

# SMARTPHONE – WAY OF LIFE

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## INTRODUCTION:

In early 1990's, Mobile phones were commonly used for making phone calls. They had a digital phone book, number pad, pick-up and hang-up buttons. Now smartphones offer many more features and they are actually fully-fledged computers that can be used to run games and applications, send email, accessing the internet and much more. Smartphones are significant nowadays in terms of connecting people sitting at different geographical location. Smartphones have turned out to be important part of everyday life since they are portable mini computers with complete operating system offer computing capabilities.

<sup>1</sup>As per the latest statistical report by TrendForce, in the year 2019, Global Smartphone Manufacture Volume is anticipated to be 1.41 billion units with a decline of 3.3 percent compared to the year 2018. As we can see in figure 1, Samsung smartphones are leaving all the other brand phones behind in terms of global production volume. Samsung's production volume is contributing about 22.45 percent of the total market production volume in the smartphone industry. From the year 2014 till 2018, Samsung have launched 151 smartphone models like the Galaxy S series, Galaxy Note series, Galaxy A series and many more in the global market.

## SMARTPHONE PRODUCTION VOLUME

Samsung's tagline 'Next is what?' is apt looking at the future vision the brand leaders have, which is a clear indicator looking at their market dominance in the field of smartphones.

Smartphone Production Volume (units) worldwide

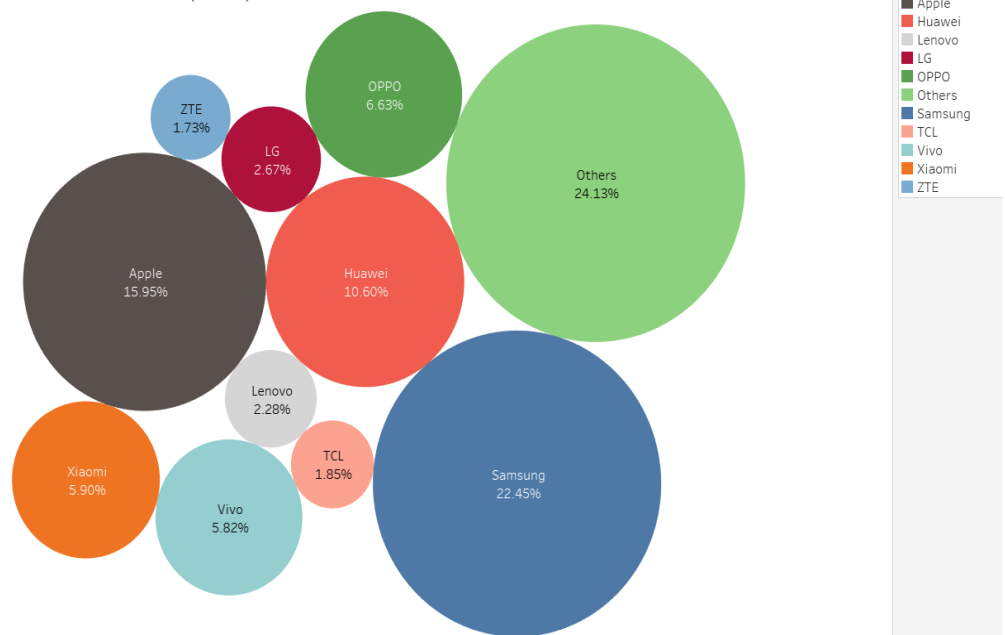


FIGURE 1- SMARTPHONE PRODUCTION VOLUME

<sup>1</sup><https://press.trendforce.com/node/view/3200.html>

## GLOBAL SHIPMENT OF SMARTPHONES

<sup>2</sup>As per the International Data Corp report, this would be the third consecutive year for global smartphone market to experience its decreasing shipments as smartphone volumes are predicted to fall by 0.8 percent with volumes dropping to 1.39 billion. However, by second half of 2019, the smartphone market is expected to pick-up momentum with a year-over-year growth of 2.3 percent. Looking at Figure 2, Global Shipments of Samsung smartphones are soaring high when compared to other brands due to their global production volume (Figure 1).

## GLOBAL MARKET SHARE OF SMARTPHONES

Market share is the ratio of a market captured by a specific company either in terms of units or revenue. Market share provides information on dominance of any brand on the global market. It also depicts how well a specific company is

performing against its opponents.

