A FORMAL REPORT

FEBRUARY, 2021

GOOGLE AND ITS MONOPOLY



A REPORT ON GOOGLE AND ITS MONOPOLY



SUBMITTED IN PARTIAL FULFILLMENT FOR THE COMPLETION OF THE COURSE BITS F112 TECHNICAL REPORT WRITING

SUBMITTED TO DR. PUSHP LATA IC, TECHNICAL REPORT WRITING

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DECLARATION

Technical Report Writing (BITS F112)

Assignment 1

Declaration Semester I, 2020-2021

This is to certify that, we, the following undersigned (Name and BITS ID Number) have worked uniformly on the report attached herewith. Also, we assure that the report is original, with proper citations wherever required, and the entire group is responsible for any kind of plagiarism whatsoever.

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ACKNOWLEDGEMENT

We would like to express our gratitude to the Instructor In Charge of the course Technical Report Writing Dr. Pushp Lata for providing us with a great opportunity to work on this project on the topic 'Google and its Monopoly'. We are also very thankful to her for the guidance throughout the project and her constant support and encouragement, which motivated us to complete this project to the best of our capabilities. This project has been a great learning experience for each of us.

We would also like to thank all our friends and acquaintances in BITS and other colleges to take out time from their busy schedule and fill out the survey enabling us to collect enough data to present a proper analysis of the agenda. We would also like to acknowledge the great help we received from Google and Microsoft services like Google Forms, Microsoft Office Suite, which helped us make the report effective.

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ABSTRACT

We first-year students of BITS Pilani have conducted a survey and made a report as a part of the TRW assignment on the Monopoly of Google on the online market in different fields, its reasons, and consequences. We have covered the History and economics of the online market for a better understanding of the Readers. We have provided enough Illustrations and Graphical Representations for a better understanding of the topic. Moreover, finally, we have tried to give a conclusion and some personal opinions. The data and content is being extracted from Online sources as well as from Newspapers and Articles.

PURPOSE AND AUTHORIZATION

This report has been made for the purpose of surveying and analyzing the influence of Google over the Internet, and has been made under the instructions of our Technical Report Writing teacher, Ms. Pushpa Lata Ma'am. Through this report, we aim to study the influence of Google over the Internet by analyzing and studying data collected by us from various people through questionnaires. We aim to provide an unbiased report based on real facts and figures collected from real users of Internet services. The motive is to check the validity of speculations made by people over the dominance of Google on essential Internet services by comparing them with bar graphs and pie charts made using data collected from various people through questionnaires.

SCOPE AND LIMITATIONS OF THE REPORT

This report was made by a group of four first-year BITS Pilani students with no professional insight or an idea about the inner workings of Google. Hence, the information and data which was collected for this report were done so mainly through sources such as the Internet and an inter-college survey, which may act as limitations to this report, as we do not have first-hand, authentic accounts from someone who is professionally attached to Google. However, since this report is largely based on user behavior and preferences, we have tried our best to reach out to varied people through a survey for this report.

This survey's scope is limited mainly to introducing the primary services offered by Google and what a diversified group of individuals think about using them (as part of the survey). However, care has been taken to ensure that the information required for this report is genuine, and references for the same have been mentioned accordingly.

METHODS AND SOURCES OF DATA COLLECTION

The data has been collected via an online survey conducted for college students from all over the country. A questionnaire was prepared seeking information about what services of google are being used by students on a day to day basis. Students were also asked how essential google services are in their life and if they can continue doing their activities smoothly without these services or not. The data obtained gives a very clear picture of the Monopoly Google has created over the web in the past few decades.

Online stats counters were also referred to in order to obtain information about the market share of different services across the globe. All the sources of secondary data have been cited towards the end of the report.

Although the survey has been conducted for college students who have answered mostly for their online classes going on, it shows the general perspective of the crowd.

