



N A M E	Xiaoyong TIAN
STUDENT ID	2203444
M O D U L E	Global Business Challenges
MODULE ID	BMMB7006
LECTURER	Anthony Burns

December 2021

Table of Contents

1. Executive Summary	3
2. An Introduction to Apple.....	4
2.1 Background of Apple	4
2.2 An Overview of Global Landscape	5
3. A Comprehensive Analysis and Evaluation of Apple	8
3.1 PESTEL Analysis	8
3.2 SWOT Analysis.....	14
3.3 Porter's Five Forces Analysis.....	16
4. Conclusion.....	18
5. Recommendation.....	20
Reference list.....	21

1. Executive Summary

The report aims to offer a comprehensive and thorough evaluation of the global business challenges faced by Apple. To this end, the report introduces three business models to analyze the company including PESTEL — evaluating the macro or external environment of the company from six aspects, SWOT — analyzing the micro or internal environment of the company from four aspects, and Porter's five forces — assessing the company's position and competitiveness in the industry from five aspects. Based on the three in-depth evaluations, a comprehensive conclusion is drawn. And finally, four recommendations are listed, taking into different factors that can enhance the capability of Apple so as to foresee and withstand global business challenges in the future.

2. An Introduction to Apple

2.1 Background of Apple

Founded in 1976 by Steve Jobs and Steve Wozniak, Apple Computers, Inc was renamed Apple Inc in 2007. Headquartered in in Silicon Valley, it is now located in Cupertino in California. At that time, only a few companies owned computers and it remained a new concept for many individuals. In fact, the original vision of the two is to create computers that are small enough for people to carry when they want to work in office or work at home, or in other words, user-friendly (Kocienda, 2018). Together they designed Apple I in Job's garage, and then Apple II became very successful, attracting the global attention. The whole industry was revolutionized by Apple II with its first-ever color graphics, and its sales rocketed from \$7.8 million in 1978 to \$117 million in 1980 when the company went public (Esslinger, 2014). But the development of Apple and Jobs is also bumpy as they encountered many difficulties. After Wozniak leaving the company, Jobs hired John Sculley and had some controversies with him. As a result, Jobs left Apple, founded NeXT Software and purchased Pixar which succeeded later in computer animation (Elliot, 2012). Despite all the vicissitudes, Apple still has become one of the most innovative companies globally with a series of products including iPhone, iPod, Mac book, Apple Watch, Air Pods, iTunes, iBook, Apple TV+ and so forth. And in 1996, many experts believed that the company was about to go bankruptcy as its market hit the lowest point. But one year later when Jobs came back, he conducted cooperation with Microsoft to reverse the downward trend by developing a Mac version office software which becomes the turning point for the company. In 2007, iPhone, a game changer of smartphone, was released with several

new versions in next few years or even a decade, and then iPad and Apple Watch were introduced (Isaacson, 2011). In 2011, Apple surpassed Nokia who was the best seller for fifteen consecutive years to become the largest producer of smartphone in the world. As of now, Apple enjoys a market capitalization of \$2.261 trillion, making it the world's most valuable company (marketcap, 2022).

2.2 An Overview of Global Landscape

Currently, the globe is undergoing dramatic transformation and instability that have not been seen for a century. Politically, Russia and Ukraine conflict has become a major unstable factor to the whole world as the world is increasingly interwoven with each other due to globalization. And the major goal for the world right now is keeping peace and stability, upholding multilateralism and promoting diversified and globalized development. But since the outbreak of Russia-Ukraine conflict on February 15th this year, a lot of countries and blocs including USA, Australia, Canada, Japan, New Zealand and European Union (EU) have all imposed economic sanctions targeting Russia's banks, military exports and oil refineries and provided assistance in many forms to Ukraine (Jazeera, 2022). And the second unstable factor is China-US trade war. Since 2018 when Donald Trump was the president of the United States, the world's two largest economies — US and China — started a trade war to impose additional tariffs on each other so as to gain more edges for themselves. That's mainly because the gap between the countries is bridging, and China actually has already surpassed US to become the world's largest economy in terms of purchasing power parity (PPP) and is 25% bigger than the USA, as shown in Figure 1 by Purdie (2019), whereas if gross domestic product (GDP) is considered as the measuring index, then China remains the second largest economy globally,

but the gap between the two is smaller. And the economic disputes of them have dealt a heavy blow to the entire world as the world is now interconnected. And Apple without doubt is suffering from this. All of these factors will lead to the growing prices of raw materials, resulting in inflation and high costs. Therefore, the supply and industrial chains of Apple will be all hampered.