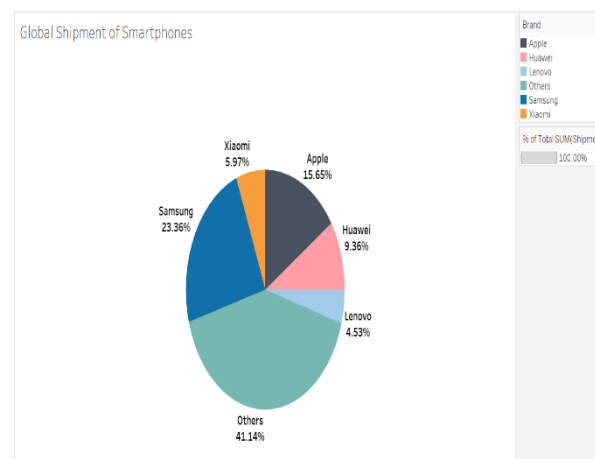


FIGURE 2 - GLOBAL SHIPMENT OF SMARTPHONES

As a growing market share is the most significant objective of any business. As we can see in Figure 3, the Apple iPhone market share is consistent and it is dominating the global market share of smartphones from year 2014 to year 2018 despite the global production volume (as showed in figure 1).

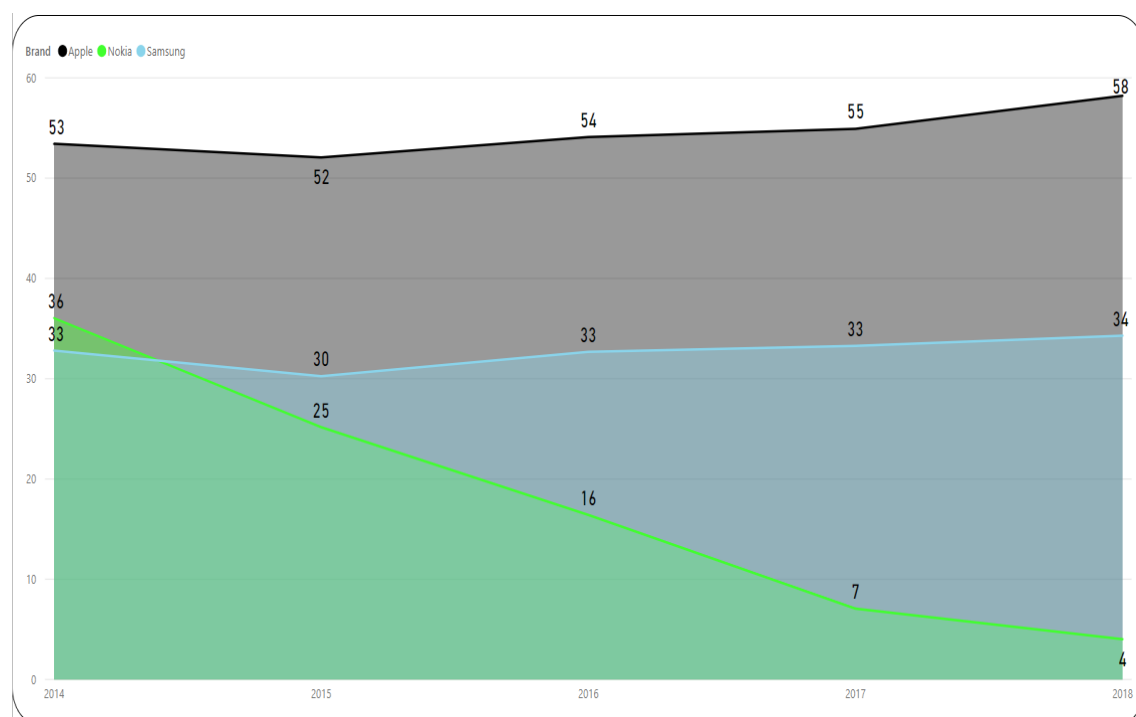


FIGURE 3 – GLOBAL MARKET SHARE OF SMARTPHONES

<sup>2</sup><https://economictimes.indiatimes.com/tech/hardware/global-smartphone-shipments-to-fall-for-third-consecutive->

[year/articleshow/68300349.cms?from=mdr&utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](https://economictimes.indiatimes.com/tech/hardware/global-smartphone-shipments-to-fall-for-third-consecutive-year/articleshow/68300349.cms?from=mdr&utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)

The global shipment volume (as showed in figure 2) of Apple iPhone being less than global production volumes and global shipment volumes of Samsung. Apple and their all-time-successful iPhone have successfully maintained their brand value even after just launching two new models every year unlike Samsung, who have launched 151 models of phones in past four years.

consumers. As we can see in figure 4, the operating system in smartphones plays a vital role to increase/decrease operating system market share at different geographical locations.