THE METHODOLOGY ADOPTED FOR THE STUDY

We took 7 essential services provided by Google into consideration, and through a survey from 167 students of 20 different colleges all over the country, we devised that in different fields how these services are giving competition to google. We took the data and converted it into easier ways of interpretation like Pie charts, Bar graphs and pictures. We analysed the data from different kinds of groups. Only some particular institutes have less influence of google. We also picked the History of google and tried to see the different events with the world history and tried to match the contemporary events. This gives us a good idea of why google has prospered more than anyone else.

The last part of the survey was the one where we directly asked students about their satisfaction with the services of Google.

SIGNIFICANCE OF THE STUDY

The Internet has made everyone's lives easier. As new technologies like smartphones were invented and their integration with the Internet was done, consumers have been given power in their hands at the click of a button, the likes of which have never existed in the History of humanity. One of the pioneers in this technological revolution is Google. The significance of this in-depth study is to analyze how much of a role has Google really played in digitally transforming lives, the various reasons for its meteoric rise, and how much of a monopoly it really has on the Internet. This analysis will help the reader of the report gain detailed, well-researched insights on

- · What major services do Google offer and their origins
- · Why these services have been so transformational and successful at a large scale
- · The positives and negatives of using these services
- · How Google has achieved a near-virtual monopoly over the Internet
- · Making informed decisions on using Google services

1.INTRODUCTION

When we think of the Internet or of the web in general, we can not deny the fact that the most important websites or the services we use the Internet for are related to google. If we want to look for some information, we go to the Search Engine, if we want to communicate with a colleague, we opt to use Gmail, if on a not so good day we are looking for some entertainment Youtube saves our day. We do not even realize that we have been using Google and its numerous services multiple times on a daily basis.

This report has been made as a part of an assignment from the institute, in order to check the truth about the alleged Monopoly of google over the Internet by analyzing real data collected from real people through questionnaires. The purpose of the report is to have a proper analysis of the influence of Google over the Internet.

The survey covers a vast majority of people throughout India, however is only limited to college students. Though the data collected is quite diverse, we cannot determine how much influence this limitation has on the data. In some cases, it has also been seen that the students from a particular institute use almost similar services, which maybe because of the institute using those. We have tried our best to reduce these limitations by collecting information from various colleges throughout the country.

The data has been collected through questionnaires, which has questions related to a variety of Internet services. The user is supposed to choose which services they use. These services include mail services, meet services, video streaming platforms, and Cloud storage services. Choices include the service provided by Google and also its competitors. Other related questions have

also been asked. The questionnaire was sent to college students in various colleges across the country.

We have obtained responses from 167 students of different colleges from all over the country via an online survey and tried to find out the most popular services among the youth Through the means of pie charts, bar graphs and histograms we look at the usage of different services and also see the response of the students when asked about the privacy concerns related to data being collected by Google. The students also rate their satisfaction with the google services and how essential they are in their daily life.

Everyone at some point explores the various options available to him and then decides what they want to use. Has Google been the go to place for everyone for the past 2 decades, or have people stopped using their services for other available options? Despite many competitors from different fields, has Google maintained its throne? If yes then what made them so strong to compete and excel in so many different domains? We have seen names of so many companies like Yahoo fade away slowly, how did Google avoid that fate? So many questions that come into our mind will all be addressed in this report.

The report first addresses the brief History of Google and how the different services Google is providing today came into existence. We also talk about the different alternatives to all these major services and try to find out what services are being majorly used by the youth. We also look at the recent privacy concerns regarding the data collected by Google and what's the take of the youth on the same.

2.HISTORY OF GOOGLE

Google has its origins in "BackRub", a research project that was begun in 1996 by Larry Page and Sergey Brin when they were both PhD students at Stanford University in Stanford, California.

Initially the search engine used Stanford's website with the domains google.stanford.edu and z.stanford.edu. The domain google.com was registered on September 15, 1997. They formally incorporated their company, Google, on September 4, 1998, in their friend Susan Wojcicki's garage in Menlo Park, California.

