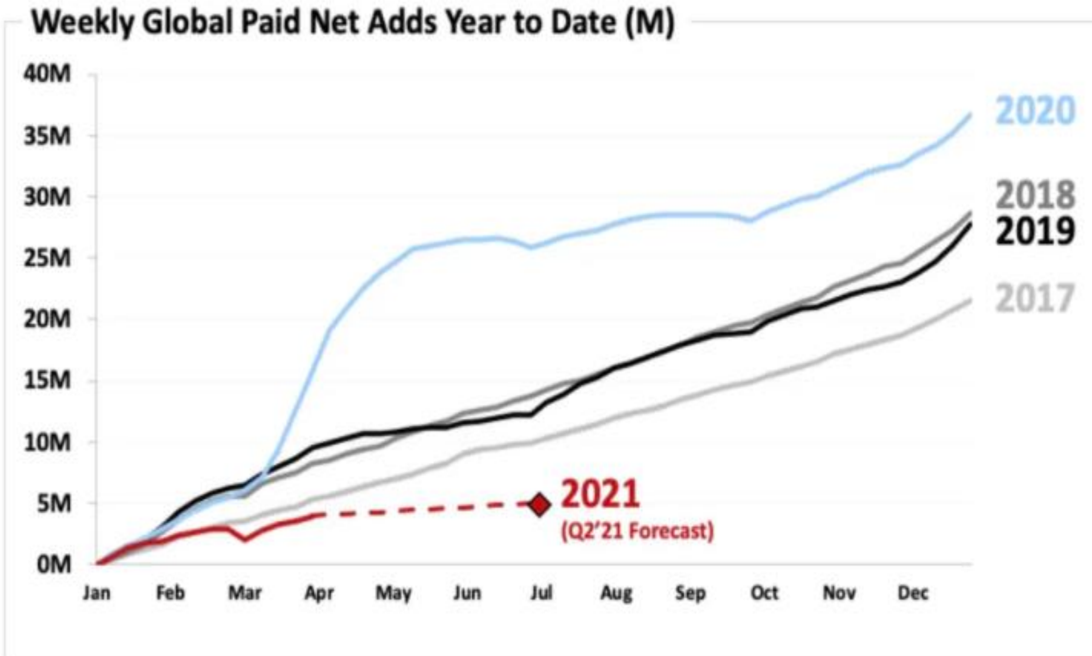

Figure 8. Netflix Growth in 2020 (Kastrenakes, 2021).

Figure 8 shows a staggering rise in member subscriptions from March 2020 till the end of 2020. 2020 was also the year which recorded the highest growth for Netflix in the last 5 years (Kastrenakes, 2021).

<u>Earnings of Amazon during COVID-19:</u>

E-commerce enterprises like Amazon offer products at a low cost. However, most importantly, they deliver at the doorstep as fast as possible. Small scale businesses and small merchants were having a tough time matching the cost and delivery options with the E-commerce giants. Then COVID-19 happened, and people would anytime choose convenience. Amazon grabbed the opportunity when the physical stores were forced to shut down and the consumers were imposed with lockdown orders due to the spread of COVID-19 (Takefman, 2021).

Amazon founder Bezos saw his wealth skyrocket. According to USA Today, Bezos' net worth in March 2020 was 113 billion US dollars. As of November 2020, the 56-year-old CEO is worth more than 203 billion US dollars. Since March 2020, Bezos' personal wealth has increased by $ 90.1 billion, giving him 80% more wealth than before the pandemic (Takefman, 2021).

In the first nine months of 2020, the international IT business recorded a 70 percent increase in earnings. It increased by US$5.8 billion from the same period in 2019.The pandemic proved to be a catalyst for Amazon’s increase in revenue and also its expansion in different parts of the world. By the end of 2020, Amazon will increase its infrastructure by 50%, employing more than 250,000 people. Amazon Web Services, which was already doing good and gathering profits, expanded up to 29% in 2020. AWS accounted for 12% of Amazon’s total revenue, since most of the companies across different continents started shifting its operations to cloud computing and planned to work remotely. During the COVID-19 pandemic, Amazon invested 25.3 billion USD to expand its warehouses, researching new technologies, and also made investments for capital. Only big companies like Google, Netflix, Facebook, Apple and others were able to keep up with Amazon's spending’s and yields (Takefman, 2021).

