

## LEVEL 5 ASSESSMENT SPECIFICATION

|                   |                        |                                                |                      |
|-------------------|------------------------|------------------------------------------------|----------------------|
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## **Introduction**

This report is subjected to the assessment of the market behavior of the companies concerning the changes in the managerial economic tools that also take into account different microeconomic phenomena of the markets. A company will be selected that sells a relevant product in the market of the UK and this assessment of microeconomic factors will be done in the context of that business and industry. Factors influencing the demand for that product will be assessed and how income effect and substitution effect can impact the price elasticity and income elasticity of demand will be analyzed in the later part of this report.

Managerial economics is a branch of modern economics that is used to analyze the major business decisions made by the management of a company with the help of various microeconomic and macroeconomic tools. Some of those tools are- demand and cost, market structure (Perfect Competition, monopoly, duopoly, oligopoly, etc.), the trade-off between firms, proper allocation of the resources available to the firm, etc. These measures are useful for managers to make better decisions related to the business (Samuelson, Marks & Zagorsky., 2021).

## **Part 1**

### **Name and description of the company and its product**

In 1973, when mobile phones were first introduced, they provided a new dimension to the communication system of the entire world. Mobile phones were a bit different in their nature and operations compared to telephones. In current times, there are two operating systems of the handsets that are used in the entire market of mobiles. These two types are the android operating system and the iOS operating system. This iOS operating system is mainly used in the handsets of Apple (Uswitch, 2022).

Apple Inc. is a US-based technology company that operates in multiple nations of the world. Steve Jobs 1976 first opened this company that used to prepare and sell personal computers at first. After that, the company introduced multiple other technological tools such as MacBook, iPad, iPhones, AirPods, Apple Watch, etc. The specialty of these items is the use of iOS instead of the regular operating system or android. There are more than 500 stores of the company all around the world and in 2022, the company is said to have generated a turnover of 394.33 billion US dollars alongside having an assets value of 52.76 billion US dollars. The company is headquartered in

California, USA, and Tim Cook is currently operating as the CEO of the company (Encyclopædia Britannica, 2022).

The handset of the company will be used for the discussion in the paper.

### **Choice of the product**

Mobiles and handsets are regarded as one of the most essential devices for people. Not only in communication but also terms of other operations, handsets are useful. Smartphones in recent times provide a lot of features like calculation, watching movies, games, etc. The market of handsets is also filled with several companies so the change in the behavior of the market can be assessed using demand-cost modules and price elasticities of demand too.

## **Part 2**

### **Demand and market equilibrium analysis**

To analyze the market equilibrium in economics, demand and supply schedules are considered for a particular product or the overall market. Equality in the quantity demanded and quantity supplied between the consumer and supplier at a certain price is regarded as the equilibrium of the market for that product. At equilibrium, neither the suppliers nor the consumers tend to shift away (Baker., 2003). So, this situation is good for both the consumers and suppliers of a market in terms of achieving their self-objectives. One of the best examples of market equilibrium is the scenario of a competitive market where the cycle of production and purchase is stable and the number of goods is transacted at a market-clearing price (MasterClass, 2022).

It is not possible to collect the price-quantity data that would correspond to the demand-supply equilibrium of Apple Inc.'s handsets in the UK smartphone market. Therefore, using economic concepts a price-quantity dataset has been prepared to design a demand-supply module of the business.

#### **Market equilibrium of Apple Inc.**

| Price (£) | Quantity demanded | Quantity Supplied |
|-----------|-------------------|-------------------|
| 5000      | 9                 | 3                 |
| 7000      | 7                 | 5                 |
| 8000      | 6                 | 6                 |
| 10000     | 3                 | 8                 |
| 12500     | 1                 | 10                |

**Table 1: Price-quantity dataset of Apple's iPhones**

(Source: Self-prepared report, 2022)

