

Critical Analysis of Huawei and Apple in the view of Expert Opinion, Financial Performance and Customers' perspective

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Abstract

Huawei and Apple are in the top tier of the smartphone industry around the globe top competitors for each other. Huawei, being a privately owned company, is a leading global provider of information and communication technologies i.e., smartphones and 5G equipment by having a 14.4% smartphone market share worldwide. On the other hand, Apple, being a public company, currently holds 11.1% of the smartphone industry market share. In this study, Huawei and Apple are compared in three ways, Expert Opinion, Financial position, and Market survey. Rankings of three reputed consultancy firms, i.e., *Interbrand*, *BrandZ*, and *Brand Finance* were included in this study. These three consultancy firms ranked Apple higher than Huawei in the 2020 rankings. In financial terms, Apple is going to be a \$3 trillion company soon and Huawei is still chasing a \$1 trillion milestone. Comparing Huawei and Apple especially iPhone in the survey conducted in 11 countries, respondents found the iPhone appealing, a high-quality product, and pleasant, but rated it as overpriced. Regarding Huawei, the respondents rated it higher than the iPhone only in terms of value for money. Regarding purchase decisions and overall satisfaction level, the iPhone again surpassed Huawei.

Keywords: expert opinion, brand awareness, financial performance

1. Introduction

Since the inception of digital technology, a war of competition has started in smartphones. All the smartphone brands are fighting with each other based on new and unique features to attract potential customers and retain their existing customers. In this paper, I will compare two smartphones that are in the top tier of the smartphone industry. Huawei and iPhone are the smartphones that are going to be compared in terms of External and internal analysis, brand equity, sales, and services. Parent companies of these smartphones are Huawei Technologies Co., Ltd and Apple Inc., respectively. Huawei Technologies Co., Ltd is a Chinese-based company whose head office is in Shenzhen, Guangdong, China. Huawei Technologies Co., Ltd was founded by Ren Zhengfei in 1987 during the evolution of telecommunication infrastructure in China. Currently, this company is a leading global provider of information and communication technologies i.e., 5G equipment (David, 2021). Huawei Technologies Co., Ltd started manufacturing phones in 2010 but the first smartphone was manufactured in 2012 and named "Huawei Ascend Series". This smartphone had an android 2.1 operating system. Since the inception of the first Huawei smartphone, Huawei has launched 299 smartphones model as of July 2021. The Series of its smartphones includes Ascend series, Mate Series, P series, W series, Y series, Nova series, GX series, GR series, T series, Honor series, and Enjoy series. On the other hand, Apple is a US-based company whose head office is in Apple Park Way Cupertino, California, USA. Apple started manufacturing iPhones in 2007 when it first launched iPhone 1st generation. It had developed its operating system and kept updating it over time. iPhone has selected only the top elite and rich population around the globe and kept its product short. So far Apple has launched 29 models of iPhone and its models range from iPhone and iPhone 3 to iPhone 12 pro max.

Currently, Huawei has 197,000 employees out of which 54.3% of employees work in research and development departments. In the section of assets, Huawei has a financial position of 876 billion yuan as of 2020. Additionally, Huawei is capturing a 14.4% share of the smartphone industry and is currently in second place after Samsung in the smartphone industry worldwide. On the other hand, around 147,000 employees work under the roof of Apple. Apple has an 11.1% smartphone industry market share with a financial position of 323.89 billion USD worth of assets as of 2020.

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In the smartphone industry, Huawei and iPhone are intensely rival to get the throne of market leader but at the same time, other brands are intensively competitive with each other to get enough sales. These competitors are Samsung, Oppo, Xiaomi, Lenovo, and LG. The operating systems that are being used in smartphones are Android, iOS, HMS (Huawei Management System), and Windows(Switch, 2021).

1.1 Product Mix of Huawei

Huawei brand is famous for its low-cost high-quality telecommunication products. The products mix of Huawei has a Telecommunication network and solution, Fixed, and mobile soft switches, internet protocol Multimedia subsystems, telecommunication equipment for building and operating networks, wireless and USB modems, Wireless routers, wireless gateways, embedded modules, smartphones, smartwatches, and tablets.

1.2 Product Mix of Apple

The product mix of Apple consists of hardware, software, accessories, and operating systems. In the hardware, Apple offers Apple TV, Apple watches, iMac, iPhone, MacBook, and Air Tag. The software of the iPhone includes Appstore, Apple Card, Apple Music, Apple News+, iTunes Store, iCloud, FaceTime, iTunes, Safari, Siri, and much other software. Accessories of Apple include AirPods, USB cables, Apple pencil, Apple remote, iPhone adapter, Apple SD card for Camera readers, Magic keyboard, and hundreds of other accessories. The operating system offered by Apple are bridgeOS, HomePod Software, iOS, iPadOS, tvOS, and watchOS.

2. External Analysis of the industry

The communication and smartphone industry is expanding at a speed that has not been seen before. Smartphone evolution boomed in almost no time and now every smartphone company is offering unique features and better services than others. Therefore, almost half of the industry personnel are deployed in the research and development programs. For this reason, the dynamic change of the digital industry is so quick that every day a new gadget comes in and an old gadget expires. The smartphone industry is extremely sensitive and affected by many external and internal factors. In this section, I will discuss the external factors that affect the smartphone industry around the globe. The best framework to assess the external environment is the PESTEL analysis.

2.1 Political Analysis

The 21st century is highly rigorous in terms of regulatory compliance and political barriers. Especially the smartphone industry is highly impacted by it. With the increasing competition, governments are interfering in the smartphone markets to gain much out of it. The Huawei ban is a hot example of it as the US-China trade war has changed the dynamics of the smartphone industry. High tariffs and much harder barriers to entry into new markets have made it China as well as the US harder to operate in a new region for smartphone brands. Operating costs have surged to more than double after the Huawei ban step from the side of the United States. At the same time, iPhone is abandoned in China due to the utmost loyalty of Chinese people. After the Huawei ban, the sales of Huawei have seen a drop and a surge was expected in the sales of iPhone, but the sales were not as per expectations. This will be discussed in the sales analysis section. All smartphone brands are now going through rigorous regulatory compliance after the scandals of data privacy breaches in the recent past. Apart from the smartphone industry, social media companies are also under strict scrutiny after the Cambridge Analytica scandal unearthed where as much as 50 million user data was harvested from Facebook in 2016 and this data was used to manipulate the voting patterns of the users. Ban on TikTok in the United States is another example where TikTok was accused of data mining and hence barred to operate in the United States in place of an executive order. Although the accusation was never proven. Political decisions on technology, especially in the smartphone industry and the social media industry are increasing with the evolution of technology.