The Google search engine attracted a loyal following among the growing number of Internet users, who liked its simple design. In 2000, Google began selling advertisements associated with search keywords. The ads were text-based to maintain an uncluttered page design and to maximize page loading speed. Keywords were sold based on a combination of price bid and click-throughs, with bidding starting at \$.05 per click

Today, Google is one of the leading companies in the world and is considered to be one of the three companies which largely control the technology world, Apple and Facebook being the other two. Whilst Apple specializes in electronic devices and hardware and Facebook in social media services, Google has established itself as a critical player in both domains, competing with Apple in the form of the open-source Android operating system versus Apple's iOS, and with Facebook in the form of user-engaging platforms like YouTube which competes for the user's attention with Facebook-owned services like Instagram.

3.DIFFERENT SERVICES OFFERED BY GOOGLE

Google has been this successful in the market because it provides various services, and even that better than it's competitors. Also, these services are free of cost and are easy to use. Following are some web services offered by google.

3.1 Search Engine

Google itself has become a synonym to online search just like Xerox had become a synonym for photocopying, that itself explains the widespread reach of the Google search engine. in spite of the existence of other competitors like Bing by Microsoft, Yahoo Search, DuckDuckGo, the popularity of Google is unrivaled. No other search engine is even close to the impact google search engine has, and it has been so for the past two decades. The vast amount of information, search result accuracy, and speed are why people love Google. If we look over the web search market in India, Google dominates the market 98.79% share with Bing and Yahoo sitting at 0.79% and 0.34%, respectively, which shows no other search engine is anywhere close to Google. Google is ranked as the most popular website in the world by web traffic data firm Alexa Internet, for which a large credit goes to its search engine. This company that was founded in 1998, has held the title of the number one search engine for decades.

3.2 Youtube

Google bought Youtube back in 2006 by beating tech giants like Microsoft and Yahoo. Youtube is undoubtedly the most popular online video sharing platform. The acquisition of the privately held YouTube enabled Google to thrive in one area of the Internet, where it had failed to gain footing. Google Video, which was launched in 2005, could never reach the popularity Youtube had. In recent times, despite many new and promising competitors rising like Vimeo,

Dailymotion, Twitch, Youtube has still successfully maintained its throne for more than a decade and a half. Along with video uploading, one other factor that is responsible for its success is the unparalleled live streaming experience. The Indian gaming industry has seen a boom in the past few years, with much of the credit going to Youtube for being the go-to streaming platform for every professional esports player. As of May 2019, there were more than 500 hours of content uploaded to YouTube each minute and one billion hours of content being watched on YouTube every day.

3.3 Android

In the last decade, the boom of smartphones and tablets saw the rise of Google sponsored Android operating system, which was unveiled in 2007. It is a modified version of the Linux terminal and other open-source software. The Android operating system has been the best-selling operating system on touchscreen smartphones and tablets for almost a decade now. Android does face some serious competition from iOS developed by Apple. Still, because of its much better price-performance ratio, it remains to be the most widely used operating system in the market. Android and iOS account for more than 98% of the global market share for operating systems with Android sitting at almost 72% and iOS at 27%. One reason for this is that many different

mobile manufacturers use the Android platform, but iOS is only used on Apple devices.

Windows also accounts for a mere 0.02% in the OS market share, indicating the dominance of Android and iOS over this scene.

3.4 Google Chrome

Google Chrome is a cross-platform web browser developed by Google and was first released in 2008 for Microsoft Windows and was later ported to Linux, macOS, iOS, and Android As of November 2020, StatCounter estimates that Chrome has a 70% worldwide browser market share (after peaking at 72.38% in November 2018) on personal computers. On the HTML5 web standards test, Chrome 41 scores 518 out of 555 points, placing it ahead of the five most popular desktop browsers. Chrome 41 on Android scores 510 out of 555 pointsChrome periodically retrieves updates of two blacklists (one for phishing and one for malware) and warns users when they attempt to visit a site flagged as potentially harmful. Chrome sends details about its users and their activities to Google through both optional and non-optional user tracking mechanisms. Other Alternative web browsers are Microsoft Edge, Safari, Opera. However, Chrome is the leader here too by a huge margin with 66% market share followed by Safari and Firefox with 10.5% and 8.5% each.