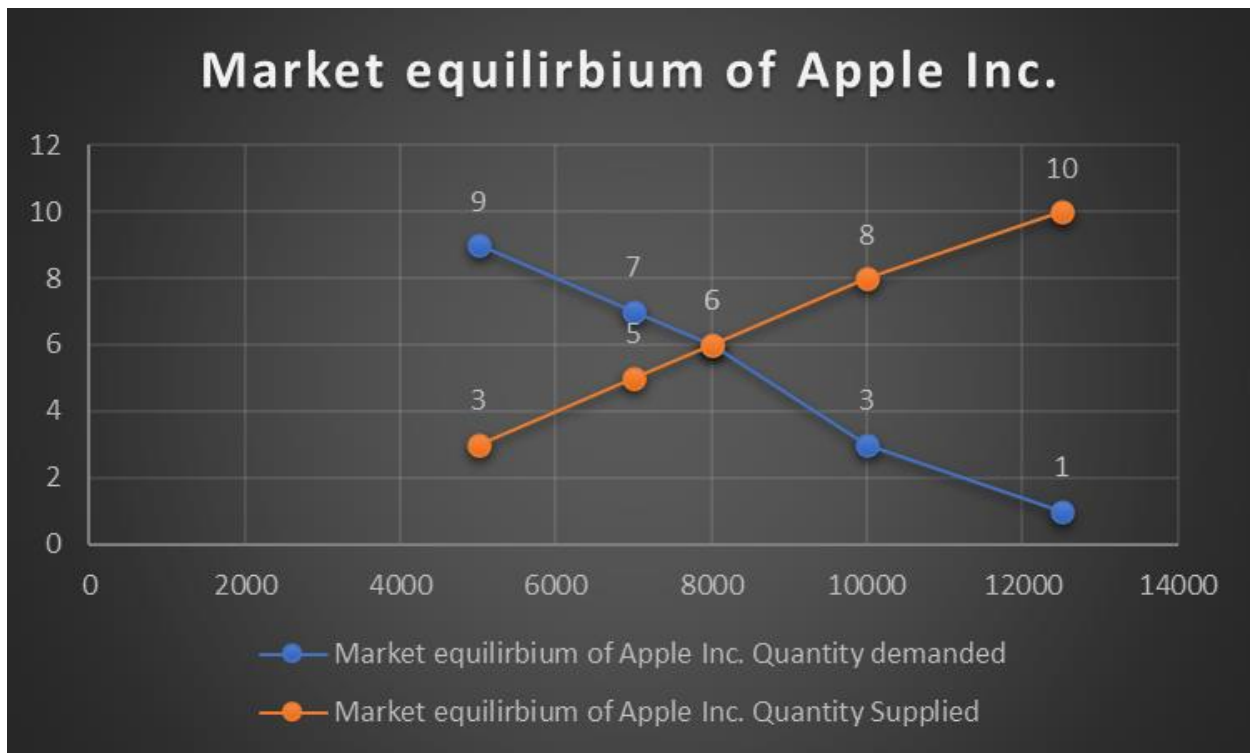


**Fig. 1: Market equilibrium of Apple Inc.'s handsets**

(Source: Self-prepared, 2022)

So, from the demand and market equilibrium schedule, it is to be stated that the equilibrium price or the market-clearing price is £6000 and the equilibrium quantity of handsets is 6 units.

### **Factors that can influence the demand for Apple's handsets**

From the books of economics, it is found out that there are mainly 6 factors that can induce a change in the demand for the products. These 6 factors are- the price of the substitutes, the price of the complements, the income of the consumers, their tastes and preferences, future price expectations about the good, and the impact of demography as well.

#### **Price of the substitutes**

If the theory of demand is followed in general, it is seen that an increase in the price of the substitutes would increase the demand for the main good. A substitute is an alternative to a particular good that the consumers can use in place of another good.