2.2 Economic Analysis

The economy is a key factor that directly impacts the smartphone industry because a strong economy leads to higher employment, lower poverty, and higher purchasing power. Higher purchase power leads to higher sales and revenues for smartphones. China, the United States, Canada, India, and the middle east are the biggest markets for smartphone brands. Sales of smartphone brands like Samsung, Huawei, iPhone, LG, and Oppo specifically depend upon the country's population and regional economy. The regions with a better economy and higher purchase power like the United States, China, Canada, and the Middle East are good markets for the smartphone industry because of higher sales and sound revenues. Before 2019, the world's economy was going smoothly in a gradually increasing trend but unfortunately, Covid-19 has hit hard on all, underdeveloped, developing, and developed nations and put all the countries around the globe in economic trouble. Businesses were shut down, the economic activity stopped, and unemployment sharply increased around the globe but in Asia and European markets. Output shrank by around 15% in the first half of 2020, down to levels last seen in 2005. Contact-intensive sectors were hit particularly hard. Overall, real GDP is forecast to decline by almost 8% in 2020 and cause financial distress for many countries(Gary, 2020). Currently, in 2021, most of the countries are back on an economic recovery path and revive their businesses.

However, the pandemic compelled users to stick to smartphones and social media channels like Facebook, Instagram, Tok-Tok, Netflix, and Amazon Prime. For this reason, the sales of the smartphone industry declined less sharply than that of other industries like Automobile, textile, and petroleum.

2.3 Social Analysis

Social factors play a vital role in the smartphone industry. The smartphone industry has customized itself in such a way that users count smartphones as a part of their basic needs. The app provider programs like Google play store, app store, and Huawei Management system have millions of apps for the users to facilitate them. The smartphone industry has covered every part of a customer's life ranging from basic mobile phone functions like calls, and messages to checking outdoors, calculating functions, taking notes, editing documents, email managing, and navigating locations. Because of such services, smartphones have become a lifestyle for users. The users want to remain connected with everyone all the time. They take their smartphone with them everywhere they do. Smartphone brands are flooding more features and customizing their services to give users the experience they want. Although the excessive use of smartphones adversely affects the health of users and causes anxiety and depression. The teens are addicted to the large screen smartphones where they are indulged in highly engaged social media apps like Facebook, Instagram, Tok-Tok, and other apps. Such addictive smartphones with additional addictive social media apps deprive the young generation of other important aspects of life. Smartphone brands, however, are investing heavily in research and development programs to study the habit and life patterns of the users to give them the best user experience. These brands are even hiring analytics companies to develop models based on the users' activities, lifestyles, gaming patterns, and habits to customize their features. Every day they are introducing new features and updates to increase its sales.

2.4 Technological Analysis

Technology is the differentiating factor on which smartphone companies compete. Technological advances are the core competitive advantages for brands. The race for technology improvements has become a core part of the growth of the brands. This is the reason that major brands like Samsung, Huawei, and iPhone invest billions of dollars each year in research and development programs only to get better and faster features and services. Unique and better-performing features provide a better user experience and hence generate good sales. Recently, the invention of 5G technology has also given a vent to the competition between smartphone brands. Recent developments have been seen by the Chinese tech giant Huawei after the US Huawei ban in 2019. Huawei has introduced its operating system called Huawei Mobile Services (HMS). Huawei claims that it has 650 million monthly active users, and this operating system is available in 170+ countries around the globe (Adamy, 2021). iPhone on the other hand is using bionic chips in its smartphone which enhances the speed and performance of its smartphones. In 2020, Apple has invested 18.75 billion USD (Lionel, 2021) for the R&D program and likewise, Huawei invested 20 billion USD for the same purpose (Matt, 2020).

2.5 Environmental Analysis

Businesses and corporations have adverse effects on the environment and this impact is approaching a point of irreversible due to high carbon emissions and hazardous byproducts. These days, every organization is conscious of its impact on the environment and molding itself to have environment-friendly workplaces. Most governments around the world have devised stricter laws to minimize environmental damage and conserve non-reusable resources and for that reason, many operational processes are optimized, and operational costs are reduced. Currently, every organization is put sustainability and corporate social responsibility as its top priority in addition to minimizing hazardous waste. To mitigate the damage, corporations have started different plantation campaigns and CSR activities to create a sense of urgency and do impactful steps to stop environmental damage. Apple, for example, converted all the facilities around the globe to carbon emission-free energy resources in 2018. Apple is now insisting its suppliers use eco-friendly raw materials and environment-friendly techniques. The market leader, Samsung is also giving high weightage to CSR activities to have a good environmental impact. Huawei is also working to convert its assembly and other facilities to reusable and green energy resources along with CSR activities. Recently Huawei and SPL TELE have come together to create synergy for emission-free mobility (Huawei, 2021).

2.6 Legal Analysis

The legal environment is hot in the smartphone market in the 21st century. The competition among the brands is increasing with the advancement of technology and it is giving a strong vent to many other complexities and concerns. Governments must develop new rules to monitor the digital industry and they are now vigilant about the practices and operations of the brands and have devised many laws to avoid problems. Labor laws, product quality laws, data security laws, data privacy laws, patent and copyrights laws, and environmental laws are formed to control and regulate not only the smartphone industry but also the industries which are directly or indirectly

linked to it. Compliance with local as well as international laws is now vital to operating successfully on a global scale. Each year, millions of new patents and copyrights are issued for new and innovative products, designs, and features.

There are many examples to depict the strength of the legal environment for such an industry. For example, Apple had to pay 15 billion USD in a tax-related case in the EU (Abhijeet, 2019). Moreover, android has banned many applications for data security and privacy breaches.

3. Internal Analysis of the Brands

Although the iPhone and Huawei belong to the same industry and are tough competitors of each other. The internal structure and operations of these brands differ from each other. In the below section, we will discuss the competitive advantages of both brands and compare the VRIO and Value Chain analysis framework of both brands.

3.1 *Competitive Advantage*

3.1.1 *Huawei*

Huawei is famous for its high-quality, low-price telecommunication equipment. The prices of Huawei equipment are low compared to international competitors. This is one of its core competitive advantages for Huawei. In current market dynamics, Huawei offers as little as 30% prices for 5G network equipment as compared to its competitive vendors like Ericsson, Samsung, and Nokia (Melanie & Jordan, 2020). Huawei is utilizing the full potential of its competitive advantage despite international hurdles. This is the reason that China's tech giant, Huawei has 70% of the 5G base stations globally (Amy, 2021).

3.1.2 *iPhone*

iPhone has many competitive advantages like product differentiation, innovative products, and features. iPhone has an advanced virtual assistant called "Siri" which is a prototype of advanced artificial intelligence. Although other virtual assistants are available in the markets like Google and android have "Ok Google" and Microsoft has Cortana, these virtual assistants are less advanced as compared to the virtual assistant of Apple. A study has been conducted where virtual assistants of Google and Apple were examined on various factors and Siri remained on the top (Robert, 2015). Apart from that, iOS is another innovative product of Apple which differentiates Apple from other available products in the markets.

3.2 *Value Chain Analysis of iPhone*

The Value Chain framework is used to identify the business activities which create value in the business and core competitive advantages of the business. Value Chain analysis is divided into two categories i.e., Primary activities and support activities. Primary activities include inbound logistics, operations, outbound logistics, marketing and sales, and services. Whereas support activities include Firm infrastructure, Human resources, Technology development, and procurement.

3.2.1 *Primary Activities*

3.2.1.1 *Inbound Logistics*

Apple has hundreds of suppliers for raw materials all over the world who have sophisticated supply chain management systems. Although the CEO of Apple, Tim Cook has reduced the number of suppliers in recent years, however, Apple still possesses high bargaining power when it comes to negotiating with its suppliers.