There a lot of factors like quality, customer loyalty, brand value, history, a secure operating system and many more which have helped Apple stay strong in the smartphone game over the last decade. In the year 2012, CEO Elop announced the shift of Nokia phones from Symbian to Windows. From that

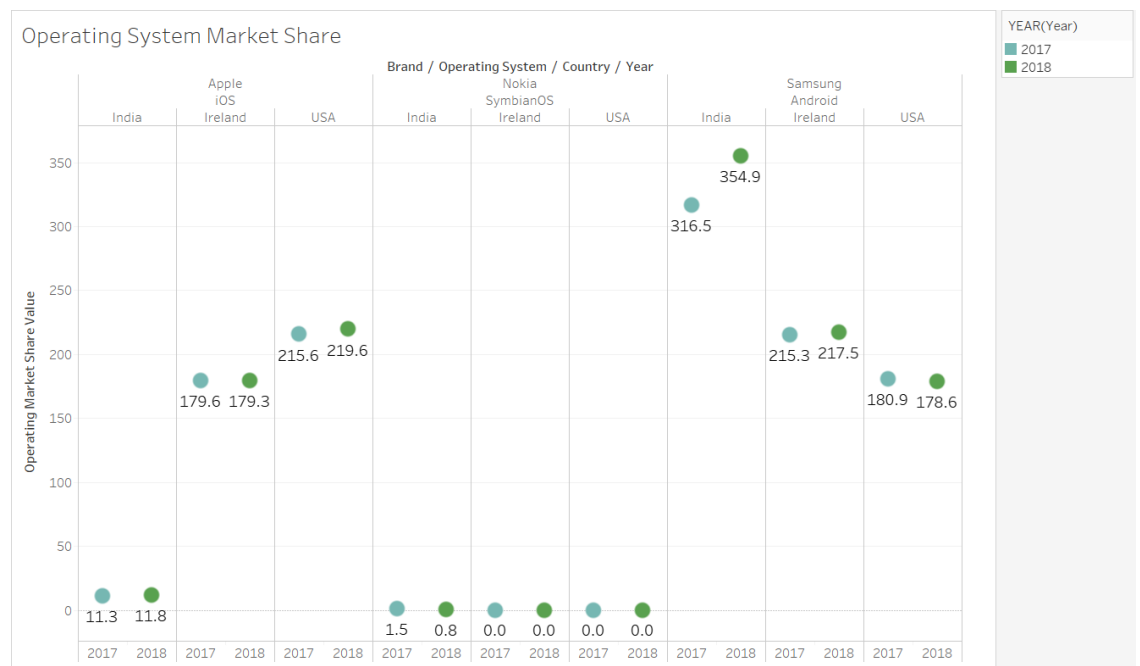


FIGURE 4 - OPERATING SYSTEM MARKET SHARE

### THE MARKET SHARE CAPITALIZED BY OPERATING SYSTEMS

<sup>3</sup>The operating system is a system program that manages both software and hardware of any computational device. Operating systems help by providing a communication link between software and hardware. Smartphone, smartwatches, tablets and other mobile devices use a mobile operating system which combines an array of features like music player, infrared blasters, and many more to make it user friendly for handheld

particular year, downward trend in market share can be seen for Nokia Smartphones.

Operating system market share is directly proportional to 'smartphone market share'. Apple's iOS is dominating the market in United States of America and on the other hand, the existence of iOS is comparatively less in India. Similarly, market share of Android is almost double as compared to that of iOS in India, whereas, the existence of Nokia's Symbian operating system is obsolete in all the three countries.

<sup>3</sup>[https://en.wikipedia.org/wiki/Mobile\\_operating\\_system](https://en.wikipedia.org/wiki/Mobile_operating_system)

### STOCK CLOSING PRICES:

<sup>4</sup>Market forces play a key factor which lead to a change in stock prices every day. Through this it means that share prices change due to demand and supply. Price of a stock goes up if the demand of that stock is more and supply of that stock is less. If the 'supply' of that stock is more and demand is less than 'buy', ultimately, the price of that stock would fall. Eventually, revenue is the most significant factor that affects the stock price value of a firm. Income is very beneficial for any organization and in this competitive market no organization can endure without it.

global market of smartphones as many new brands are currently in market and they are providing more features and

As illustrated in figure 5, Stock Closing Price of Samsung smartphones are high in all the three years because of their high production and shipment volumes worldwide compared to Nokia and Apple. The stock closing price of Nokia is almost negligible as they failed to innovate their technology and thereby failed to attract customers in global market.