Apple's iPhones have a lot of alternatives in the form of android smartphones. There are various companies such as Samsung, Vivo, Huawei, Google Pixel, Motorola, etc. Generally, the price of iPhones is higher than the price of android phones. In the UK, Apple and Samsung are the leaders so, Apple faces strong competition in the name of Samsung. But Samsung is forced to increase the prices of its android smartphones in the UK which could lead to an increase in the demand for Apple iPhones.

| <b>Annual revenue of iPhones</b> |                              |
|----------------------------------|------------------------------|
| <b>Years</b>                     | <b>Revenue (\$ billions)</b> |
| 2017                             | 141.2                        |
| 2018                             | 166.2                        |
| 2019                             | 142.3                        |
| 2020                             | 137.7                        |
| 2021                             | 191.9                        |
| 2022                             | 205.4                        |

**Table 2: Revenue earned from the sales of iPhones**

(Source: Business of Apps, 2022)

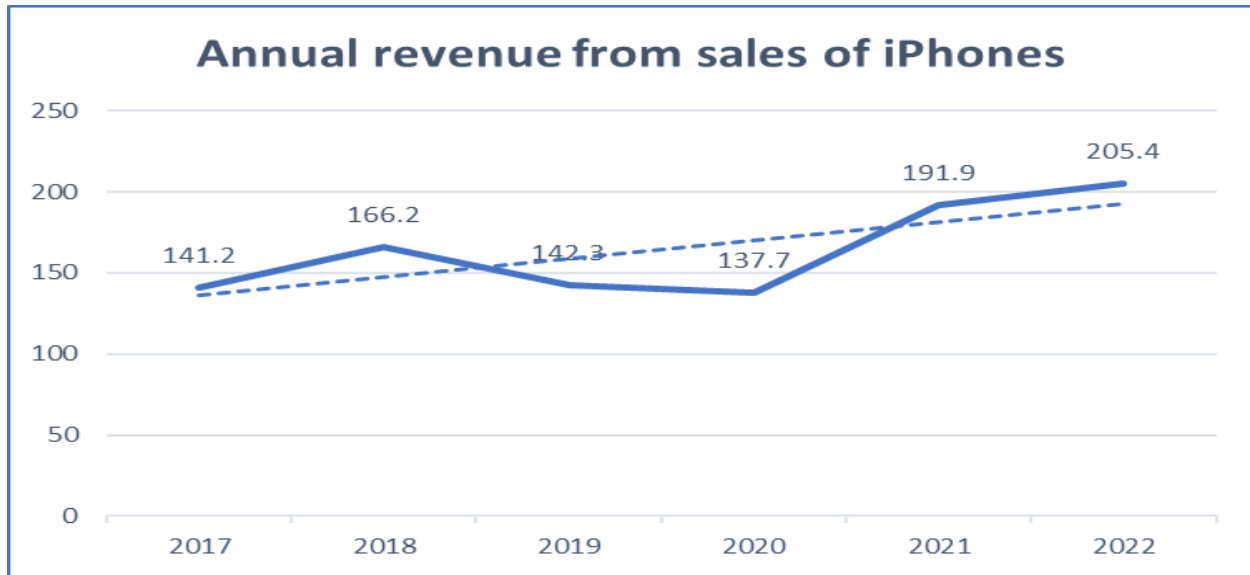


**Fig. 2: Increasing trendline of the revenue of iPhones**

(Source: Self-prepared report, 2022)

Here, the figure shows that the revenue of the sales from iPhones has increased over the years which is a reflection of the increasing demand for iPhones over android smartphones.

### **Price of the complements**

Another important factor in determining the demand for a good is the changing price of the complements available. Often the good's demand increases when the price of its complement falls and the demand will fall if the price of the complements increases. Apple iPhones are subjected to having SIM cards, chargers, mobile applications, and headsets as some of their complements.

In the UK, the price of the chargers has reduced a bit and this will surely increase the demand for the iPhones. In near future, the use of common chargers will help to increase the demand for the iPhones. But the charges of SIM cards have become costlier than before and without SIM cards, the use of any handset is not worth it. So, this can induce a fall in the demand for the iPhones in near future (Expatica, 2022).

### **Income of the consumers**

The people of the UK are currently struggling with low-income growth because of the pandemic and high inflation rates (ONS, 2022). The unemployment rate has increased a lot as well. This would hurt the demand for the Apple iPhones in present as well as in the future.

The following graph shows how the mean disposable income and median disposable income of the people have changed in the UK in the last few years.