3.2.1.2 *Operations*

Although Apple does not follow the JIT (Just in Time) strategy for its supply chain. Its supply chain model is a benchmark for the who industry in terms of efficiency. The purchase period of Apple from its suppliers is around 150 days. It relies totally on the outsourced materials from other companies in different countries. The raw material of Apple is collected from The United States, Europe, China, and other Asian countries. Apple also prefers to outsource the manufacturing of its hardware from developing countries, especially China. Inbound logistics is the main source of value for Apple due to its vast operations, economies of scale, and high bargaining power.

3.2.1.3 *Outbound logistics*

After assembling the iPhones in China, these are transferred to warehouses. For the online stores, iPhones are shipped through UPS or FedEx to the optimized warehouses of online stores and for the retail stores and direct sale force, the smartphones are shipped to a warehouse facility in Elk Grove, California, US. From the ELK Grove, the smartphones are dispatched to the wholesalers and network carriers around the globe.

Apple tries to keep minimum inventory in warehouses because of the short product life cycle. This is the reason that the CEO of Amazon, Tim Cook compared the Apple products to the Dairy ones. Additionally, online stores are preferred by Apple because of their cost-effectiveness and value generation. Due to the focus of Apple on e-commerce, the Apple is 3rd biggest e-commerce seller in the United States after Amazon.com and Walmart.

3.2.1.4 *Sales and Marketing*

The sales and marketing channels of Apple can be divided into the following two categories.

Direct

- Apple Retail Stores
- Apple Online Store
- Direct Sales Force

Indirect

- Third-party cellular network carriers
- Wholesalers
- Retailers
- Value Added resellers

Apple is trying to focus on direct sales and avoiding indirect sales to maintain its monopoly and avoid complexities. In 2020, Apple has gained 34% of its sales from direct sales and the remaining was achieved by indirect sales. Apple itself advertises the brand and products indoors and outdoor as well and in addition to that, Indirect sellers are also responsible for the marketing of the brand.

3.2.1.5 Services

The services of Apple can be categorized into three stages i.e., Pre-purchase, during purchase, post-purchase. Apple gives impressive pre, during, and post-services to its customers. Apple has experience centers around the globe where anyone can go and use the products of apple to facilitate decision-making about the purchase. Experience centers have trained and sophisticated staff to attend to the potential customers and demonstrate to them the features of the iPhone. Apple also facilitates its customers to get a new model after returning the old model with additional payment. Post-purchase services of Apple are also good where any customer can go to the Apple stores when anything goes wrong, or he/she is facing any problem.

3.3 Value Chain Analysis of Huawei

Huawei has a value chain different from Apple in terms of raw material sourcing and supply chain. As compared to Apple, Huawei rely on foreign suppliers as minimum as possible. Most of the raw material is outsourced by national companies and processing is done by Huawei itself.

3.3.1 Primary Activities***3.3.1.1 Inbound logistics***

Huawei has storage places that are owned and operated by Huawei in China which are used as warehouses to store inventory. For the global presence, it has taken warehouses on rent and contracted the agents and warehouse managers for maintenance. To move raw materials, work in process, and final products from one place to another, Huawei has its vehicle all over China. Huawei says that it has two suppliers for each of its components. In the US, the suppliers of Huawei are Qualcomm, Microsoft, and Intel. From Japan, Sony and Fujitsu are the suppliers. China's mainland suppliers are mostly from Taiwan which include TSMC, Hon Hai, and Media Tek. Other than the Taiwanese suppliers, BOE, Shenzhen Tianma, and Lixun Precision are the mainland suppliers of Huawei (John H, 2019).

3.3.1.2 Operations

Being a company of Chinese origin and having its headquarter in China, the bulk of the operations are done in China. Like Apple, Huawei is also investing heavily in research and development and the R&D capabilities are evolved in many other countries like Pakistan, Russia, Ireland, and Canada. Huawei manufactures and assembles most of its products in China and retails it to different destinations around the world.

3.3.1.3 Outbound Logistics

After manufacturing and assembling the products in China, Huawei exports the products to different international destinations where it has contracted highly trained agents which already developed supply chain models. Huawei products are distributed to 140 countries around the globe and unlike Apple, Huawei does not deal directly with the customers but has its agents, distributors, and wholesalers. The only medium where customers and Huawei interact is the website of Huawei where customers can directly purchase the products. Moreover, Huawei has developed ventures with local governments in different countries to create channels of distribution with the help of local authorities (MBA Skool, 2021).

3.3.1.4 Sales and Marketing

Huawei uses traditional ways of marketing its products. Huawei relies on brand equity endorsement techniques like hiring a star for the promotion of its products. For example, Huawei has hired Lionel Messi as its brand ambassador for the promotion of its products. Other celebrities like Henry Cavill and Scarlett Johansson are also engaged in the promotional activities of Huawei in print media(MBA Skool, 2021). After the announcement of the Huawei ban from the US, sales of Huawei products have dropped, and google denying giving the android operating system to Huawei has worked as a catalyst in the sales drop in the West. But Huawei regained the trust of its users after announcing the development of Huawei Management Services (HMS). Apart from smooth sales, agents in different countries around the globe are also responsible for the promotion of Huawei in their localities. Huawei often offers coupons and discount cards as a part of its sales and promotional schemes.

3.3.1.5 Services

Huawei also provides pre-and post-purchase services to its customers but does not have the experience centers like Apple.

For the pre-purchase services, Huawei has an active website where it publishes posts related to the updated types of equipment, products, and features for its customers. Huawei offers online shops from where customers can purchase products online. The purchase experience of the customers is dependent upon the agents selling the Huawei products. For this reason, Huawei has hired trained and skillful agents who ensure smooth sales and good customer purchase experience. Huawei also offers post-sale services in the form of warranties and repairs. Despite having repair stores in specific localities around the globe, Huawei has introduced postal repair services for the convenience of its customers where Huawei service picks up the device and delivers repair service free of cost (Huawei, n.d.).

4. Brand Equity Analysis

In the section on brand equity analysis, the following methods will be used.

4.1 Expert opinion

In expert opinion, we will analyze the brand consultants’ rankings of Huawei and Apple. We will analyze the rankings of Interbrand, BrandZ, and Brand Finance.

4.1.1 Interbrand

Interbrand is a famous brand consultancy firm that was founded in 1974 and has 33 offices in 27 countries. According to Interbrand 2020 global brand ranking, Apple stands on the top and has 1strank by having a brand value of \$322,999m and a growth rate of +38%. However, Huawei lies at the ranking of 80 by having a brand value of \$6,301m and a growth rate of -9% (Interbrand, n.d.).