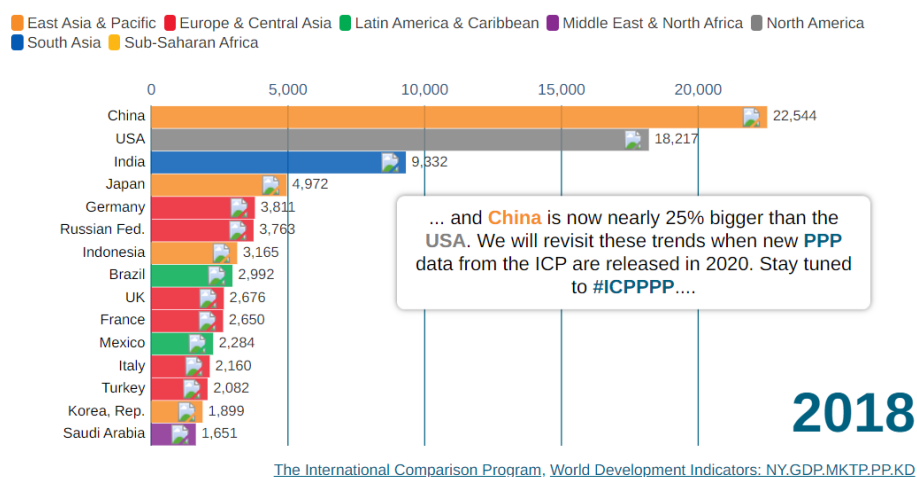


Figure 1

Economically, the global economy hasn't recovered to the pre-pandemic level since the outbreak of COVID-19 in the beginning of 2020. Let's take China as an example who has employed the most restrictive anti-virus policies. In 2020 when the coronavirus first outbreaked in China, the whole country was closed and the economy was suspended. As a result, its GDP growth slumped without doubt. With its zero-covid policy that almost curbed the spread of the virus in 2021, its economy bounced back to the previous level in 2019 as shown in the Figure 2 (Huld, 2022). However, in this year, because of the recurrent outbreak in major cities in China in a large scale, the economy is almost shut down again, thus its GDP growth plummeting again. Such economic fluctuation undoubtedly will impact Apple in many manners.

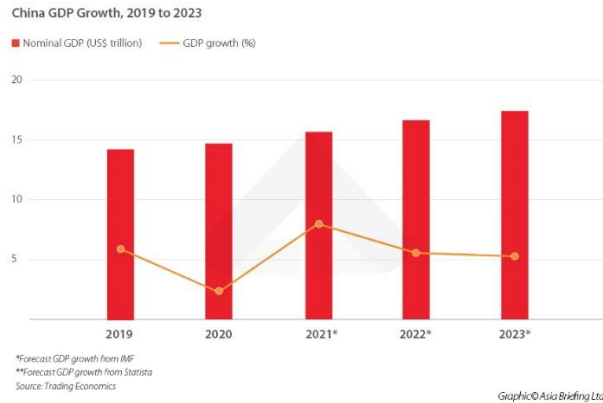


Figure 2

And the other reason is the high inflations in countries across the world. According to Hanselman (2022), inflation remains the top risk for major economies worldwide except in Europe and China, as shown in Figure 3. It is clear that in Asia-Pacific region, North America and other developing markets, inflation is the biggest factor impacting their economy, whereas in China the biggest risk in COVID-19 with the reason explained before, and in Europe the biggest one is volatile energy prices as the conflict between Russia and Ukraine has led to energy shortages in Europe, and thus the prices are volatile. And both of the two economic factors will pose challenges and threats to Apple whose products' prices are too high for normal people or low-income groups to buy. And with the inflation and coronavirus, the prices will only increase, resulting in a too expensive price unaffordable even for middle-income groups.

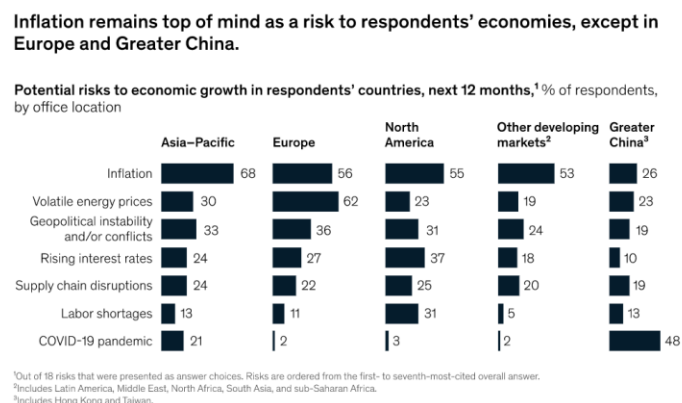


Figure 3

3. A Comprehensive Analysis and Evaluation of Apple

In this sector, a series of Apple's products are introduced as the foundation for the analysis. And then three models are adopted, namely PESTEL, SWOT, and Porter's five forces, to conduct a comprehensive evaluation on the major global business challenges and threats faced by Apple.

3.1 PESTEL Analysis

PEST(EL) is one of the several tools to investigate the broad macro-environment of an organization which considers the impact from six aspects, namely, Political, Economic, Socio-Cultural, Technological, Ecological and Legal factors (Johnson et al., 2014). And all six aspects are actually interconnected and will be discussed in detail.

