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# The Analysis of Google's Monopoly in The Search Engine Industry

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**ABSTRACT**

The main purpose of this paper is to discuss whether Google has a monopoly in the search engine industry and whether it will maintain a monopoly in the future. Firstly, using the five-force model to analyse the industry where Google is located explain Google's position in the industry. Then through the analysis of Google's important accounting subjects such as revenue recognition, goodwill and operating lease assets and financial rate shows Google's own financial ability. Finally, we analyse the risks faced by Google, put forward the corresponding solutions, and forecast Google's future revenue. This paper holds that Google now occupies a monopoly position in the search engine industry and can continue to maintain it in the future. This paper also creatively puts forward the relationship between Google and the Chinese market and analyzes its potential risks. This paper has implications on the research of Google's position and future development trend in the search engine industry.

***Keywords:*** *Google, monopoly, search, differentiation, forecast, risk*

## 1.INTRODUCTION

Search engine is a retrieval technology that uses specific strategies to retrieve and formulate information from the Internet and feed back to users according to user needs and certain algorithms, so it is closely related to people's life. As an enterprise occupying more than 80% of the global search engine market, Google has maintained a huge competitive advantage and monopoly position in this industry. But now, the risks facing Google mainly come from three aspects. The first point is that the trade protection policy makes Google withdraw from the Chinese market. The second point is that competitors plan to cooperate to change Google's monopoly. The third point is that other areas invested by Google are affected by the epidemic. We chose Google because we want to judge whether it will continue to maintain its monopoly position in the search engine industry through analysis. On the other hand, the development of Google will reveal the development trend of the Internet, which is of great significance.

This paper deeply analyses Google's past business and financial strategies firstly, including Google's accounting data and ratio's data and lists the existing and possible risks Google facing. Then we combine with the prediction of Google's future development to finally prove that Google will continue to maintain a monopoly in the search engine industry.

In the session 2, we briefly summarize the methods used in the article. Then the session 3 describes and analyzes Google's accounting data, strategy, the risks Google facing and its forecasts. Session 4 shows the summary of the paper.

## 2.METHODS

In this study, we will use the SWOT, Porter's five forces model, value chain analysis, Google's financial report, calculation method of financial indicators, etc. to analyze how Google's past operating strategies and financial models can enable Google to monopolize the search engine industry, and predict its future development trends, risks and challenges, and countermeasures, so as to conclude that Google can maintain a monopoly in the future.

# 3.RESULTS & DISCUSSION

## *3.1. Strategic Aanalyses*

Google belongs to the search engine industry and occupies a large market share in the industry. We decided to use five forces analysis to analyses the Google's development in the search engine industry, which make us know more about the background of Google's development.

First, there is threat of new entrants, which may have little impact on the development of Google. Because building a large search engine requires a lot of money to buy machinery and hire technicians. Most of the small companies in the market don't have enough money to get into the search engine industry. Although some big companies have engine services such as Bing and Yahoo, the combined market share of these two will be less than 5% by 2020. Therefor these two companies pose little threat to Google.

As for the bargaining power of suppliers, which is minor. The communication industry, private network communication industry and Beidou navigation industry have a large choice of upstream suppliers for Google. What’s more, the supplier of Google is a web server and this server is produced by Google itself.so the bargaining power of suppliers will be limited by the horizontal competition.

Then, for the bargaining power of customers, there are many search engines in the industry and many new firm appear, which users can choose according to their own preferences. Those enhance the bargaining power of buyers.

On the other hand, the existing industry has high requirements for technology, which makes it difficult for buyers to achieve backward integration, and also limits the bargaining power of buyers. Therefore, on the whole, the bargaining power of buyers in the industry is moderate, and the threat of buyers to the industry is small.

After then is the threat of substitutes who should come from outside the industry. The corresponding substitutes are the official website of other firm and some consulting companies, but they all have their own shortcomings, which the things that can be searched from they are very limited. [1]

Finally, for the industry rival, competition in the search engine industry is strong. Google has many competitors such as Yahoo, Microsoft and Baidu. Bing and Yahoo have a unique search technology. Bing relies on Microsoft's windows system for disseminating. Baidu has a strong Chinese search function, with a 66 % share of China's search engine market by 2020.

Google's most famous strategy is market strategy especially the advertising strategy, in which companies pay Google for the opportunity to appear on Google pages. Meanwhile, Google's services strategy offers a wide range of mobile services, including dozens of software such as Google Search, Google Docs, and Google Translate. In addition, Google is a research-oriented company that employs people to a very high standard, while it is not strict with the management of employees, who can complete the task at anytime and anywhere and be encouraged to have innovative ideas.