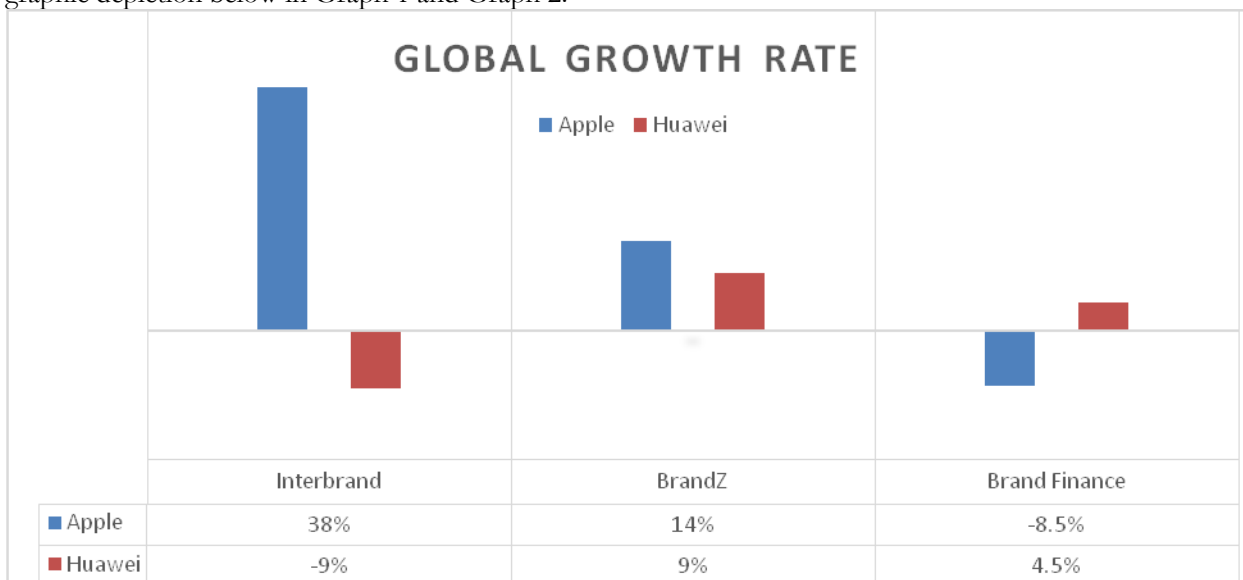
4.1.2 BrandZ

According to BrandZ, Apple is in 2nd ranking with a brand value of \$352,206m and a growth rate of +14%. Huawei is at the position of 45 by having brand equity of \$29,412m and a growth rate of +9% (BrandZ, 2020).

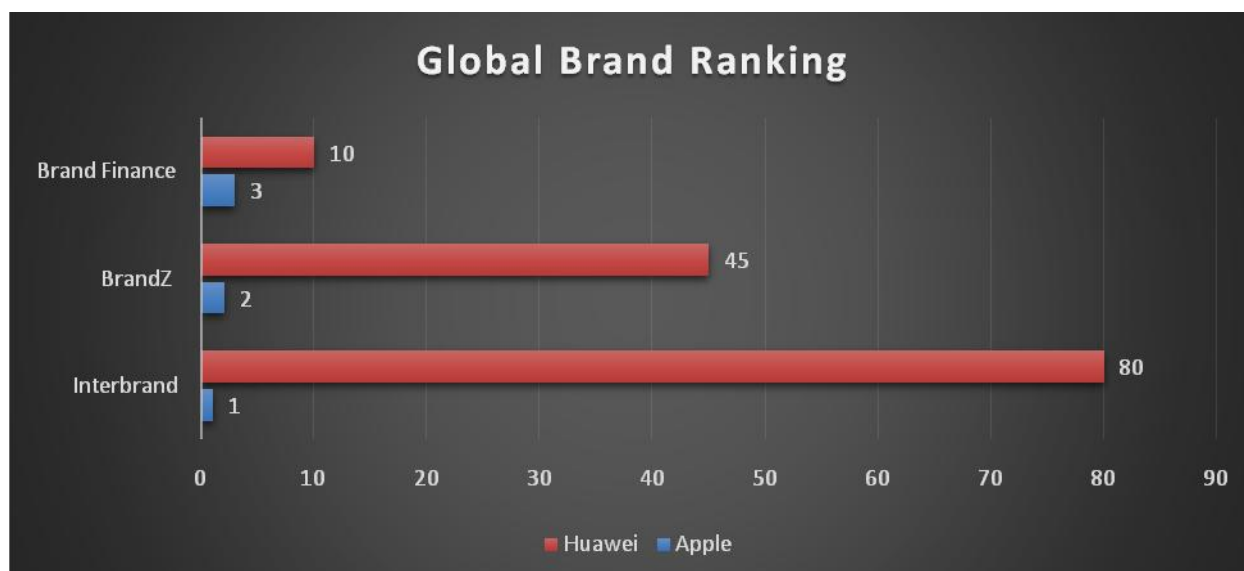
4.1.3 Brand Finance

Brand Finance ranks Apple in 3rd position with a brand value of \$140,524m and a growth rate of -8.5%. Huawei is ranked in 10th position with a brand value of \$65,084m and growth rate of m and a growth rate of 4.5%.

The comparative analysis of Huawei and Apple in the light of these consultancies can better be understood in the graphic depiction below in Graph 1 and Graph 2.



Graph 1 - Global Growth Rate



Graph 2 - Global Brand Rankings for Huawei and Apple

The criteria of these consultancy firms vary from each other, and this rating is usually considered subjective. This is the reason that the growth rate and ranking for these two brands are different in the global ranking of each consultancy firm. Overall, it can be concluded that Apple is in the top tier of brands when it comes to comparison and the Huawei brand has a volatile ranking because in Interbrand it is ranked at 80 but in Brand Finance, it has secured 10th ranking. The same subjectivity can be seen in the growth percentage where Interbrand has shown negative growth for Huawei and growth for Apple and Brand Finance has shown the opposite.

4.2 Financial Comparison

4.2.1 Huawei

According to the audited 2020 financial statements of Huawei, total assets are CNY876,854m which is equivalent to 135.7 billion USD and total liabilities are CNY546,446m, equivalent to 84.6 billion USD. When we deduct the total liabilities from total assets, we get the net assets value which is the book value of Huawei and that is CNY 51.3 billion USD. Additionally, the leverage ratio of Huawei is 0.62. Huawei with a 1.1 trillion yuan (154 billion USD) value ranks 1st in China's top 100 consumer private enterprises (Deng, 2021).