Politically, the major challenges faced by Apple are caused by Russia-Ukraine conflict and China-US trade war. In fact, the whole Europe has been hit hard by the confrontation between Russia and Ukraine as Russia is a major energy supplier to Europe countries. And its effects have hit Germany's economy and the European Economic Area, only second to the shock of COVID-19. As mentioned above, many countries have imposed economic sanctions on Russia to stop the special military forces. For example, US has banned Russia from making debt payments using foreign currency held in US banks; a majority of Russian banks have been removed from SWIFT, or Society for Worldwide Interbank Financial Telecommunications and from the UK financial systems with frozen assets of Russian companies and banks (BBC, 2022). This indeed hampered Russia's economic foundation, but the real key point is oil and gas. Russia has always been the largest oil exporter across the world. Before the outbreak of the conflict, 60% of its oil was exported to Europe and 20% to China; in effect, Russia supplied 45% of Europe's gas and a third of its gas, and US imported some 20% specialized petroleum products such as crude oil from Russia (Global Witness, 2022). However, Russia also has defended itself by suspending its gas and oil supply to Europe where most of the people rely on

the oil and gas to go through the cold winter. According to Seddon and Sheppard (2022), Russia has indefinitely suspended natural gas flows through the Nord Stream 1 pipeline, exacerbating a squeeze on Europe's energy supplies and deepening the recession risks faced in the EU. As a result, such shortages send the prices of natural gas and oil through that roof that are unaffordable to most of families in Europe. And impacted by the recession, such double pressure has dealt a heavy blow to European families who are suffering in this winter. And Europe is another major market for Apple as a global company. But with the rocketing prices of energy supplies, families in Europe can no longer afford them, not to mention the high-price Apple products. In addition, energy supplies are daily necessities, while digital products are not. Thus, its sales will definitely be hampered. And the other challenge is posed by the trade war between China and US. In 2018 as US has started to levy additional tariffs increasing from 10% to 25% on loads of Chinese products exported to US worth of approximately \$60 billion in a large scale and limited Chinese companies to invest and acquire US companies (Bown, 2022). As most Apple has many factories in China to produce its products, the additional tariff rate has made the company extremely vulnerable to such a trade war as all the assembled iPhones in China exporting to US would be imposed additional tariffs. According to Leswing (2022), the Dow Jones Industrial index of Apple dropped 2.6%, and its Nasdaq Composite decreased by 3.5%; and a 25% tariff on the iPhone could lead to a price increase of \$160 for the iPhone XS, or Apple could eat the tax, which could lead to a 23% slump in earnings per share in 2020. As a result, the manufacturing and supply chains in China have been hindered, making the company vulnerable to this dispute.

Economically, global economy is still suffering from COVID-19 that poses economic threats to Apple. Take China as an example. China, as the world's second largest economy, is one of the countries whose economy recovers fast from the COVID-19 pandemic in comparison with its pre-pandemic level. According to the report (Li, 2022), in 2021, China's economy continued

to recover with its domestic product (GDP) reaching 114 trillion yuan, an increase of 8.1%, and per capital disposable income rising 8.1% in real times. A total of 12.69 million urban job opportunities were created, and the average surveyed unemployment rate amounted to 5.1%. And the consumer price index (CPI) grew by 0.9%. Despite all these impressive achievements, China's economy still faces series downward pressure. It's evident that the China's economy underwent dramatic decrease after the outbreak of the coronavirus and bounced back in 2021. But as shown in Figure 4 (Wang, 2022), its GDP growth started to slump again. And the Figure 5 (Textor, 2022) also indicates that in 2022 China's economy still decreases dramatically. Therefore, China, one of the countries who outperform other countries in response to the pandemic thanks to its strict zero-covid policy, still suffers from the recurrent outbreak, let alone other countries who basically have done nothing to curb the spread of virus like US. Under such circumstance, Apple, however, have taken no measures to adjust its prices for people whose wages become less due to the economic downturn. Thus, people cannot afford the high prices, and the sales would plummet unsurprisingly.