3.5 Gmail

Gmail is a free email service provided by Google. It started its limited beta release on April 1, 2004, and ended its testing phase by July 7, 2009. By October 2019, Gmail had 1.5 billion active users worldwide.

At launch, Gmail had an initial storage capacity of one gigabyte per user, which was much higher than what was provided by other providers at the same time. Today, the service comes

with 15 gigabytes of storage. Users can receive emails up to 50 megabytes in size, including attachments, while they can send emails up to 25 megabytes. In order to send larger files, users can insert files from Google Drive into the message.

3.6 Google Meet

Google Meet is a secure video-conferencing platform developed and offered by Google as a part of its various services. It was preceded by Hangouts, a chat-cum-video conferencing component. Initially an invite-only iOS app launched quietly in 2017, Google formally launched Meet as an enterprise-friendly version of Hangouts, supporting up to 30 participants.

The product witnessed gradual growth up until the coronavirus (COVID-19) pandemic broke out in all parts of the globe in March 2020, when its growth exploded. This was primarily driven by the fact that physical office spaces and meetings were shut down due to the pandemic, and everything was shifted online. The use of Meet grew thirty-fold during this period, with close to 100 million users accessing it on a daily basis. It soon became one of the most widely used video-conferencing services, with Zoom and Microsoft Teams being its competitors. As a result, seeing this extraordinary response, Google decided to suspend the sixty-minute time limit on video calls for unpaid users, making it a quality, free, and seamless to use product – a hallmark of the Google tradition – for users across the globe.

3.7 Google Drive

Google Drive is a file storage and synchronization service developed by Google. It was released in April 2012, and allows users to store files on Google servers (cloud storage) and then synchronize files across devices and share files. It is a powerful tool for enterprise as well as regular users, especially when cloud storage as a concept has begun to take centre stage over

local storage, largely owing to its security, ease of access across multiple devices, and memory efficiency. Google Drive offers 15 GB of free storage through Google One and also offers larger storage (100 GB, 200 GB, 2 TB, 10 TB, 20 TB, 30 TB) through paid plans.

Following the launch of the service, Google Drive's privacy policy was heavily criticized by some members of the media. Google has one set of Terms of Service and Privacy Policy agreements that cover all of its services, meaning that the language in the agreements grants the company broad rights to reproduce, use, and create derivate works from content stored on Google Drive. However, this did not affect users much, as they continued to use the service for its ease, security and seamless features. This is evidenced by the fact that in just eight years, Google Drive reached 1 billion users in 2020.

4.DATA PRIVACY

Google changed its privacy policy in a major way on March 1, 2012, which enabled the company to store and share data across a variety of services. Worded very vaguely, the privacy policy of the company is something which is generally ignored by most users due to its verbose nature. Google has been time and again known to tracking users and collecting their personal data in various forms. Cookies are an effective web tool which are used to track a person's browsing on a large number of unrelated website, and Google uses this sophisticated mechanism for tracking user's activity on other websites, and based on this activity, integrates this data with its artificial intelligence algorithm, and uses it run personalized ads. So, for example, if you search for shoes on Amazon, Google will track this activity, and will throw up Amazon ads which will show shoes exclusively. Similar to this, keeping the details a bit murky, Google tracks user data through other platforms like Google Analytics, Google Play Services etc.



Even supposedly "private" features offered, such as the Incognito mode in Google Chrome, do not entirely protect the user's activity from third-party organizations/individuals. Incognito mode theoretically prevents the browser from storing any browsing or download history information and cookies, but individual websites can still track the user's activity, and any activity done while signed into a Google service in Incognito mode will be recorded. This has led some to believe that Google actually offers an inflated view of the privacy protection offered by the Incognito mode.

5.SURVEY RESULTS AND ANALYSIS

Analysis of the data

The data obtained through questionnaires clearly shows the dominance of Google in almost all Internet services. Analysing all the pie charts, we see Google services have a very huge percentage of users.