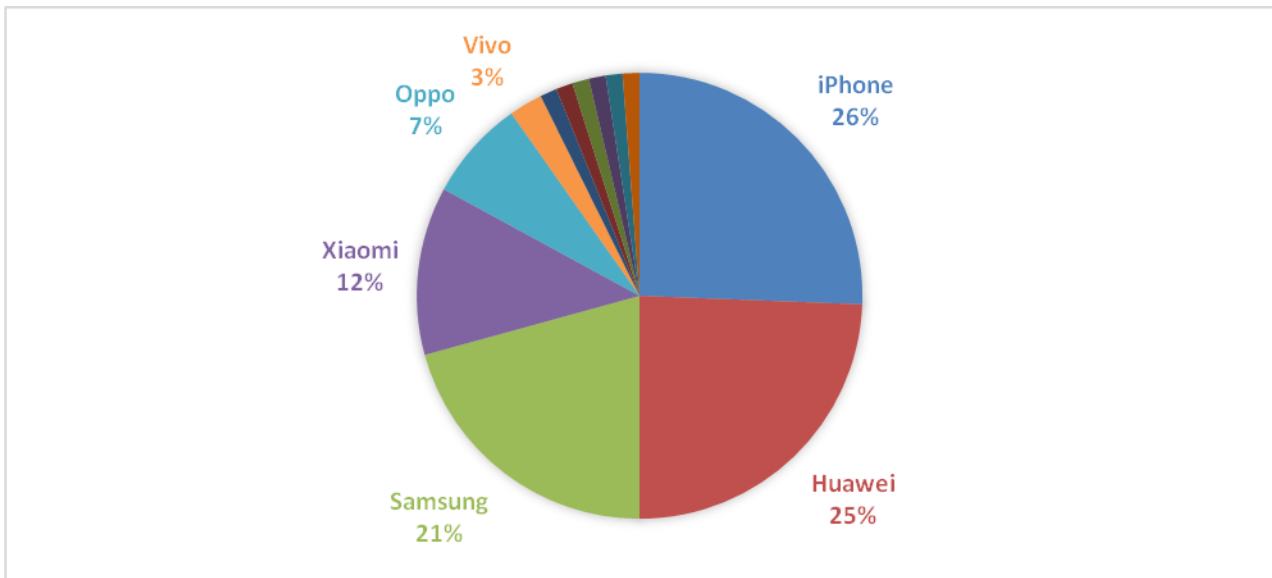
4.2.2 Apple

In the case of Apple, the fiscal year ended September 26, 2020, and showed assets amounting to \$323.9 billion and liabilities amounting to \$258.6 billion. The book value is hence \$65.3 billion. The leverage ratio of 0.8 shows that Apple is 80% financed by debts and 20% financed by its equity, Apple is using its long-term and short-term debts beyond the limit for its operations and has a weaker book value as compared to Huawei. But the market capitalization is higher than Huawei. As of December 2021, Apple has a market cap of \$2.807 Trillion (Companies Market, 2021).

4.3 By customer Attitude

4.3.1 Demographics

In a study to find out the customers' attitudes, a structured survey was shared with the population which included the question related to performance, loyalty, satisfaction, and purchase behavior of the customers. The survey was answered by candidates from Pakistan, Peru, Sudan, Thailand, Malaysia, Russia, Tanzania, Yemen, United Arab Emirates, Uzbekistan, Papua New Guinea, and China. Of a total of 249 responses, 74.7% of the candidates were male and 24.1% were female. Three candidates preferred not to reveal their gender. The respondent data has a maximum age of 40 years, minimum age of 16 years, and an average age of 24 years. 50.6% of the population has earned a bachelor's degree and 30.1% has a master's degree. Out of 249 respondents, 26% use iPhone, 25% use Huawei and 21% use Samsung smartphones. The rest of the respondents use smartphones like Nokia, Infinix, Poco, OnePlus, and some other handsets.



Graph 3 - Smartphones currently being used by respondents

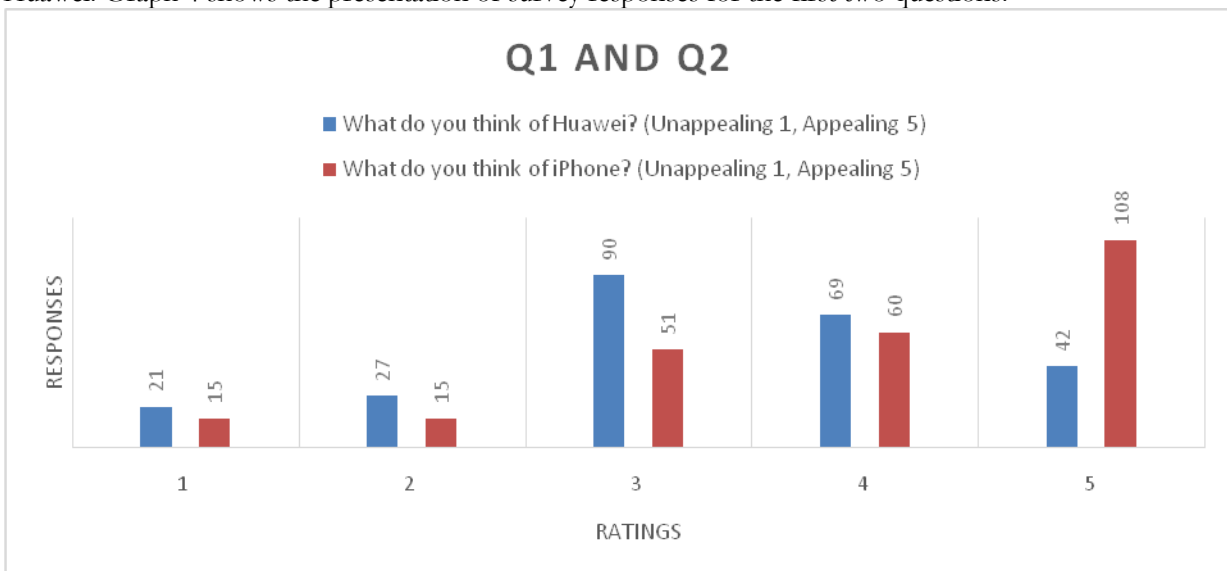
4.3.2 Responses and insights

We asked the respondents 12 close-ended questions about Huawei and iPhone and received the responses as follows.

Q1 What do you think of Huawei? (Unappealing 1, Appealing 5)

Q2 What do you think of iPhone? (Unappealing 1, Appealing 5)

Out of 249 responses, when we asked about the appealing quality of Huawei and iPhone, 108 respondents gave 5 ratings for iPhone which depicts that a maximum number of respondents find the iPhone appealing. However, 90 respondents gave a 3 rating to Huawei which shows that for most of the respondents Huawei is not as appealing as the iPhone and respondents seemed confused about the appealing attribute of Huawei. Graph 4 shows the presentation of survey responses for the first two questions.