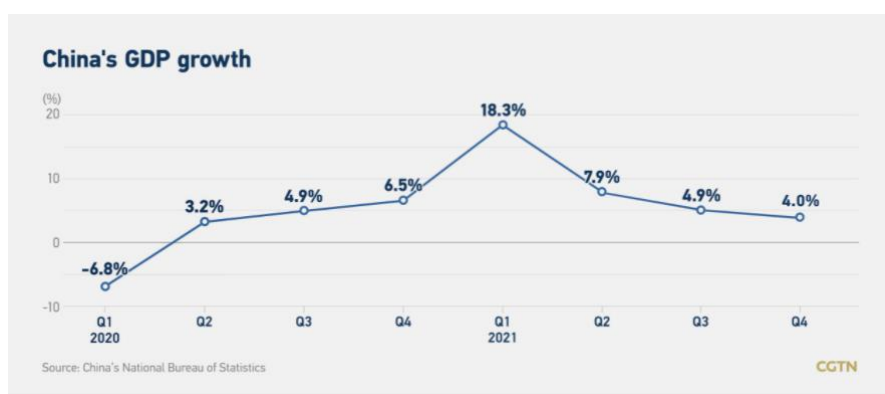


Figure 4

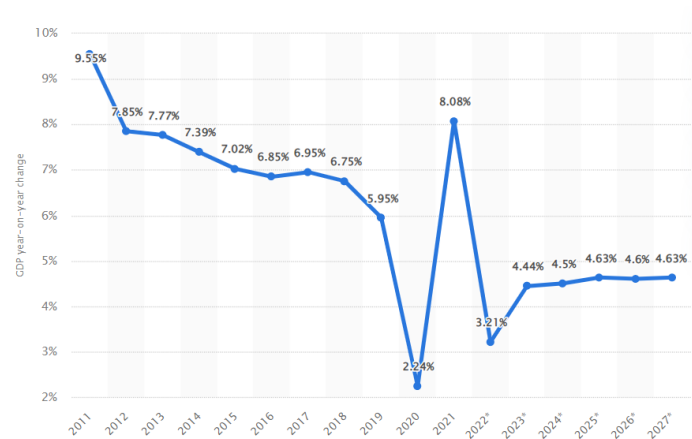


Figure 5

Another economic factor is the high inflation. For example, to tackle the highest inflation level for nearly four decades, the Federal Reserve raised its benchmark interest rates by 75 basis points, the biggest increase since 1994, leading to a spillover effect, meaning that the fluctuation of exchange rates among different currencies can damage the overseas competitiveness of large US companies such as Apple (Hu, 2022). Thus, dollar has appreciated, whereas other currencies especially Asian currencies have depreciated, which means that the competitiveness of Apple products in foreign markets will be reduced as the fluctuation of exchange rates will lead to increasing prices, add more pressure to the local consumers.

Under the framework of PESTEL, “S” not only refers to social factors but also cultural factors as cultural difference servers as a key indicator that can indicates consumers’ inclinations globally. As social media becomes all the more important, Apple has published iTunes, the biggest virtual media store for online music, and Apple TV+, a streaming service for people to watch TV show or documentaries online. In fact, both of the two services are available in most of the countries, but there is an exception, that is China. In China, local residents are unable to get access to iTunes or Apple TV+ as they have all been prohibited with Apple Arcade or Apple News and News+ on the list. In fact, over the past several years, China has always been a lucrative market for Apple, and most of Chinese apple fans are attracted by its hardware like iPhone, iPad and Macbook (George, 2019). That is mainly because the Chinese government or

Chinese people have different opinions on the foreign TV series, and the government may regard that some online books in iTunes and some movies in Apple TV+ are not in line with its value that it prefers those movies promoting socialist value and Chinese culture. There is no doubt that Chinese people are more willing to watch movies with their own stories and cultures, and thus Apple need to make some adjustment so as to seize this lucrative market and improve its profitability with its digital services.

Technologically, Apple enjoys the cutting-edge technologies across the world that hardly have any competitors. However, it also has encountered its largest competitors, that is Huawei, a Chinese brand that also focuses on smartphones and personal computers. In terms of chips, the Apple's A13 Bionic chip and Huawei's Kirin 990 5G chip are the focus. According to MacroPolo (2020), Huawei's chip is more exposed to foreign supply chains than Apple's in terms of design, fabrication, assembly and packaging, whereas Apple is more reliant on Taiwan Semiconductor Manufacturing Company (TSMC) who is subject to the Chinese government which will also damage the production of chips. As a result, the threat posed by Huawei in manufacturing chip is immense for Apple. In light with smartphones, Huawei P30 Pro is also the strongest competitor of Apple's iPhone 11Pro. The biggest drawback of iPhone 11 Pro is its camera prowess as P30 Pro has the combination of Huawei's periscope lens and digital smarts with 40MP wide-angle, 20MP ultra-wide, 8MP zoom, and time-of-flight sensors that outperforms iPhone 11 Pro with its combination of ultra-wide sensor, a trio of 12MP back cameras and Smart HDR processing (Hayward, 2021). Therefore, Apple need to enhance its technology on camera so as to make iPhone more professional for photographers and prevent from Huawei from encroaching its market share globally.

Ecologically, Apple always claims itself as an environment-friendly company, aiming to realize carbon neutrality by 2030. In 2020 when Apple released its iPhone 12 series, Apple announced to remove the charger and the Earpods from the iPhone 12 box in all major markets across the

world to reduce its carbon dioxide emission and save more raw materials by cutting the packages and ship more devices at the same time (HT tech, 2022). And such a behavior has aroused much controversy in many countries including China and Brazil. In China, five students sued Apple for not providing a charger and Earpods in the box of iPhone 12, suspecting that whether such a move of the company is really for conserving the environment, or just for saving the cost as the new 5G technology is quite expensive (Roth, 2021). The major argument of consumers is that the USB-C to Lightning cable included in the box is not compatible with any of the previous chargers provided by Apple devices, and they have to pay extra money to buy chargers which also has a separate packing box. In this case, it's meaningless to remove chargers and Earpods from the iPhone.

Legally, iPhone also faces some lawsuits in other countries. For example, the Justice Ministry in Brazil ordered Apple to stop selling iPhones without a charger in the box, as it provided incomplete products to the local customers, which was considered as a deliberately discriminatory practice, and has been fined around \$2.34 million (Clover, 2022). Another legal factor is that Apple has been accused of transmitting private data of users to a data center in Guiyang, China, with the requirement of the local government, arousing people's concerns as it once refused to help US law enforcement agencies to break the iPhone encryption (Ikeda, 2021). On the other hand, Apple was accused by the Chinese government of sending browsing data and IP address of users to Tencent, a Chinese tech giant, and the list of browsing data is also maintained by Google (South China Morning Post (Hong Kong), 2019). This has just run counter to its claim as the safest company to ensure the data privacy of users. Such lack of consistency will stir backlash from consumers, thus damaging Apple's image brand and resulting in a sales drop.