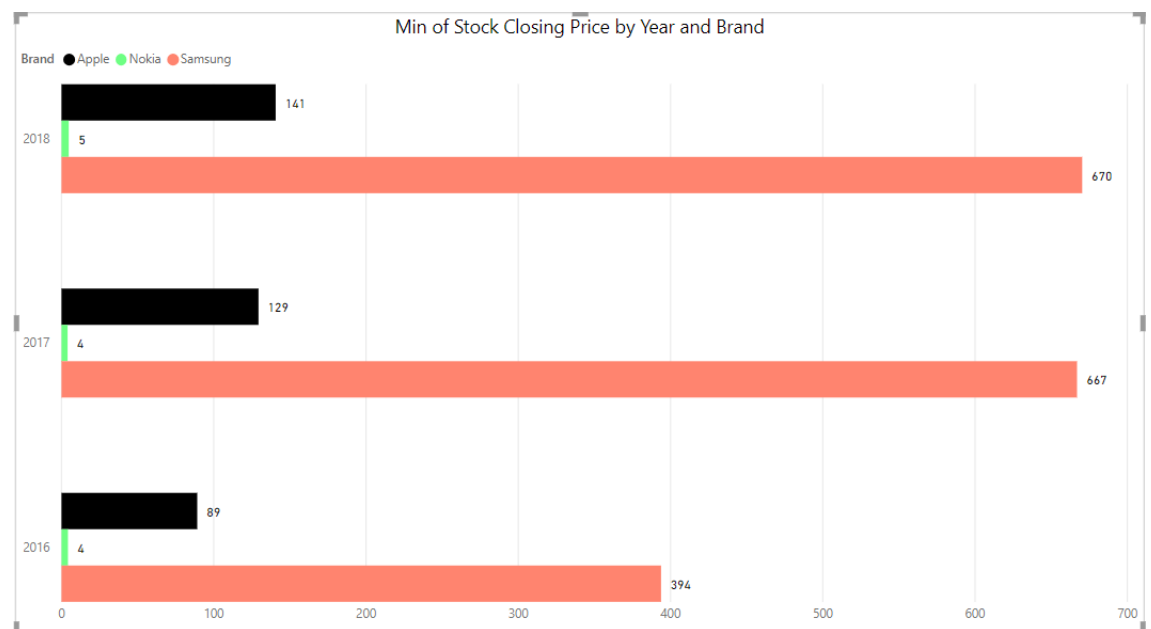


FIGURE 5 - STOCK CLOSING PRICE

### SMARTPHONE USERS IN MILLIONS

Factors like smartphone production value, smartphone shipment value, and operating system used in particular smartphone does have an effect to increase users of smartphones and it also boosts-up the market share and brand value in global market. More features in phones with lesser selling prices tend to attract more and more customers towards that specific brand. There is a lot of competitiveness in

selling them at cheap prices to capture the market. This helps them in creating a dominating presence over the current market leaders. As we can see in figure 6, five years of data is given away on smartphone users in millions showing how users have doubled in a span of five years. This provides information on significance of smartphones in day to day life.

<sup>4</sup> [https://en.wikipedia.org/wiki/Stock\\_market](https://en.wikipedia.org/wiki/Stock_market)