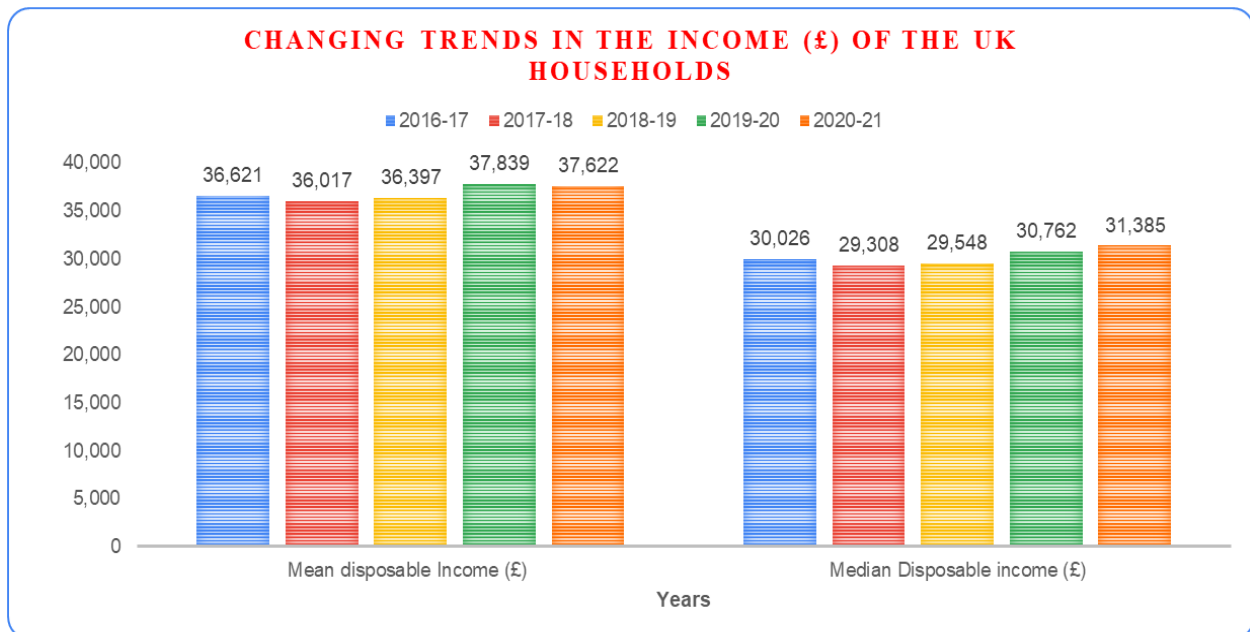


**Fig. 3: Change in mean income and the median income of the UK people**

(Source: Self-prepared, 2022)

With a reduction in the average income and the forecast that the income can fall more in coming years, iPhones are luxury items so the demand for iPhones will surely fall if anything such happens.

### **Tastes and preferences of customers**

Taste and preferences are important in determining the demand for a good. If people prefer a good more than anything else, then the demand for that good will surely increase. In the case of handsets in the UK, people prefer iPhones over the android phones of Samsung and other companies are quite a distance away from these two companies. Hence, it can be said that the demand for iPhones will surely increase shortly.

### **Future price expectation**

If people start expecting that the price of their demanded goods can increase in the future then they will look to purchase more of those goods in the current period. So, in the current period, those products will see an increment in demand.

It was seen from the first quarter of 2022, that Apple Inc. has increased the average price of the iPhones to recover the profit the company lost in 2019 and 2020 because of the outbreak pandemic. In the first two quarters, the average price has already increased and it can increase more in the

coming quarters of 2022 and the coming years as well. So, it is expected that demand for iPhones can increase at this moment (Financial Times, 2022).



**Fig. 4: Forecast about the increase in the average price of iPhones in the UK**

(Source: Financial Times, 2022)

### Demography

With an increased number of customers, the demand for a product increase as well. The increase in the number of customers of Apple iPhones is depicted by the increased value of the market share (%). These figures also reflect that in the last 5 years, the demand for Apple's iPhones has increased as well.