In conclusion, Google has the most information, a wide coverage and its algorithm is strict. So, it can use this advantage to form differentiated competition to provide customers with valuable and unique attributes. However, due to the search engine service is a high value-added product, and the employment concept of Google determine that it is not suitable to adopt the cost leadership strategy to participate in the competition.

## *3.2. Accounting Analyses*

### *3.2.1. Analysis Annual Report of Google*

Firstly, we want to introduce the revenue recognition of Google. Google makes money from advertising, cloud services and others. Advertising revenue is recognized when a user engages with the advertisement, such as a click, a view, or a purchase. For brand advertising, they recognize revenues when the advertisement is displayed or a user views the advertisement. Google Cloud revenues consist primarily of fees received for Google Cloud Platform services and Google Work-space collaboration tools and other enterprise services. Cloud services are generally provided on either a consumption or subscription basis. [2] Revenues related to cloud services provided on a consumption basis are recognized when the customer utilizes the services, based on the quantity of services consumed. Google other revenues and Other Bets revenues consist primarily of revenues from Google Play, hardware, and other products and services. They report revenues from these transactions on a net basis because performance obligation is to facilitate a transaction between app developers and end users, for which they earn a commission.

Moreover, the goodwill is also important to Google. Google acquired one company in 2019 and two in 2020. This led to an increase in Google's goodwill in 2020. They test goodwill for impairment at least annually, or more frequently if events or changes in circumstances indicate that the asset may be impaired, and there are some change of accounting of Google in 2019 due to the impact of the epidemic. As a result, certain of Google's estimates and assumptions, including the allowance for credit losses for accounts receivable, the credit worthiness of customers entering into revenue arrangements, the valuation of non-marketable equity securities. Next Operating lease assets and liabilities are included on Google's Consolidated Balance Sheet beginning January 1, 2019.

What's more according to the balance sheet, the proportion of operating lease assets is about 3.82%, and operating lease assets is a new development mode of modern enterprises. It can make the enterprise in a 'light assets' mode, and doesn ’ t need the enterprise to calculate depreciation, so that the enterprise has no depreciation cost. Investors are happy to see this model. We think the company can make more efforts in this aspect.

Adopting the analysis of Google's annual report, we find a trend in weaker performance of Google. As a matter of fact, disassembling the various sub-businesses of the Google business, the traditional search advertising revenue contributed 57% of the revenue, the proportion has declined significantly, and the growth has slowed down. Mainly affected by the epidemic, the overall advertising market shrank last year. What ’ s more the European Union Privacy Protection Act introduced in 2019 imposes many restrictions on application software. Strengthening the supervision of privacy and data security is also restricting Google's profitability to a certain extent.

#### *3.2.2. Finance Rate Analysis*

From 2018 to 2020, the proportion of current assets of Google decreases and the proportion of Property and equipment is relatively stable, and at the same time, the proportion of accounts receivable is increasing year by year, which shows that the return of sales inventory is not timely, leading to the instability of cash flow. But on the whole, the proportion of current assets is still high, and the cash flow is stable.

Through accounting the ratio analysis, we come to the conclusion that in 2018, Google's current ratio is too high, which may lead to low asset utilization rate of enterprises, which is not conducive to the long-term development of enterprises. [3] In the past two years of development, the enterprise gradually reduces the current ratio, which is conducive to the subsequent sustainable development of the enterprise. However, we should pay attention to the speed of reduction, which may reduce the ability of the enterprise to repay its debts.

Turnover rate is also one of the important indicators to measure the health of enterprise economy. The most common turnover rates are Accounts receivable turnover rate and Inventory turnover rate. Although the accounts receivable turnover rate of Google dropped from 7.02 in 2019 to 6.32 in 2020, it is still relatively high in the industry, with a short average collection period, fast collection of accounts receivable, and faster capital turnover. And the inventory turnover rate increased from 69.28% in 2019 to 98.13% in 2020 and the inventory turnover days in 2020 is 56.3 days, which means it takes 50 days to do a round of business. This is at the leading level in the search engine industry.

For this trend, we try to give some advice. To the begin with, Google is not an enterprise whose main business is to sell physical inventory, so the expression of cost of goods sold in the financial statements is not very clear. The inventory in Google's operation is not significant, but the inventory turnover rate in Google's operation is too high, which may lead to the shortage of supply, and may have a bad impact on the company's reputation. The increase in the turnover rate of accounts receivable may be caused by the decrease in bad debts of enterprises, which indicates that enterprises have done a good job in credit evaluation when selecting customers. Of course, this is also related to Google's monopoly position in the industry.