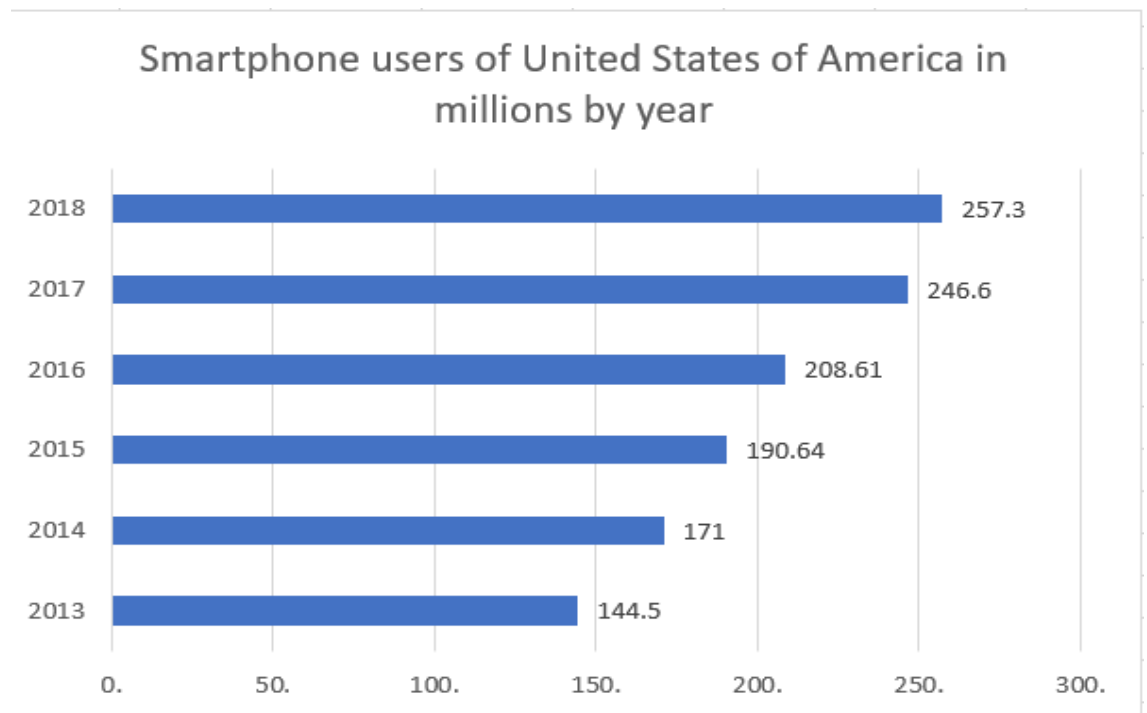


FIGURE 6 - SMARTPHONE USERS IN MILLIONS

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### SMARTPHONE OWNERSHIP IN UNITED STATES BY GENDER

<sup>5</sup>Ownership of smartphone can vary based on different countries, even across cutting-edge financial prudence. Whether in advanced economies or developing ones, the youth of any country with higher level of qualification and income are most likely to be connected digitally. In a recent survey it

found that youth of every country are more likely to own smartphone to access the internet and to use social media platforms. Large number of