3.2 SWOT Analysis

First explained by Albert Humphrey in the 1960s, SWOT analysis is a structured planning method to assess and foresee a company's strengths, weaknesses, opportunities and threats from the perspective of micro-environment (Alka, 2015). This sector aims to focus on the challenges and threats faced by Apple, both of which will be discussed thoroughly.

Strengths: Apple, as the world's most valuable company, undoubtedly have many advantages, including a strong brand image, high customer loyalty, and cutting-edge technology. High perceived value — a customer's evaluation of the benefits and costs of one brand compared to another — always demonstrates a strong brand image (Morgan, 2018). With such an image, customers are more willing to pay high prices for its products as the strong brand image indicates high quality. According to Miller (2021), 90% of Apple fans will continue to select iPhone as their new smartphone, whereas its competitor Samsung is only less than 70%, as shown in Figure 6. And also, in terms of chips, Apple's M2 has outperformed others including M1 released in 2020 and can achieve framerates of 51 frames per second (fps) when running games.

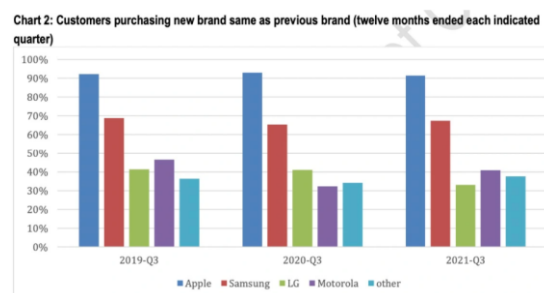


Figure 6 (AppleInsider, 2021)

Weaknesses: No company is perfect, even as valuable as Apple who also has many internal weaknesses such as limited designs and technological issues of new iPhone, zero compatibility with other operating systems and software and high prices of its products. Some users of iPhone

13 complained that the iPhone 13 is plagued by a touchscreen issue which leads to the screen being unresponsive for several times (Frahm, 2021). Apple claimed such a problem can be fixed via upgrading operating system to IOS 15, however, users responded that the issue remains unfixed, leading to a horrible customer experience and damaging its customer loyalty. And its design has also been complained by many users who think that new iPhone has no creative design and is looked basically the same with the previous one. The second weakness is that Apple's special hardware and software are designed exclusively for Apple products with unique functions, but such a design resulted in many problems, including the information of Apple products unable to transfer to other Android products. And the third weakness is its high prices of all products. As shown in Figure 7, the prices of Apple products continued to rise over the past few from 2012 to 2018 with Macbook Air increasing from \$1,000 to \$1,200, and thus being loyal to Apple is getting more and more expensive (Fowler & Dam, 2018).

Opportunities: Now a lot of external opportunities may boost the future development of Apple, including globalization and producing more ecological-friendly products. As the world is transforming into an interconnected global village, people can purchase all the stuff they need directly from the companies via cross-border e-commerce platforms. And Apple has employed a new manufacturing system that products are marketed and designed in United States, but the production is outsourced to other factories across the world with foundation of international supply chain partners (Researchomatic, 2013). And the second opportunity is to produce more environmental-friendly products rather than advertising its idea of environmental protection. As its goal is to realize carbon neutrality by 2030, it should produce more products with reduction in carbon footprint, plastic wrap, and mercury (Apple, 2022).

Threats: Apple also faces some external threats such as increasing competition and impact of COVID-19. The first threat is posed by Apple's increasingly stronger competitors including Huawei, Xiaomi, Samsung and so forth. As shown in Figure 7, Apple plays a leading role in the smartphone market share globally with 28.43% which means that near three in ten people use iPhone, and its competitor Samsung ranks at the second place with the market share of 28.19%, only 0.23% less than that of Apple (Lin, 2022). And the rest top brands, namely, Xiaomi, Oppo, Huawei and Vivo are all Chinese brands that have developed rapidly recently. And the other external threat is COVID-19 pandemic. Since the outbreak of the coronavirus, many offline Apple retail stores have been forced to shut down and its supply chains have been disrupted (Downey, 2021). As many of its factories are located in China, the lockdown in China leading to the closure of them have greatly impacted Apple's assembly line. Therefore, its production capacity has been damaged and unable to provide enough iPhone and iPad for consumers, damaging the consumer confidence.