### *3.3. Risks Google Will Face*

#### *3.3.1. Risks of Trade Protectionism*

Google's most important risk is trade protectionism. Google accounts for more than 80% of the global search engine industry. However, Google has not entered the Chinese market since 2010. Research shows that Google's search concept is to provide more content search services, which is not in line with China's cultural ideology [4]. By June 2021, China's Internet users have reached 1 billion. Meanwhile, according to a questionnaire survey, more than 60% of Chinese people expect Google to return to the Chinese market [5]. Therefore, this is a huge number of users for the search engine industry. Google's decision-makers intend to enter the Chinese market in the future, and trade protectionism needs Google to solve. If Google enters the Chinese market according to the original search concept, it will still withdraw from the Chinese market in a short time.

Circumvention method: first, Google should negotiate with China to obtain entry qualification. Second, Google needs to understand China's regulations on the search engine industry. Try to avoid violating relevant systems after entering the market. Third, Google adjusted its search concept according to regulatory requirements, such as reducing the search permission of some words. Fourth, Google should sign cooperation agreements with some Chinese companies in advance, including mobile phones, databases and other Internet fields, so as to occupy more markets as soon as possible under the competitive pressure of local search enterprises such as Baidu and Sogou [6].

### *3.3.2. Risks from Competitors*

Google will face the risk of competition in the same industry. Google's competitors in markets other than China are Yahoo and Microsoft. Yahoo and Microsoft account for only a small part of the market. But Yahoo and Microsoft plan to cooperate in the future to compete with Google. If Google enters the Chinese market, it needs to compete with Baidu, which accounts for more than 60% of China's search industry.

Circumvention method: First, Google can focus on differentiation strategy. The core of differentiation strategy is to provide customers with valuable and unique attributes. This strategy is to give full play to its internal advantages and produce products that are more different from competitors. When Google's services are special, such as providing a variety of search styles, new users are more likely to use Google search. Second, Google should find partners to avoid allowing most enterprises to cooperate to resist Google's monopoly. Third, when entering the Chinese market in the future, Google needs to abide by the policy and provide better search services as much as possible, such as more accurate search results. Fourth, Google needs to focus on obtaining more patents to prevent competitors from filing lawsuits [7].

### *3.3.3. Risks from Epidemic*

Google will face the impact of the epidemic. The first point is the decline in the growth rate of advertising revenue. Most of Google's revenue comes from advertising. Some companies delayed their promotion plans because of the suspension of offline economic activities. The second point is that other industries invested by Google were forced to suspend. The real estate and data centers invested by Google have been affected by the epidemic, reducing the construction speed, which will increase Google's cost.

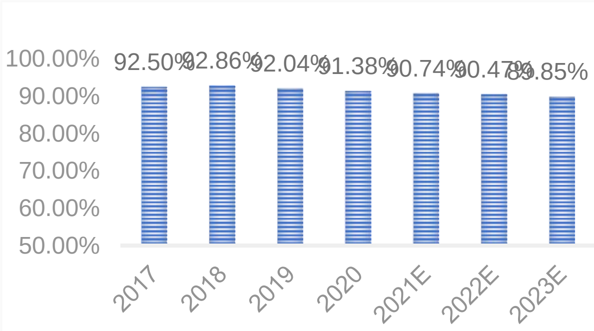
Circumvention method: Google should reduce investment in other industries during the unstable epidemic and maintain the original operation mode as much as possible. After the epidemic situation stabilizes, Google can seize the opportunity of the rebound period, increase advertising cooperation with other companies and invest in the construction of new data centers.

## *3.4. Forecast*

The above focuses on the analysis of Google's past business strategies, accounting strategies and the risks it faces or will face. The following paper will predict Google from two aspects, including market share and revenue.

### *3.4.1. Market Share*

**Table 1.** Google's Market Share



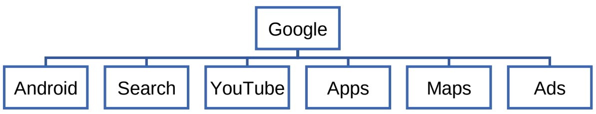

After experiencing a slight fluctuation, Google's market share in the search engine industry has declined with approximately 0.6% from 2018 to 2020. Taking into account the expansion of Bing and Yahoo's market share and the antitrust investigations Google facing, we predict that Google's market share will decline at a rate of 0.7% in the future. However, even though Google's market share growth has slowed down in recent years and has a downward trend, it is still the most widely used search engine in the global market, which means that its position is unshakable [8].