Growth of Traffic on Amazon’s Website during Pandemic :

Even though it has been more than a year since the corona virus started spreading in the US, Amazon.com Inc., one of the largest online retailers in North America, has seen an increase in traffic to its website. Based on the inspection of the traffic statistics, overall visits to Amazon.com in January increased by 20% as compared to January 2020 and increased by 37% as compared to February 2020. These statistics were taken by SimilarWeb which is a site measurement organization and reported by Digital Commerce 360 (Fareeha, 2021).

The biggest notable yearly rise in traffic took place in October when total visits to Amazon jumped by 27% as compared to the same month last year. This happened because of Prime Day. Prime day is Amazon's Once in a year sales event. It took place in October 2019 , which normally takes place in July. Site traffic increased by 28.1 percent in July compared to February 2020 and by 8.7 percent over the previous year. Even though the Prime Day event was delayed, which was initially supposed to occur in July 2019, the traffic continued to rise year over year. Amazon's traffic increased by 45 percent in November and 54 percent in December, compared to February 2020, as November and December had long weekend holidays (Fareeha, 2021).

In the 12 months ending May 31, 3.4 billion products were sold by marketplace merchants in the United States, in the timeframe from the start and peak of the coronavirus pandemic. In addition, Amazon's vendors managed to amass $160,000 in yearly sales over the same period, up from $100,000 the year before, according to Amazon's annual Small Business Impact report. According to Amazon, marketplace merchants have made "record sales" since mid-March. While the business did not provide specific sales data for the United States, it did state that the number of Amazon units sold by marketplace vendors is more than the units sold by the first party. More than half of all Amazon units sold come through the marketplace (Fareeha, 2021).

Figure 9 gives us clear information of how amazon's traffic grew during the pandemic.

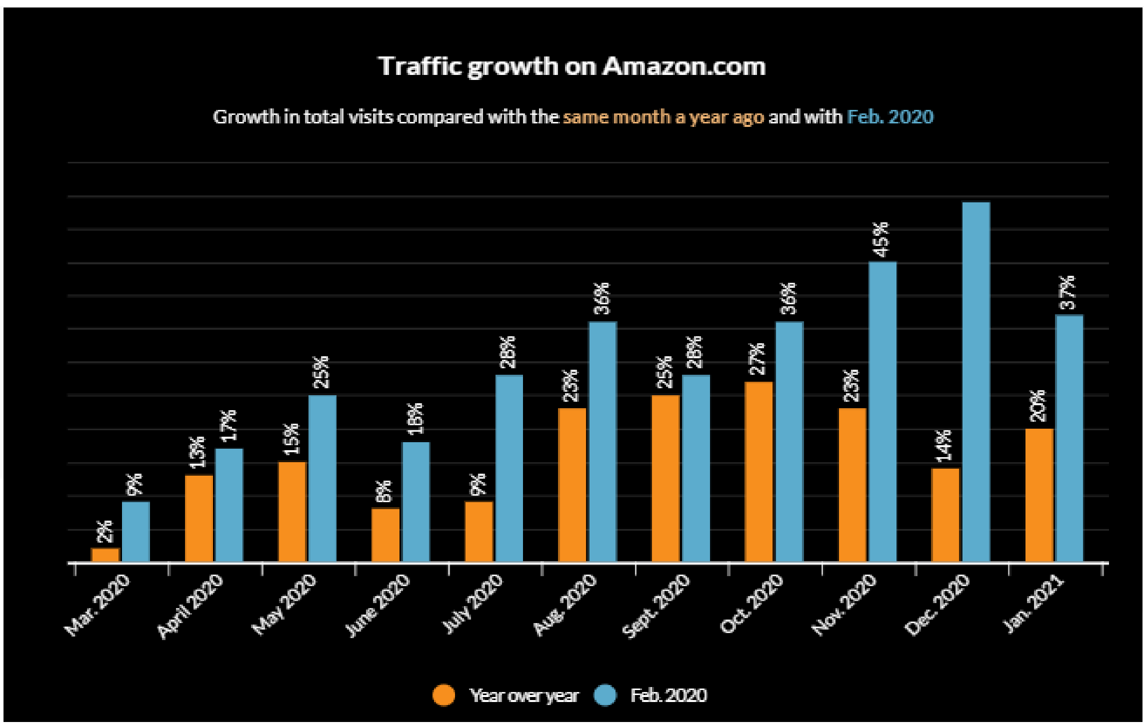

Figure 9. Growth of Traffic on Amazon.com (Fareeha, 2021).
Source. Digital commerce 360 analysis of SimilarWeb traffic data (Fareeha, 2021).