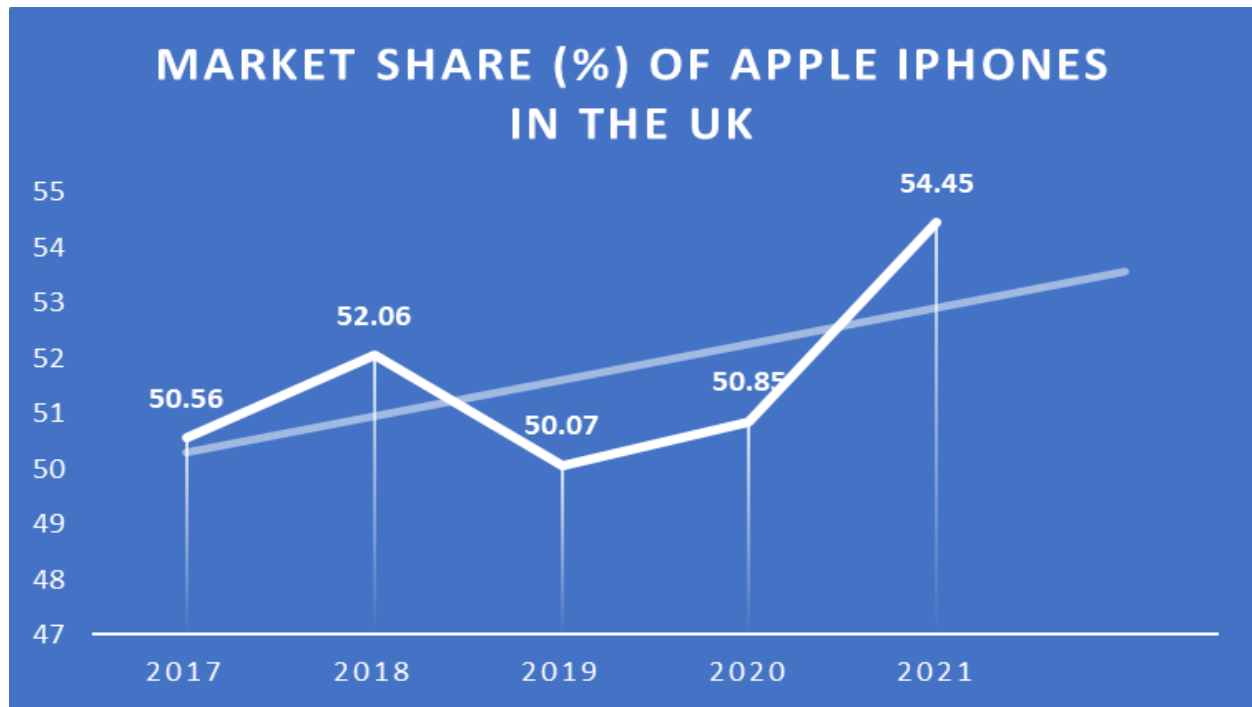


**Fig. 5: Increase in the market shares of the iPhones in the UK**

(Source: Statista, 2022)

### **Part 3**

#### **Substitution effect and the price elasticity of demand**

In economics, if the demand for goods changes concerning a change in the rate of exchange between two goods, this incident will be called the substitution effect of those two goods. This concept is also useful in determining the value and nature of the price elasticity of demand for the products. If the demand for a product changes because of the change in the price of another good, then it is regarded as the cross-price elasticity of the two goods (Andreyeva *et al.*, 2010). Generally, if the products are substitutes for each other, the cross-price elasticity of the two goods is high, that is the product's demand is more cross-price elastic while in the case of complements the cross-price elasticity is less elastic or inelastic as well.