### *3.4.2. Revenue*

#### *3.4.2.1. Business Income*

In this part, we will subdivide Google's business and analyze the revenue of each sub-business, the advantages and disadvantages, so that we can predict the revenue trend of each sub-business, and finally achieve the purpose of predicting Google's revenue. Google's business includes the following six aspects:

**Table 2:** Google's Main Business




Firstly, advertising accounts for about 80% of the total revenue. Google's advertising is divided into search, display, video, shopping and application. As an important source of revenue for Google, advertising continued to grow from 2017 to 2019, although the growth rate slowed down. In 2020, due to the impact of the epidemic, the growth rate of Google Advertising decreased. However, in the second quarter of 2021, the advertising market recovered, and Google achieved revenue of $50.4 billion, with a year-on-year growth of

69%. Although it is partly due to the low base in the same period last year. However, if the impact is not considered in the analysis, the performance in this quarter is excellent. In addition, YouTube advertising has the largest growth momentum, with a year-on-year increase of 84%.

Second, Google Cloud accounts for about 6% of total revenue. Google cloud's revenue mainly comes from the fees for Google cloud platform services and Google works-pace collaboration tools. Google cloud revenue growth rate is increasing from 2017 to 2019. This shows that Google is focusing on cloud computing business and increasing its investment in cloud services. In 2020, Google's cloud services were affected by the epidemic and the growth slowed down. In the second quarter of 2021, Google's cloud revenue increased by 54% year-on-year to $4.6 billion.

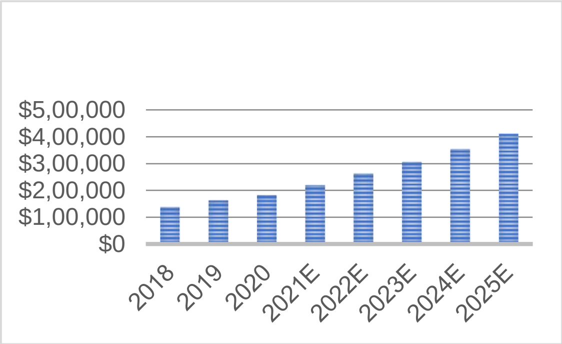
And other income accounted for about 11% of total income. And other revenue mainly comes from internet services and research services. Google's other revenue is rising from 2017 to 2019, but the growth rate slows down.

#### *3.4.2.2. Other Factors*

There are some factors that will affect income in the future. The first is Market environment. Affected by public health events, some types of mobile applications have experienced explosive growth in the short term, but in the long run, this growth will appear in a more gradual curve. The second is Policy supervision. Changes in social, political, economic, tax, and regulatory conditions or in laws and policies governing a wide range of topics and related legal matters have resulted in fines and caused us to change their business practices. The third is instability. Non-advertising revenues have grown over time. Google expect this trend to continue as they focus on expanding their offerings to their users through products and services like Google Cloud, Google Play, hardware products, and YouTube subscriptions. The margins on these revenues vary significantly and may be lower than the margins on their advertising revenues. Many of Google investment plans are in the initial development stage, so the sources of these businesses may change over time and the revenue may fluctuate [9].

#### *3.4.2.3. Revenue Forecast*

**Table 3:** Google Revenue Forecast（Million Dollars）




According to Google’s financial report, from 2018 to 2020, Google’s revenue has shown a growing trend. The growth of revenue in 2019 was 18%, and in 2020 was 12%, which was experiencing a decrease of 6% compared to 2019.

Meanwhile, by analysing Google’s revenue of each business and the political and economic environment they are facing, we predict that advertising and other revenue will grow and maintain a stable growth rate and Google cloud revenue will grow at a greater growth rate. We also predict that after the sharp slowdown in 2020, Google's revenue will show an anti-elastic growth trend in 2021 and 2022. However, from 2023 to 2025, Google's revenue will slow down due to some factors, including market, policy and instability. So we assume that Google's revenue will increase at a growth rate of 20% between 2021 and 2022, and from 2023 to 2025, Google's revenue will increase at a growth rate of 16%，eventually reaching 410,264 Million Dollars [10].

## 4. CONCLUSION

Through the analysis of Google's industry through the five forces model, we can see that Google occupies a monopoly position in the search engine industry. Then through the analysis of Google's important accounting and proportion data, this paper analyzes the company's own advantages. And make corresponding predictions for Google's future development, including risk prediction and revenue prediction. According to the risk, this paper puts forward suggestions and speculation on the future development of Google. It is worth mentioning that the article makes a corresponding analysis of the development risks of Google under COVID-19 and analyzes the development risks of Google in the Chinese market and puts forward the corresponding solutions.

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