Amazon's net income rose to 8.1 billion USD, which was more than thrice, and broke the previous high, recorded in the last quarter of 2020. This happened in three months at the beginning of the year 2021. The sales in North America increased by 39.5%, and the increase in worldwide sales was by 60.4%.

Figure 10 below demonstrates the net sales of amazon during the pandemic (Davis, 2021).

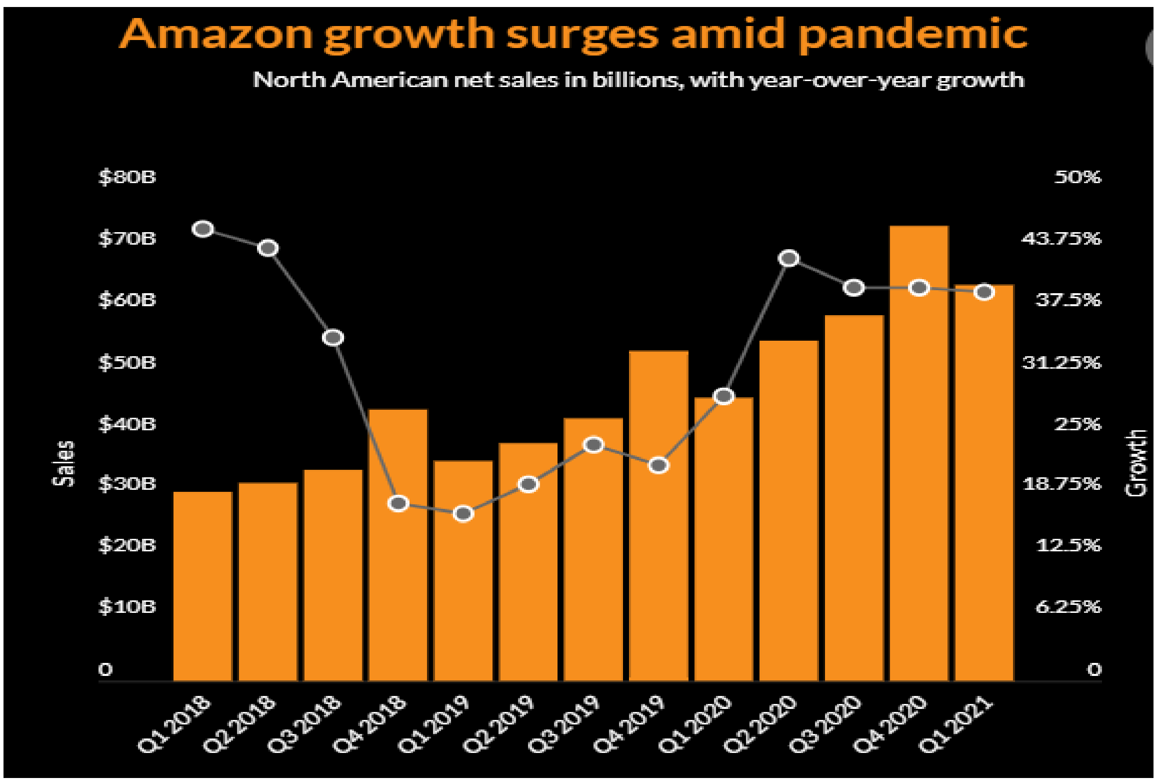

Figure 10. Net Sales of Amazon during the Pandemic (Davis, 2021).

Apple’s Earnings during COVID-19:

Amid pandemic, Apple reported nearly $90 billion in revenue for January, February, and March of 2021 ($89.6 billion), easily exceeding Wall Street projections. Revenues of $77 million were predicted by analysts. Sales increased by 54% compared to the same quarter last year, the majority of which occurred before the pandemic's full impact was felt in the United States (Sullivan, 2021).

Gains in Apple's services, iPhone, and iPad divisions propelled the company's business. Apple's Services revenue climbed by 26%, iPhone revenue by 66 percent, Mac revenue by 70%, Wearables like AirPods and Apple Watch revenue by 24%, and iPad revenue by 78 percent. The iPhone, on the other hand, was undoubtedly the major star of the quarter, with unprecedented demand. iPhone sales increased by 66 percent in the first quarter of 2020, reaching approximately $48 billion. The prior quarter's iPhone revenue was around $29 billion. More customers upgraded to iPhones in the March quarter than in any other quarter in Apple's history, according to the company (Sullivan, 2021).