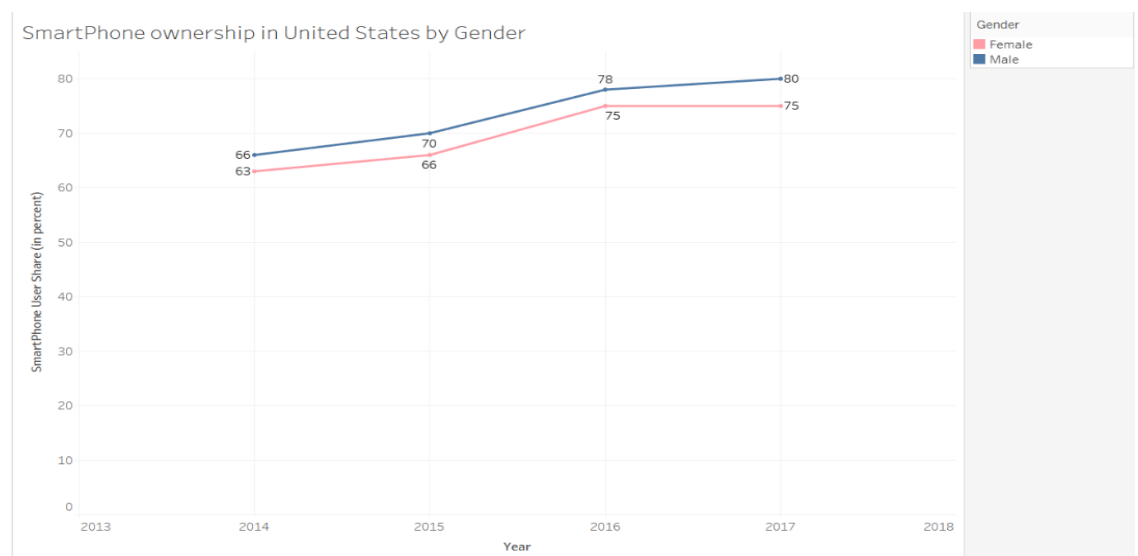


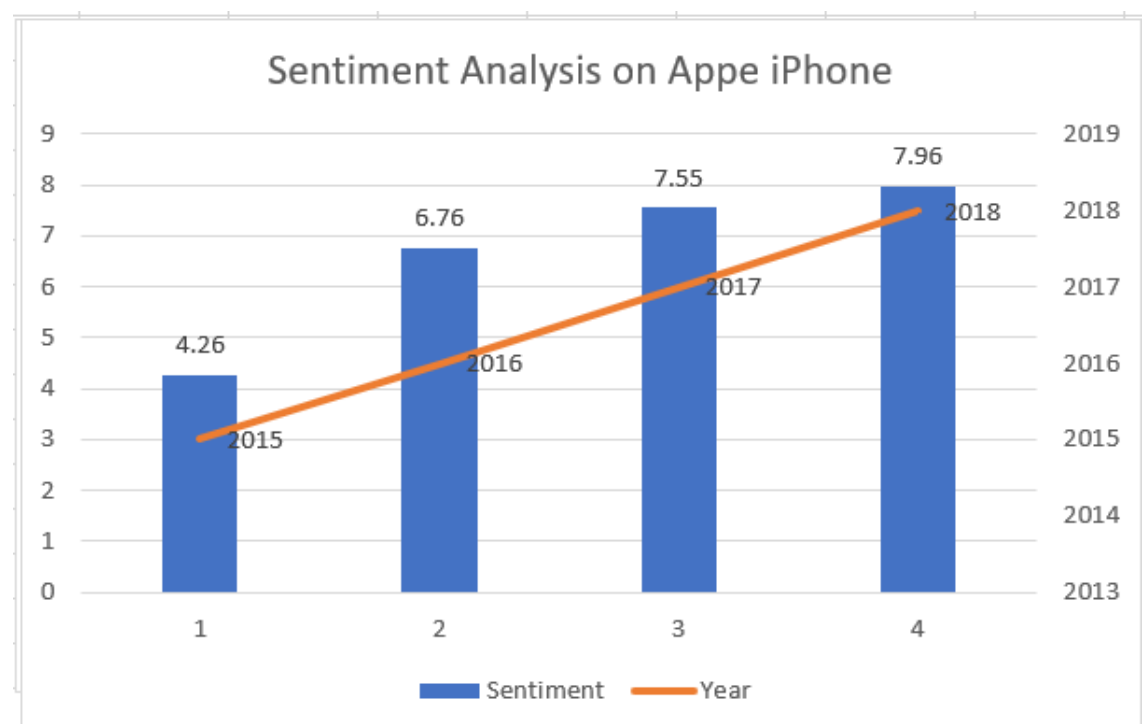
FIGURE 7 - SMARTPHONES OWNERSHIP BY GENDER

<sup>5</sup><https://www.pewresearch.org/global/2019/02/05/smartphone-ownership-is-growing-rapidly-around-the-world-but-not-always-equally/>



people below age 35 years own a smartphone. As we can see in Figure 7, Comparison on ownership of smartphones in the United States of America have been done to validate which gender has taken ownership of more smartphones in span of three years. Below statistics show that males in the USA have taken more ownership of smartphones than females.

based on the customer feedback. All companies take feedback from their customers very seriously as this helps them to innovate more and also helps them to survive in the global market. As shown in the figure 8, Apple iPhone sentiment score have increased in past four year so as its revenue. Sentiment score does have an effect on market share, stock market and production of smartphone.



### SENTIMENT ANALYSIS ON THE IPHONE:

Sentiment analysis is a feedback given by customers on any social media website about any brand. This plays a very significant role in order for customer to buy the specific brand smartphones. Positive Sentiment score of smartphones on website motivates and attract customers to purchase that specific phone. Also negative sentiment score on phones are the learning curves for companies to improve their product