Percentages for each service

Search engines

Google(93.4)

Bing(2.4)

Yahoo(1.8)

Ecosia(1.2)

DuckDuckGo(1.2)

Cloud services

Google Drive(85.5)

iCloud(7.8)

OneDrive(4.8)

Dropbox(1.8)

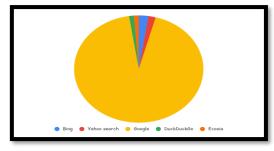


Fig 1: Most frequently used search engine

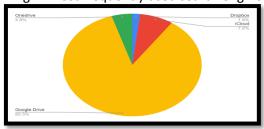


Fig 2: Most frequently used cloud service

Operating System on smartphones

Android(81.9)

iOS(12.7)

Windows(5.4)

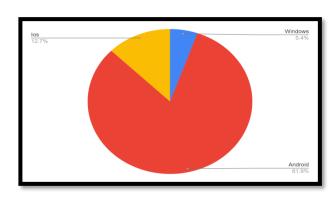


Fig 3: Most frequently used operating system on smartphones

Video Streaming platform

Youtube(92.2)

Twitch(4.2)

Vimeo(2.4)

Dailymotion(1.2)

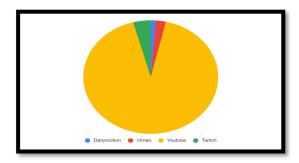


Fig 4: Most frequently used Video streaming platform

Email Service

Gmail(96.4)

Rediffmail(1.2)

Protonmail(1.2),

Hotmail(0.6)

Yahoomail(0.6)

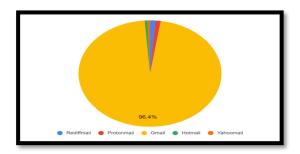


Fig 5: Most frequently used Email service

Web Browser

Google Chrome(59.9)

Microsoft Edge(20.2)

Safari(9.9)

Firefox(9.9)

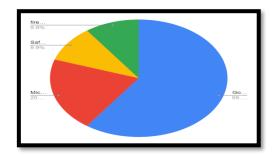


Fig 6: Most frequently used Web Browser

Meet Services

<u>Gmeet(55.9)</u>

Zoom(19.4),

Microsoft Teams(16.6)

Skype(2)

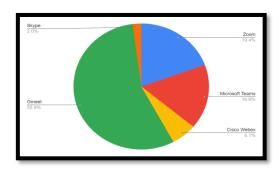


Fig 7: Most frequently used Meet services

Trading personal data for services - About 47.6 % were fine with sharing their personal data for Google services, 30.1 % were not fine, and 22.3 % were not sure.

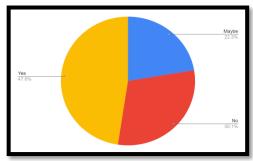


Fig 8: Do you think giving your personal data to Google in return for free-to-use, quality services, is a fair tradeoff?

We also asked users to rate from 1 to 5 their satisfaction with Google services. The ratings along with their respective percentages of people in the surveys were :

- 1 1.79 %
- 2 1.79 %
- 3 13.17 %
- 4 56.88 %
- 5 25.74 %

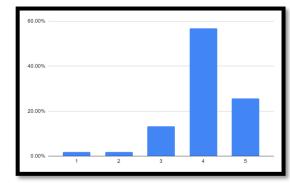


Fig 9: How satisfied are you with the provided Google services? (Rate on a scale of 1-5)

Users also rated from 1 to 5 the necessity of google services in their life. The

results were:

- 1 1.19 %
- 2 3.59 %
- 3 11.97 %
- 4 43.11 %
- 5 40.11 %

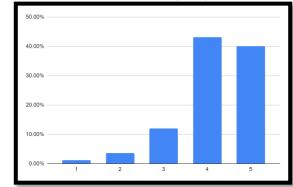


Fig 10: How essential do you think Google services are in your life?(Rate on a scale of 1-5)

6.CONCLUSIONS

Through the analysis of the data collected by the survey, it is pretty clear that despite the fact Google is competing in various different domains and still being able to stay in front of other companies who are working in a single domain. This clearly shows the kind of impact Google has created and how its ruling almost every domain it has stepped in.