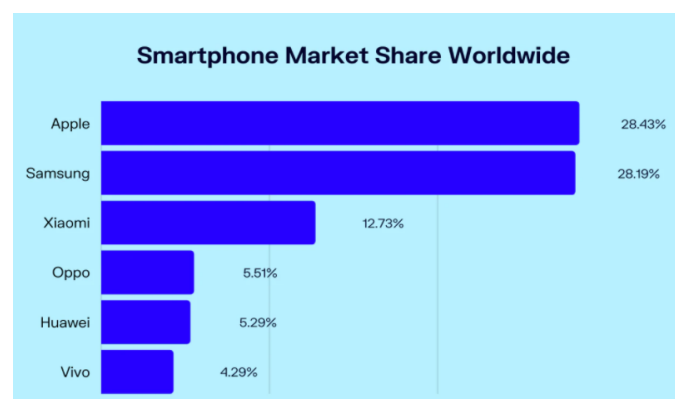


Figure 7

3.3 Porter's Five Forces Analysis

Porter's five forces were proposed by Michael Porte in 1979 to evaluate a company's position and competitiveness by analyzing the threats posed by its competitors, suppliers, buyers, new

entrants and substitutes (Porter, 1989).

Competition: In the technology industry, Apple always faces fierce competition from tech behemoths globally like Google, Amazon and Samsung. In addition to Samsung, Google also has developed a series of new smartphones called Pixel Phone to compete with Apple in the smartphone market. According to Davidson (2020), Google's Pixel 5 for the first time poses a threat to iPhone as it is as fancy as iPhone but with a lower price. And it also has many special features that iPhone doesn't have. And such global competition in the industry will only grow even more intense.

New entrants: The threats of new entrants for Apple relatively low for two Reasons. The first is that in the tech industry, especially smartphone industry, the entry barrier is extremely high as start-up companies either have to have their own unique technologies or special designs to attract customers. And they also have to raise an enormous amount of money to establish the company. And the second is that as Apple enjoys a strong image brand with loads of loyal customers, it doesn't need to concern about the threats posed by new entrants.

Substitutes: The main substitutes for iPhone are smartphone of Samsung, Huawei, Xiaomi and so on as mentioned above. As iPhone has outperformed most of Android smartphones in taking pictures, its challenges are relatively low. But Huawei's smartphone has a stronger capability in taking photographs than iPhone, thus making itself as one of the strongest competitors. And in terms of iPad, Apple also beats all its competitors as all the other Androids tablets cannot operate as fluently as iPad.

Bargaining power of suppliers: Apple, in fact, has a number of suppliers, but it also faces relatively high challenges in this perspective. In 2017, Qualcomm sued Apple, arguing that its

iPhones, iPads and Apple Watches infringed a variety of mobile-technology patents (Brittain, 2022). As a result, they suspended the cooperation, and Qualcomm stopped its supply of Media Access Control to Apple. And Apple had to find other suppliers, thus lead to a lot of complaints from consumers about the bad signal. Therefore, Apple needs to establish good relationship with its suppliers.

Bargaining power of buyers: The bargaining power of buyers is a key part in the model for Apple to consider. But the buyers' power is quite low in terms of purchasing Apple products as the prices are all settled and the losses are nearly negligible for the company. But from the global view, Apple also needs to make some changes so as to minimize the loss of consumers.

4. Conclusion

A total of three business analysis models — PESTEL, SWOT and Porter's five forces — are adopted in this report to evaluate the business challenges faced Apple across the world. Based on PESTEL analysis, all six aspects are discussed in detail. Politically, major threats are posed by the Russia-Ukraine conflict and China-US trade war. Due to the conflict between Russia and Ukraine, Russia has suspended its energy supply to European countries, leading to a ballooning price of oil and in Europe. Therefore, most of the families have to meet their life necessities first so as to go through the bitter winter, and thus they will not have extra money to purchase smartphones, not to mention the expensive iPhone for most of the families. And the trade dispute between China and US has led to the increase of tariff rate rising from 10% to 25%. As many Apple manufacturing factories are located in China, its supply chains and export to foreign countries have all been impacted. Economically, there two challenges faced by the company. One is the impact caused by COVID-19 pandemic which resulted in the recession of the global economy without much recovery. As the prices of Apple products are relatively high,

people who are unable to work cannot afford its product anymore. And the second is the high inflation. The Fed raised its benchmark interest rates dramatically, leading to the appreciation of dollars but depreciation of other foreign currencies. As a result, the competitiveness of Apple products are weakened as the high-prices will add more pressure to local consumers. In terms of social-cultural factors, many Apple's streaming services are prohibited by the Chinese government as they may include some movies or TV series that are not in line with Chinese people's value. And this has impacted the company to gain more profitability in China. Technologically, Huawei's chip producing technology is catching up with Apple with less impact posed by TSMC as the Chinese government will only support it. And Huawei's smartphones also outperform iPhone on camera. Thus, Apple need to enhance its technology in taking pictures. Ecologically, Apple has removed the charger and Earpods from iPhone box, claiming to conserve environment and save more raw materials. But such a move has been suspected by consumers with 5 Chinese students suing the company for not providing accessories. And legally, the company was fined by the Brazil court for not providing chargers. And it also has been accused of transferring users' data to other platforms and companies which runs counter to its principle of the safest company. With SWOT analysis, strengths, weaknesses, opportunities and threats are all evaluated. The advantages of Apple are a strong brand image, high customer loyalty, and cutting-edge chip technology; the weaknesses are limited designs and technological issues of new iPhone, only compatible with IOS devices and high prices; the major opportunities for the company involve globalization and producing more ecological-friendly products; and the threats include increasing competition from its rivals and impact of COVID-19. And based on the analysis of Porter's five forces, the threats from the company's competitors, suppliers, buyers, new entrants and substitutes are all evaluated. And the challenges posed by its buyers and new entrants are relatively low; but it need to find some new methods to response to the threats of its competitors, suppliers and substitutes.