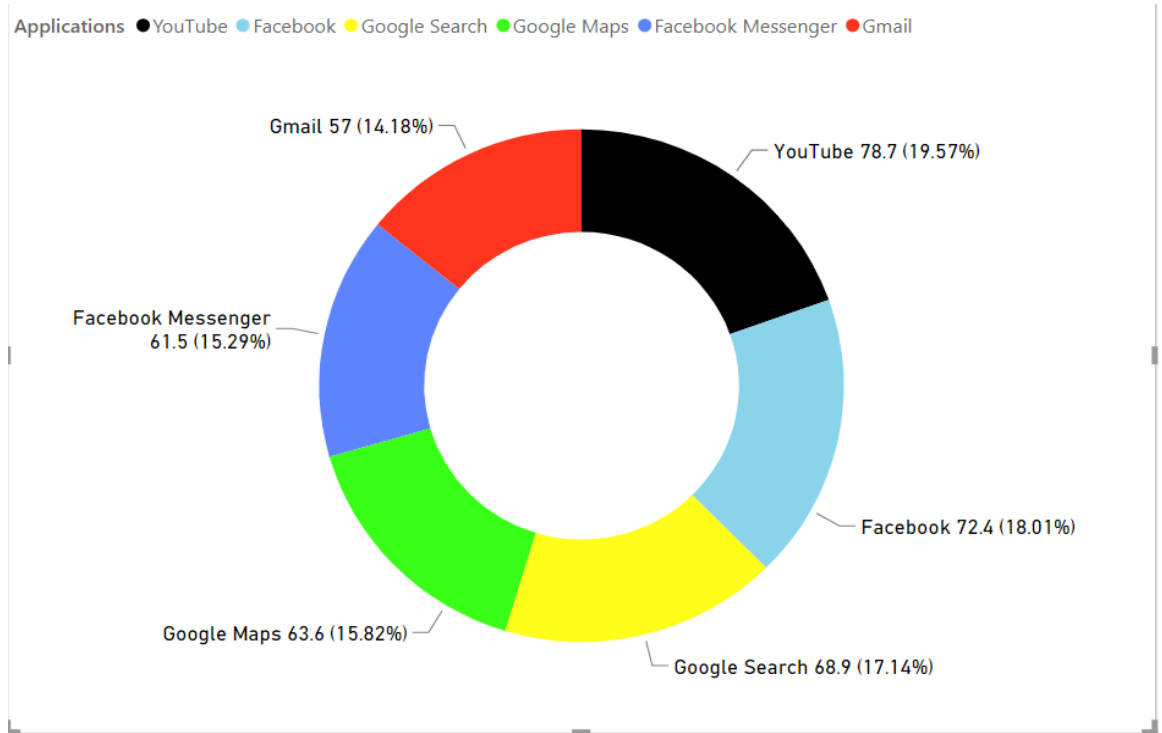


FIGURE 9 - POPULAR APPLICATIONS IN SMARTPHONES

### POPULAR APPLICATIONS IN SMARTPHONES

<sup>6</sup>Smartphone applications are software programs which are specifically designed to run on smartphone devices. Applications were initially projected for productivity support such as calendar, Email and Contact database but as per the market demands, further expansion in the field of mobile games, order-tracking, ticket purchases, GPS and many more has taken place. Application All companies take feedback from their customers very seriously as this helps them to innovate more and also helps them to survive in the global market. As shown in the figure 9, Apple iPhone sentiment score have increased in past four year so as its revenue. Sentiment score does have an effect on market share, stock market and production of smartphone.

Apple Store in the iOS platform is used by smartphones users to download necessary applications.

Some applications are free and for other application user needs to purchase it from respective application stores. As per the prediction from [Gartner], In 2013, 102 billion application would have been downloaded out of which 91% of them were free which would have generated 26 billion dollars in USA. As we can see in figure 9, YouTube, Facebook, Google Search, Google maps, Facebook messenger and Gmail are the top five most utilized application worldwide in which YouTube have been more utilized by users followed by Facebook and other applications.

<sup>6</sup> [https://en.wikipedia.org/wiki/Mobile\\_app](https://en.wikipedia.org/wiki/Mobile_app)



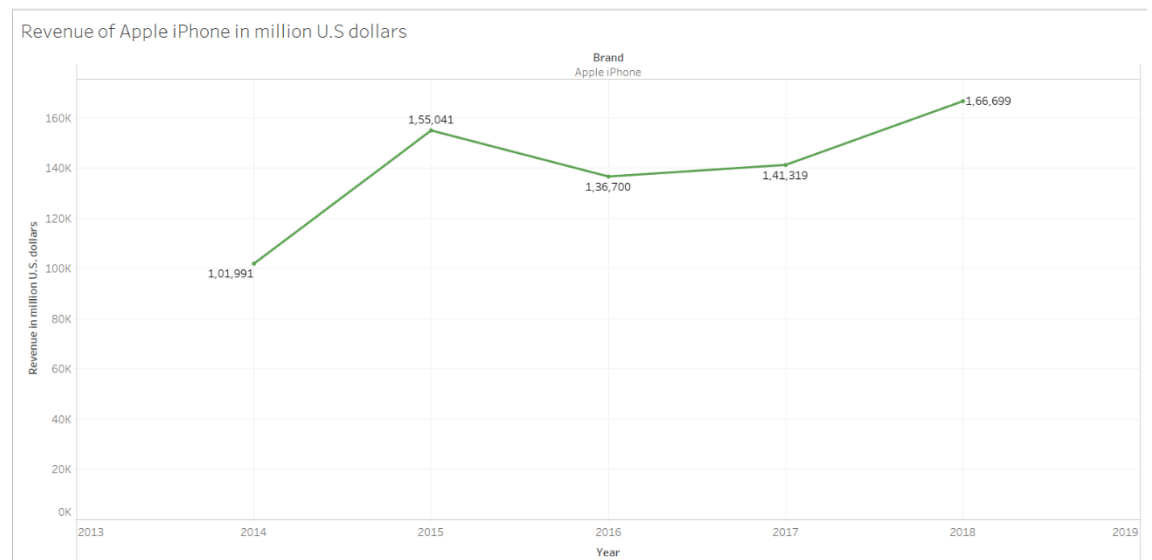


FIGURE 10 - REVENUE OF APPLE IPHONE IN MILLION US DOLLARS

### REVENUE OF THE APPLE IPHONE

Revenue is a very important factor for any company and its employees to compete in the global market of smartphones. Day-by-day some or other brands of smartphones are getting launched in the market which are providing more features in their phones to attract more customer within reasonable prices. Profit in revenue provide courage to the companies to do new innovation and to make their future phones better than the last model. Apple iPhone is one of most selling phones across the world.