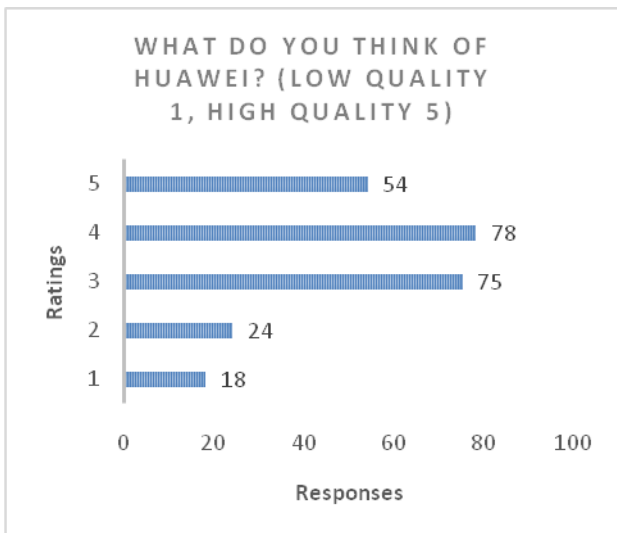


Graph 4 - Responses of Q1 and Q2

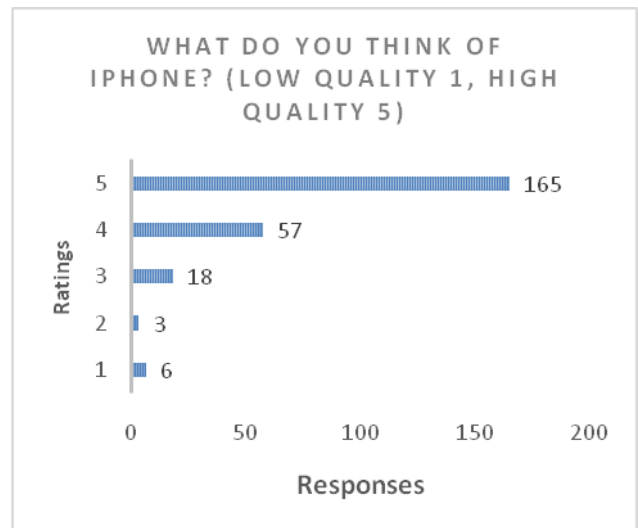
Q3 What do you think of Huawei? (Low Quality 1, High Quality 5)

Q4 What do you think of iPhone? (Low Quality 1, High Quality 5)

From the following graphs we can see that when we question the respondents about the quality of both smartphones, we got an average response for Huawei where the respondents rated it from 3-4. But in the case of the iPhone, the answer from the respondents was noticeably clear as 165 out of 249 respondents rated it 5 in terms of quality. In terms of percentage, only 21.7% of respondents gave 5 ratings to Huawei perceiving that Huawei has good quality, and in the case of iPhone 66.3% of the respondents perceive iPhone as made of high quality.



Graph 5 - Responses of Q3

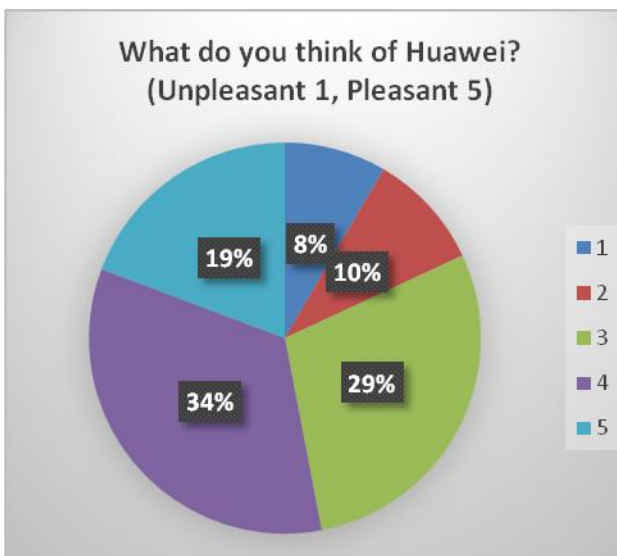


Graph 6 - Responses of Q4

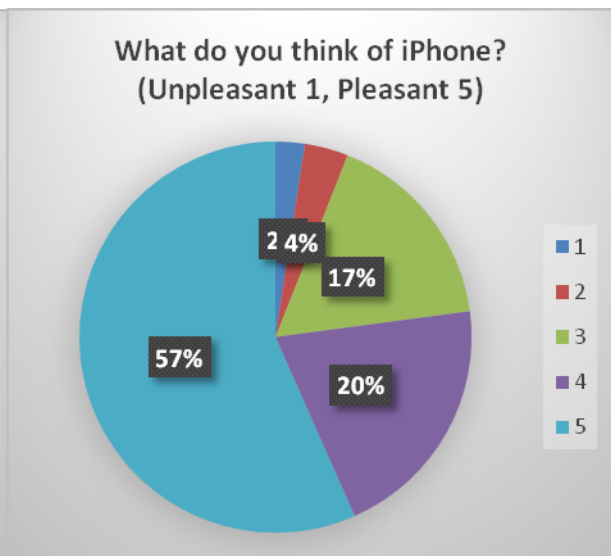
Q5 What do you think of Huawei? (Unpleasant 1, Pleasant 5)

Q6 What do you think of iPhone? (Unpleasant 1, Pleasant 5)

The following pie graphs show the responses of smartphone users about the pleasantness or unpleasantness of Huawei and iPhone.



Graph 8 - Responses of Q5



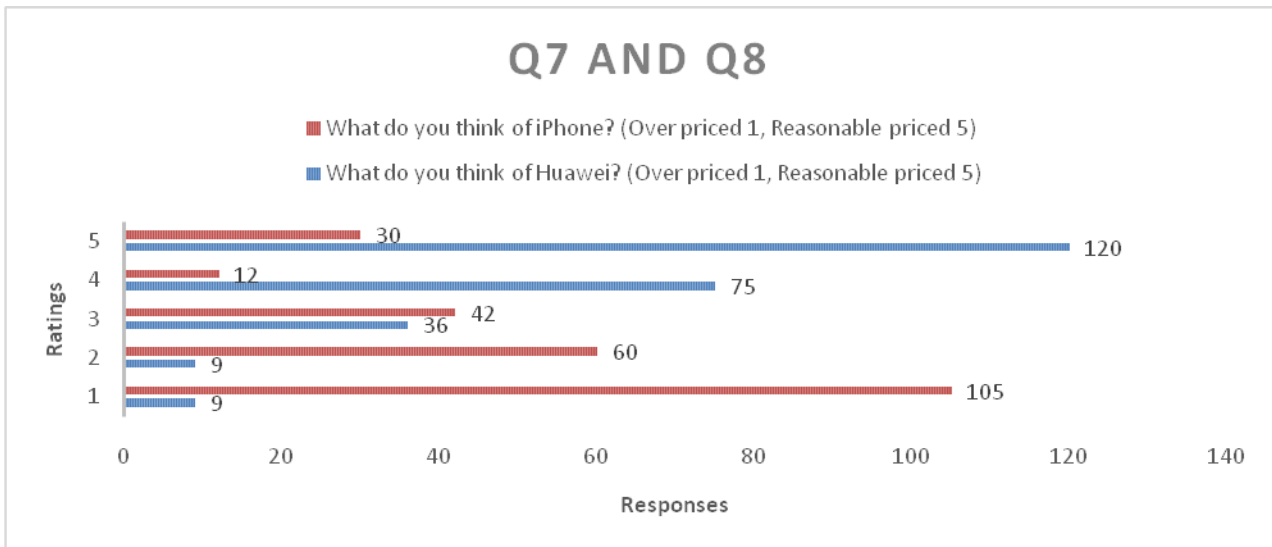
Graph 7- Responses of Q6

29% of the respondents gave 4 ratings to Huawei while the 34% gave 5 ratings to Huawei's pleasantness, which shows that the respondents think that Huawei could have been more pleasant. While in the case of the iPhone 57% of the population gave a 5 rating which shows that the iPhone is pleasant according to these respondents.