5. Recommendation

Based on the conclusion, a total of four recommendations will be listed as follow. First of all, Apple needs to make some adjustments for its high prices of the products as the high inflation, Russia-Ukraine conflict and China-US trade war have all impacted people's daily life, and thus they don't have too much extra money to digital products. And by reducing prices, Apple will also attract more new consumers from middle- and low-income groups. Second, Apple should pay more attention to its digital services including Apple TV+, Apple One and Apple Music to generate more profitability as its global revenue of hardware devices is slumping for consecutive years and its services segment has witnessed rapid growth over the past few years. Third, Apple should care more about customers' demand. As mentioned above, Apple has ditched the chargers to save the planet, but it doesn't take into account consumers' demand as its only provides the USB-C to Lightning cable that is not suitable for any of the previous charger. And Apple users have also complaint that the design of new iPhone is almost the same as the old one. Therefore, the company should collect advices and suggestions from consumers so as to meet their demand. And the fourth one is that Apple may establish a special department to evaluate the global challenges that can damage the company. If such a department were created, many risks and threats such as Russia-Ukraine conflict could be minimized and its capability to withstand business challenges when the world is unstable.

Reference list

Alka, J. (2015) “SWOT Analysis in Thirukkural: Comparative Analysis with Humphrey SWOT Matrix” *IOSR Journal of Business and Management*, 17(1), pp. 31–34. Available at: <https://doi.org/10.9790/487X-17123134>.

Apple (2022) *Environment, Apple*. Available at: <https://www.apple.com/environment/> (Accessed: December 13, 2022).

AppleInsider (2021) *Apple has most loyal smartphone customers in US, study finds, AppleInsider*. AppleInsider. Available at: <https://appleinsider.com/articles/21/10/29/apple-has-most-loyal-smartphone-customers-in-us-study-finds> (Accessed: December 13, 2022).

BBC (2022) *What are the sanctions on Russia and are they hurting its economy?*, *BBC News*. BBC. Available at: <https://www.bbc.com/news/world-europe-60125659> (Accessed: December 11, 2022).

Bown, C.P. (2022) *Four years into the Trade War, are the US and China decoupling?*, *PIIE*. Available at: <https://www.piie.com/blogs/realtime-economics/four-years-trade-war-are-us-and-china-decoupling> (Accessed: December 11, 2022).

Brittain, B. (2022) *Apple loses second bid to challenge Qualcomm patents at U.S. Supreme Court, Reuters*. Thomson Reuters. Available at: <https://www.reuters.com/technology/apple-loses-second-bid-challenge-qualcomm-patents-us-supreme-court-2022-10->

George (2019) *Apple TV+ is the newest app to be blocked in China*, iKream. ikream. Available at: <https://www.ikream.com/apple-tv-is-newest-app-to-be-blocked-in-china-37556> (Accessed: December 12, 2022).

Global Witness (2022) *Ukraine, putin, gas and sanctions - faqs*, Global Witness. Available at: https://www.globalwitness.org/en/blog/ukraine-putin-gas-and-sanctions-faqs/?gclid=EAIaIQobChMIzpjOrvnw-wIVT6qWCh1iEgP3EAAYASAAEgLeg_D_BwE (Accessed: December 11, 2022).

Hanselman, H. (2022) *The coronavirus effect on global economic sentiment*, McKinsey & Company. McKinsey & Company. Available at: <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/the-coronavirus-effect-on-global-economic-sentiment> (Accessed: December 11, 2022).

Hayward, A. (2021) *Apple iPhone 11 pro vs Huawei P30 Pro: Which is best?*, Stuff. Available at: <https://www.stuff.tv/news/apple-iphone-11-pro-vs-huawei-p30-pro-which-best/> (Accessed: December 12, 2022).

Hu, W. (2022) *How a strong dollar has hurt Apple and big US companies' overseas competitiveness*, Global Times. Available at: <https://www.globaltimes.cn/page/202207/1269670.shtml> (Accessed: December 11, 2022).

Huld, A. (2022) *China's economic outlook for 2022 - covid, market access, and business*, China Briefing News. Available at: <https://www.china-briefing.com/news/china-economic-outlook-for-2022-covid-market-access-and-business/> (Accessed: December 9, 2022).

HT Tech (2020) *Apple explains why it removed Charger, Earpods from iphone 12 box*, HT Tech. Available at: <https://tech.hindustantimes.com/tech/news/apple-explains-why-it-removed-charger-earpods-from-iphone-12-box-71602948393511.html#:~:text=To%20give%20you%20a%20quick,reduce%20the%20shipping%2Drelated%20emissions>. (Accessed: December 12, 2022).