Even though the stores were closed, supply-chain faced delays, and stretched finances for many customers, Apple surfaced as one of the significant champions in the initial year of the pandemic, announcing a record monetary year and almost multiplying its shares. With its U.S. shops returning to operations and the work economy recuperating, experts trust Apple will want to beat its pandemic-related issues while profiting with developing dependence on innovation (Bary, 2021).

Google's earnings during COVID-19:

Alphabet, the parent company of Google, announced that the revenue in the second quarter of 2021 increased dramatically compared to the same period a year ago. This is because the demand was high for online advertising on the search engine results and YouTube search for videos. Also, one of the reasons was that the cloud computing business was growing continuously. Alphabet's first-quarter sales was $55.31 billion, up 34% year over year, and its net profit more than doubled to $17.93 billion. It was the company's third consecutive quarter of record profits (Wakabayashi, 2021).

Alphabet, like the other technology companies, has benefited from the pandemic. Following a dip in travel-related advertising during the early months of the epidemic, Google's advertising revenue has exploded. Businesses are investing in Google in order to reach out to customers who spend more time online. Alphabet also made $6 billion in YouTube ads, a 49 percent increase (Wakabayashi, 2021).

During the pandemic, Google's cloud computing company continued to gain clients as businesses shifted more of their data and work to centralized data centers in an effort to save money and become more technologically agile. In the first quarter, revenue from the cloud business increased by 46%, while losses shrank to $974 million. During the pandemic, belt-tightening aided

Alphabet's performance. Despite a $14 billion increase in revenue, the company's sales and marketing expenditures were constant, and it cut general expenditures from a year ago. The lower costs occurred even as Google continued to add more employees. Alphabet's global workforce has grown by over 17,000 workers to around 140,000 individuals (Wakabayashi, 2021)

CHAPTER FIVE

DISCUSSIONS AND RECOMMENDATIONS

Overview

The research aimed to find out what were the main factors that lead to the rise of FAANG during the COVID-19 pandemic. The study talks about various factors in the Research findings section. Factors such as stay at home orders, lockdown orders throughout the US, increase in social media consumption, rise in subscribers for streaming services, increased online shopping due to closure of physical stores and shopping malls, timely innovations, and launch of products to keep people glued to their screens, change in operational strategies by the big organizations, reduced cost of operation, work from home, increase in advertisements that resulted in increase in revenue for google and stimulus check money being used in the stock market were some of the factors that were responsible for the rise of FAANG during the pandemic. Not only FAANG saw an increase in their revenue but also their share prices increased during the pandemic. The increase in the prices of the shares was a result of increased revenue of the companies during the pandemic and lots of people investing their money in the share market during the pandemic.

Rising tech industries can learn from FAANG that if they have a strong online infrastructure, the courage to make tough decisions in times of pandemic, cut operational costs, evolve, and improve operational strategies, support innovative ideas, and keep improving their business with new technologies, they will be able to survive the pandemic and avoid having to shut down their operations if something like this occurs in the future.

Support for the above claims can be found in an article by Blackburn et al.(2020), wherein the article talks about a study they conducted in Europe. The study says that about 70% of top executives from European countries believe that the pandemic will accelerate the digital transformation. The article also talks about how Asian banks, Healthcare providers, insurers, and retailers have all pushed quickly into telemedicine, self-service claims assessment, and contactless buying and delivery. The article states that the digital revolution was due a long time ago, it was the pandemic that forced organizations to adapt digitally. The article talks about one survey conducted by McKinsey & Company, which states that the organizations which were bold to move into digital space early on during the pandemic had a growth in their revenue.

Limitations

The study was solely focused on the organization and their increase in revenue during the pandemic, stock market was not explored extensively. Also, this study did not consider FAANG outside the US. The scope was limited to the US.

Future Directions

Considering the limitations talked about in the above section the future study can be the analysis of the revenues of the FAANG companies after the pandemic is over. Pre and during covid there were a boost in revenue of FAANG companies but what happens after the pandemic will be an interesting topic to study. Stock market prices of the FAANG companies would also be an interesting topic as they rose a lot during the pandemic and as the pandemic was easing, the stocks were starting to plunge gradually. Technical analysis of the stock market for FAANG and the future growth forecast of these stocks will be interesting to study. Also, how are the small-scale industries doing after the pandemic and how did the pandemic change their operational strategies for the better would be a good topic to study.

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