Q7 What do you think of Huawei? (Overpriced 1, Reasonable priced 5)

Q8 What do you think of iPhone? (Overpriced 1, Reasonable priced 5)

When asked about the money-to-value on the same scale, 48.2% of people (120 responses) gave 5 ratings to Huawei, showing their opinion that Huawei is priced reasonably and gives value to money. However, 42.2% of people (105 responses) gave 1 rating to iPhone which shows that smartphone users perceive iPhone as an over-priced smartphone in the industry.

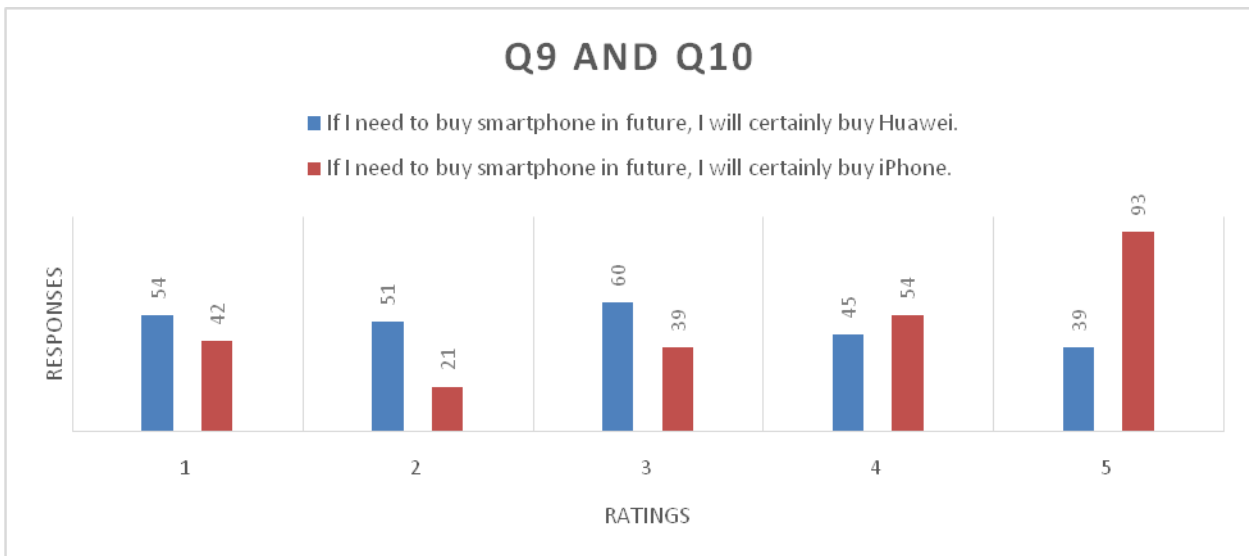


Graph 9 - Responses of Q7 and Q8

Q9 If I need to buy a smartphone in the future, I will certainly buy Huawei.

Q10 If I need to buy a smartphone in the future, I will certainly buy iPhone.

When respondents were asked about the purchase decision, respondents gave mixed responses for Huawei with 21.7% for rating 1 (54 responses), 20.5% for rating 2 (51 responses), and 24.1% for rating 3 (60 responses). These mixed responses were because of the ongoing Huawei ban and trade war between the US and China and customers are reluctant of buying Huawei smartphones because they will lack android features and apps. However, respondent was clear about the purchase decision of the iPhone because 37.3% of people (93 responses) selected rating 5, and 21.7% of people selected rating 4 (54 responses). These stats clearly show that iPhone users and non-users are clear about purchasing iPhones if they will be given an option in the future. While respondents are confused and negative about purchasing Huawei anytime in the future.

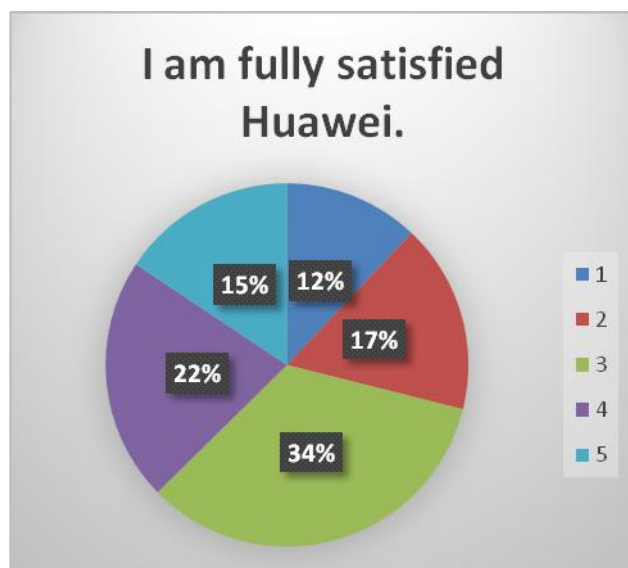


Graph 10 - Responses of Q9 and Q10

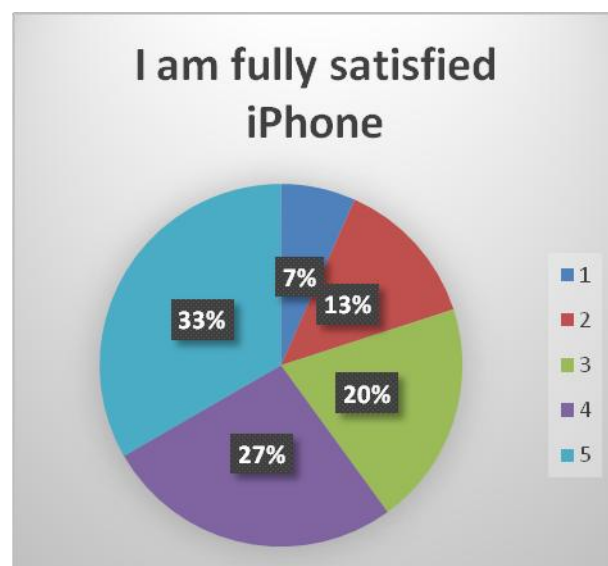
Q11 I am fully satisfied with Huawei

Q12 I am fully satisfied with iPhone

The respondents showed mixed responses when they were asked about their satisfaction with Huawei. The satisfaction confusion can be depicted by the 33.7% of people who selected rating 3 and 21.7% who selected rating 4 for satisfaction. In the case of iPhone satisfaction, 32.5% of people selected rated 5, and 25.3% of people selected rating 4 for iPhone satisfaction. The below graphs show that iPhone users are satisfied but the Huawei users are not fully satisfied and in a state of confusion.