Ikeda, S. (2021) *iCloud data turned over to Chinese government conflicts with Apple's "Privacy first" focus*, CPO Magazine. Available at: <https://www.cpomagazine.com/data-privacy/icloud-data-turned-over-to-chinese-government-conflicts-with-apples-privacy-first-focus/> (Accessed: December 12, 2022).

Isaacson, W. (2011) *Steve Jobs*. New York: Simon & Schuster.

Jazeera, A. (2022) *List of sanctions against Russia after it invaded Ukraine, Russia-Ukraine war* News | Al Jazeera. Al Jazeera. Available at: <https://www.aljazeera.com/news/2022/2/25/list-of-sanctions-on-russia-after-invasion> (Accessed: December 11, 2022).

Johnson, G. *et al.* (2014) “THE MACRO-ENVIRONMENT,” in *Exploring strategy*. Edinburgh, United Kingdom: Pearson, pp. 34–37.

Kocienda, K. (2018) *Creative selection: Inside Apple's design process during the Golden Age of Steve Jobs*. New York: Picador.

Leswing, K. (2019) *Here's why Apple is so vulnerable to a trade war with China*, CNBC. CNBC. Available at: <https://www.cnbc.com/2019/05/13/why-is-apple-so-vulnerable-to-a-trade-war-with-china.html> (Accessed: December 11, 2022).

Li, Keqiang. (2022) "Report on the Work of the Government." Beijing: Xinhua News Agency.

Lin, Y. (2022) *Smartphone market share worldwide [Nov 2022 update]*, Oberlo. Oberlo. Available at: <https://www.oberlo.com/statistics/smartphone-market-share#:~:text=The%20latest%20statistics%20on%20the,popular%20smartphone%20manufacturers%20is%20Samsung.> (Accessed: December 13, 2022).

marketcap (2022) *Apple (AAPL) - market capitalization*, CompaniesMarketCap.com - companies ranked by market capitalization. Available at: <https://companiesmarketcap.com/apple/marketcap/> (Accessed: December 11, 2022).

MacroPolo (2020) *Apple vs Huawei*, MacroPolo. Available at: <https://macropolo.org/digital-projects/supply-chain/ai-chips/apple-vs-huawei/> (Accessed: December 12, 2022).

Miller, C. (2021) *iPhone loyalty rate continues to exceed 90%, new CIRP Data shows*, 9to5Mac. Available at: <https://9to5mac.com/2021/10/28/iphone-loyalty-rate-data-switchers/> (Accessed: December 13, 2022).

Morgan, S. (2018) *The world's most valuable brand: Apple's secret to Success*, Bynder. Available at: <https://www.bynder.com/en/blog/the-worlds-most-valuable-brand-apples-secret-to-success/> (Accessed: December 13, 2022).

Porter, M. (1989) “How competitive forces shape strategy,” *Readings in Strategic Management*, pp. 133–143. Available at: https://doi.org/10.1007/978-1-349-20317-8_10.

Purdie, E. (2019) *Tracking GDP in PPP terms shows rapid rise of China and India*, *World Bank Blogs*. Available at: <https://blogs.worldbank.org/opendata/tracking-gdp-ppp-terms-shows-rapid-rise-china-and-india> (Accessed: December 11, 2022).

Researchomatic (2013) *Globalization of Apple*, *Researchomatic*. Available at: <https://www.researchomatic.com/globalization-of-apple-158511.html> (Accessed: December 13, 2022).

Roth, E. (2021) *Chinese students Sue Apple for not including a charger with the iphone 12*, *The Verge*. The Verge. Available at: <https://www.theverge.com/2021/10/27/22748474/chinese-students-sue-apple-including-charger-iphone-12> (Accessed: December 12, 2022).

Seddon, M. and Sheppard, D. (2022) *Russia indefinitely suspends Nord Stream Gas Pipeline to Europe*, *Subscribe to read | Financial Times*. Financial Times. Available at: <https://www.ft.com/content/5867c175-df16-4c8b-9b7a-a868a19d0138> (Accessed: December 11, 2022).

South China Morning Post (Hong Kong) (2019) *China: Apple accused of sending browsing data and IP addresses to Tencent*, *Business & Human Rights Resource Centre*. Available at: <https://www.business-humanrights.org/en/latest-news/china-apple-accused-of-sending-browsing-data-and-ip-addresses-to-tencent/> (Accessed: December 12, 2022).

Textor, C. (2022) *China: GDP growth rate 2027*, Statista. Available at: <https://www.statista.com/statistics/263616/gross-domestic-product-gdp-growth-rate-in-china/> (Accessed: December 11, 2022).

Wang, T. (2022) *2021: China's GDP growth beats expectations with 8.1%, fastest in 10 years*, CGTN. Available at: <https://news.cgtn.com/news/2022-01-17/China-s-GDP-tops-114-36-trillion-yuan-in-2021-16T64Jt0na8/index.html> (Accessed: December 11, 2022).

Wawro, A. (2022) *Apple M2 chip benchmark results are in - and Apple's done it again*, Tom's Guide. Tom's Guide. Available at: <https://www.tomsguide.com/news/apple-m2-chip-benchmark-tests-are-in-and-apples-done-it-again> (Accessed: December 13, 2022).