The pie charts show the clear dominance of Google in all the services that have been studied. Many competitors have come and gone, but the mindset and strategies of Google has set them apart from all other competitors. Making the correct moves at the right time has been their key to success and made it possible for them to maintain their position in the market for 2 long decades. This success story is worth mentioning because the past 2 decades have seen a lot of start ups and lots and lots of technological advancements, but no company has been capable enough to dethrone Google from the spot they claimed back in the late 1990s and early 2000s.

In one line, we can say that Google has understood the nerve of the market, and thus, it is able to create it's Monopoly over the market. Although there have been privacy concerns in recent times regarding the data being collected by Google for advertising purposes, the users have considered the data usage to be a fair tradeoff to the number of services Google is providing for free and the quality of those services.

On a scale of 1 to 5, users have rated the importance of Google in their life at an average of about 4.2 and rated their satisfaction with the services provided by Google at an average of about 4.1

7.RECOMMENDATIONS

As seen above, there are positives as well as negatives in using Google services. On one hand, the quality of services being offered is exceptional, while on the other, privacy and personal data is being compromised. As they say, "If you don't pay for the product, you are the product". This line fits perfectly in the context of Google services. As most of them are free to use, Google uses the consumer and his/her data to profit off of by using this data to run personalized ads and earn handsome revenue. Now, it is up to the user to gauge whether this trade-off is fair or not. As evidenced from the data collected from the survey, the majority of respondents were comfortable in providing their personal data, but some were hesitant.

We urge the reader to make an informed choice about the various caveats associated in using Google services. As Google has a monopoly on almost all services, alternatives can be difficult to find. However, with a bit of digging deep and recognising whether this trade-off is fair or not, a decision can be arrived at. Even though Google is the undisputed king of Internet services, it would not be wrong to say that with data concerns creeping in, alternatives to these services such as DuckDuckGo to Google Search and Brave Browser to Google Chrome, the paradigm is shifting, slowly but surely.

APPENDIX

Survey on 'Usage of Essential Internet Services'

Kindly fill out this short survey giving your opinion on various internet services available. This survey is being conducted by a group of 1st year BITS Pilani students for collecting data to make a report.

No personal information is required, you may provide the name of your institution if you are comfortable.

For any feedback regarding the survey you may contact us at f20200139@pilani.bits-pilani.ac.in

* Required

Which institution do you belong to?(If not applicable write NA) *
Your answer
Which search engine do you use most frequently? *
Google
Bing
Yahoo Search
○ DuckDuckGo
Other:

Which video streaming platform do you use the most? *
Twitch
Vimeo
O Dailymotion
O Youtube
Other:
Which web browser(s) do you use? *
Safari Safari
Firefox
· Google Chrome
Microsoft Edge
Opera Opera
Which email service do you use on a frequent basis? *
○ Hotmail
Yahoomail
○ Gmail
Protonmail
Rediffmail

Which of these platform(s) do you use the most for video conferencing/online classes? *					
Zoom					
Microsoft Teams					
☐ GMeet					
Cisco Webex					
Skype					
Which of the following cloud storage services do you use regularly? *					
iCloud					
Onedrive					
Google Drive					
O Dropbox					
О Вторьох					
Which operating system does your smartphone use? *					
Android					
Olos					
Windows					
How essential do you think Google services are in your life? *					
1 2 3 4 5					
Not at all essential C Can't live without them					
cooling C C C C C C C C C C C C C C C C C C C					

How essential do you think Google services are in your life? *								
		1	2	3	4	5		
Not at all esser	ntial	0	0	0	0	0	Can't live without them	
How satisfied are you with the provided Google services?(Rate on a scale of 1-5) *								
	1	2		3		4	5	
(С	С)	0		0	\circ	
Do you think giving your personal data to Google in return for free-to-use, quality services, is a fair tradeoff? * Yes No Maybe								
Submit								

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