Graph 11 - Responses of Q11



Graph 12 - Responses of Q12

5. Discussion

In this study, we measured the brand equity of Huawei and iPhone by using three methods, i.e., Expert opinion, financial analysis, and customers' attitude. In the expert option, Interbrand ranked iPhone in 1st place with a 38% growth rate while it ranked Huawei in 80th place with a -9% growth rate. BrandZ has ranked Apple in 2nd place with a 14% growth rate and Huawei in 45th place with a 9% growth rate. Brand Finance has given Apple 3rd position with a growth rate of -8.5% and Huawei secured 10th position with a 4.5% growth rate. With all 3 experts, the Apple brand is on top and has more growth rate than Huawei. The financial position of both Apple and Huawei depicts that Apple is undoubtedly in the 1st place because of its assets amounting to \$323.9 billion and market capitalization of \$2.807 Trillion. The book value of Huawei in terms of total assets is CNY876,854m which is equivalent to 135.7 billion USD and the market capitalization of Huawei is 154 billion USD which is way less than iPhone. The customers' attitude towards iPhone and Huawei is also another judging factor. In survey results, in comparison between Huawei and iPhone, 67% of the respondents found the iPhone appealing, 66% found it as a high-quality product, and 57% found it pleasant but overpriced because only 12% of respondents rated it as reasonably priced. Regarding Huawei, the respondents rated it higher than iPhone only in terms of value for money because 78% of the respondents found it priced reasonably. Regarding purchase decision and overall satisfaction level, the iPhone again surpassed Huawei by having 33% ratings for fully satisfied with iPhone as compared to 15% ratings for fully satisfied with Huawei. Also, 59% of the respondents showed their clear interest in purchasing iPhones if they will have to in the future.

6. Conclusion

From the above analysis and comparisons, it can be concluded that iPhone is truly a market leader in the smartphone industry in terms of market value and customers' opinions. There are several reasons why iPhone is a market leader. Apple is vertically integrated and hence controls the supply of its products and has a monopoly on the prices and full control of the quality of Apple products. On the other hand, Huawei relies on distributors, suppliers, and wholesalers' networks which produces pure competitive pricing for Huawei products. With competitive prices, Huawei has higher sales but less price monopoly and less control over quality. In financial terms, it took Apple 38 years from its IPO date to surpass the \$1 trillion market capitalization and in the next two years, Apple crossed the \$2 trillion market capitalization. Today, Apple is about to touch the \$3 trillion market capitalization. Huawei, not being a public company, is way behind Apple in financial books and is backed by the Chinese government. The recent ban on Huawei companies in the US and other Huawei Technologies product resistances in other parts of the world are also impacting Huawei heavily and retarding the pace of Huawei.

With this ban, Huawei is deprived of the Android operating system and its future handsets will not be able to download and use the android/google apps. In the 5G technology, Huawei is trying to compete with the rest of the smartphones with as low as 30% off prices to generate more sales. In the opinion of the public, iPhone is preferred because it is appealing, made of high quality, pleasant, and higher satisfaction rate when compared with Huawei. However, Huawei is competing in the smartphone industry due to its low prices and customers find its prices reasonable and value for money.

According to the survey responses, the overall brand evaluation (Appealing, High Quality, and Pleasant) of the iPhone is the highest from the perspective of customers, and customers gave an average brand evaluation of Huawei. Thus, in operations, iPhone has an efficiency and price monopoly by having vertical integration. In financial terms, it is going to be the \$3 trillion company soon and Huawei is still chasing the \$1 trillion milestones. The experts of the brands like Brand Finance, BrandZ, and Interbrand find Apple as a top brand as compared to Huawei and Huawei has yet many ratings to climb to compete with Apple. respect of expert opinion and customers' perspective, iPhone has a higher ranking and is considered at the top of the mind brand among customers. However, Huawei has a yet larger room for improvement if it wants to compete with the a to be \$3 trillion company.

References

- Abhijeet, P. (2019, November 18). *Smartphone industry pestel analysis - notesmatic*.
<https://notesmatic.com/smartphone-industry-pestel-analysis/>
- Adamy, S. (2021, June 19). *What are Huawei Mobile Services? Everything you need to know*. What Is HMS? All You Need to Know about Huawei's New Mobile Ecosystem. <https://www.androidauthority.com/huawei-mobile-services-hms-1086979/>
- Amy, S. (2021, June 15). *Huawei tops 5G market ranking in Q1 of 2021, China has 70% of the total global 5G base station: Report - Huawei Central*. <https://www.huaweicentral.com/huawei-tops-5g-market-ranking-in-q1-of-2021-china-has-70-of-the-total-global-5g-base-station-report/>
- BrandZ, W. (2020, July). *BrandZ™ Top 100 Most Valuable Global Brands 2020*.
https://www.diffusionsport.com/wp-content/uploads/2020/07/2020_BrandZ_Global_Top_100_Report.pdf
- Companies Market, C. (2021). *Apple (AAPL) - Market capitalization*.
<https://companiesmarketcap.com/apple/marketcap/>
- David, S. (2021, March 29). *China's Huawei Is Winning the 5G Race. Here's What the United States Should Do To Respond | Council on Foreign Relations*. <https://www.cfr.org/blog/china-huawei-5g>
- Deng, L. (2021, March 23). *Huawei with 1.1 trillion yuan (154 billion USD) value ranks 1st in China's top 100 consumer private enterprise - Huawei Central*. <https://www.huaweicentral.com/huawei-with-1-1-trillion-yuan-154-billion-usd-value-ranks-1st-in-chinas-top-100-consumer-private-enterprise/>
- Gary, G. (2020, September 29). *State of the economy: September 2020 - gov.scot*.
<https://www.gov.scot/publications/state-economy/pages/5/>
- Huawei. (n.d.). *Postal Repair Service | HUAWEI Support Sri Lanka*. Retrieved December 27, 2021, from <https://consumer.huawei.com/lk/support/postal-repair-service/>
- Huawei. (2021, May 14). *Huawei and SPL TELE: Together for emission-free mobility - Huawei Enterprise*. <https://e.huawei.com/en/news/ebg/2021/together-for-emission-free-mobility>
- Interbrand, W. (n.d.). *BGB Archive - Interbrand*. Retrieved December 27, 2021, from <https://interbrand.com/best-global-brands/>
- John H, J. (2019, July 16). *Huawei says it has two suppliers for each component used in its products - Huawei Central*. <https://www.huaweicentral.com/huawei-says-it-has-two-suppliers-for-each-component-used-in-its-products/>
- Lionel Sujay, V. (2021, November 22). • *Apple's research and development expenditure 2007-2021 | Statista*. Apple Inc's Expenditure on Research and Development from Fiscal Year 2007 to 2021.
<https://www.statista.com/statistics/273006/apple-expenses-for-research-and-development/>
- Matt, K. (2020, March 26). *Huawei Boosts 2020 R&D to \$20B - SDxCentral*. Huawei Boosts 2020 R&D to \$20B.
<https://www.sdxcentral.com/articles/news/huawei-boosts-2020-rd-to-20b/2020/03/>
- MBA Skool, T. (2021, August 9). *Huawei Marketing Strategy & Marketing Mix (4Ps) | MBA Skool*.
<https://www.mbaskool.com/marketing-mix/products/17121-huawei.html>
- Melanie, H., & Jordan, L. (2020, October 14). *There Is a Solution to the Huawei Challenge - Center for American Progress*.
<https://www.americanprogress.org/article/solution-huawei-challenge/>
- Robert, Z. (2015, September 10). *Google Now vs Siri comparison: which personal assistant is better? | NextPit*.
<https://www.nextpit.com/google-now-vs-siri-comparison>
- Switch. (2021, June 3). *Mobile operating systems - what are they and which is best?*
<https://www.uswitch.com/mobiles/guides/mobile-operating-systems/>