As illustrated in figure 10, Apple iPhone revenue have been increased more than half a million within span of four year. This shows how iPhone have lived-up to the expectation of customers by providing many enhanced features in their phones over the period of time.

### CONCLUSION:

Visualized data depicts that how production and shipment volume of any smartphone helps to increase its sales and revenue also affecting the market shares of smartphones and market share of operating system. Stock closing price of smartphone provide information of its dominance in the global market. It provides information of smartphone users in millions along with ownership taken by users in million by gender. YouTube is the most popular application which is getting used in smartphones followed by Facebook. Sentiment analysis on Apple iPhone have been done and positive feedback from users can be seen in statistics. This leads them to increase in their company revenue and it also allow them to compete in global market of smartphone. Increase in production and shipment of smartphones means hike in number of jobs in this field.

## Appendix:

### 1. Data Sources:

Ten dataset have been used to complete this report from four different Datasource namely Statista, Statscounter, Yahoo Finance and YouTube.

#### Data Source 1: Statista

Below are the six datasets which downloaded from Statista in excel format.

<https://www.statista.com/statistics/194998/percentage-of-us-smartphone-owners-by-gender/>

Published date: February 2018

<https://www.statista.com/statistics/281605/reach-of-leading-us-smartphone-apps/>

Published date: May 2019

<https://www.statista.com/statistics/271491/worldwide-shipments-of-smartphones-since-2009/>

Published date: January 2019

<https://www.statista.com/statistics/742531/global-smartphone-production-volume-share/>

Published date: November 2018

<https://www.statista.com/statistics/201182/forecast-of-smartphone-users-in-the-us/>

Published date: February 2019

<https://www.statista.com/statistics/263402/apples-iphone-revenue-since-3rd-quarter-2007/>

Published date: April 2019

#### Data Source 2: Statscounter

Operating market share and market share by vendor data is downloaded in .csv format

<http://gs.statcounter.com/os-market-share>

Published date: May 2019

<http://gs.statcounter.com/vendor-market-share/mobile>

Published date: May 2019

## Can I use StatCounter Global Stats data for my blog/website/paper/project/book?

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### Data Source 3: Yahoo Finance

<https://finance.yahoo.com/>

Published date: June 2019 (Finance data gets updated every day on this website)

### Data Source 4: YouTube

<https://www.youtube.com/watch?v=9Ca8zWJOIFQ>

Published date: Real time sentiment score data is getting extracted.

## TYPES OF CHARTS:

### Figure 1:

Bubble chart have been used to show Smartphone Production volume (worldwide) for nine smartphone brands. Different colours have been selected based on their brand logo.

Software: Tableau

### Figure 2:

Pie Chart have been used to show Global Shipment of Smartphones for five brands in percentage. Different colours have been selected based on the colour of their brand logo.

Software: Tableau

### Figure 3:

Area chart have been used to show the magnitude of Global Market of Smartphones. Light colour has been used based on the colour of respective brand logo.

Software: Power BI

### Figure 4:

Circle view chart have been used to do comparative analysis on the market share capitalized by operating system.

Software: Tableau

### Figure 5:

Clustered Bar chart have been used for two or more data series which are grouped together to find insights of stock closing of smartphones.

Software: Power BI

**Figure 6:**

Horizontal bar chart has been used to show six year of data on smartphone users of USA in millions.

Software: Excel

**Figure 7:**

Dual line chart has been used to compare the performance of multiples series of data and here it is used to show ownership of Smartphones in USA by gender.

Software: Tableau

**Figure 8:**

Bar-line combination chart have been used to show sentiment analysis of users on Apple iPhone over the span of four years.

Software: Excel

**Figure 9:**

Doughnut Chart have been used to show the most popular applications in smartphones (in percent) as it can show how much market that particular application is occupied.

Software: Power BI

**Figure 10:**

Line Chart have been used to show how much revenue of Apple iPhone has increased in span of five years.

Software: Tableau