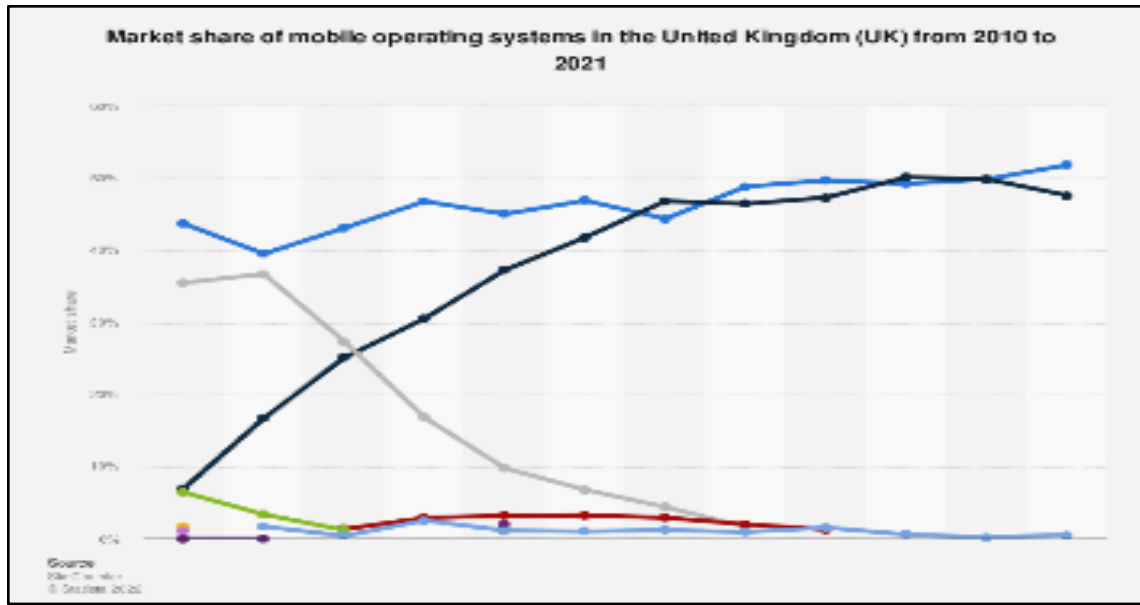


**Fig. 6: Market share of the handset's operating system in the UK**

(Source: Statista, 2022)

This figure shows that in recent years, the iOS operating system is more used by UK people compared to the android operating system. These stats also represent an increase in the demand for the iPhone handsets that are subjected to the use of the iOS system in its devices because the iOS-based iPhones have android-based smartphones as their close substitutes. The cross-price elasticity of iPhones will be high as well in this case.

Again, if the price of the complement changes, then the demand for the iPhones will be inelastic as people will demand more or less of the products if the price of the complements falls or rise respectively. Here, SIM cards are considered as close complements to the iPhones. The cost of SIM cards. E-SIM cards are mainly used by Apple Inc. in its iPhones, and the cost of these SIM cards is expected to increase in the coming periods (Statista, 2022). So surely the cross-price elasticity will become more negative.

### **Income effect and elasticity of demand**

The income effect is another essential concept of managerial economics that will be considered in determining the demand and demand elasticity of a product. If the quantity demanded of goods changes with a change in the income of the consumer, the phenomenon is regarded as the Income elasticity of demand (Andreyeva *et al.*, 2010). The nature of income elasticity depends on the

nature of the good. If the good is normal, then it will always have a low-income elasticity, that is the good is income inelastic. While, for a luxurious good, the income elasticity is always high, rather very high meaning that the product is highly income elastic.

The handsets of Apple Inc., that is the iPhones are considered luxury goods. Therefore, iPhones will always be highly income elastic. High-income elasticity means that if the income of the customer increases, they will look to purchase more iPhones to showcase their high financial status as they have more purchasing power now. Similarly, on the other hand, if the income of the people falls the demand for iPhones will fall drastically. Currently, the income effect on the sales of iPhones is negative and it results in a highly elastic demand curve for Apple's handsets.

| <b>The mean and median income of the UK consumers</b> |                                   |                                     |
|-------------------------------------------------------|-----------------------------------|-------------------------------------|
| <b>Years</b>                                          | <b>Mean disposable Income (£)</b> | <b>Median Disposable income (£)</b> |
| 2016-17                                               | 36,621                            | 30,026                              |
| 2017-18                                               | 36,017                            | 29,308                              |
| 2018-19                                               | 36,397                            | 29,548                              |
| 2019-20                                               | 37,839                            | 30,762                              |
| 2020-21                                               | 37,622                            | 31,385                              |

**Table 3: Change in mean and median disposable income of the UK households**

(Source: Office for National Statistics, 2022)

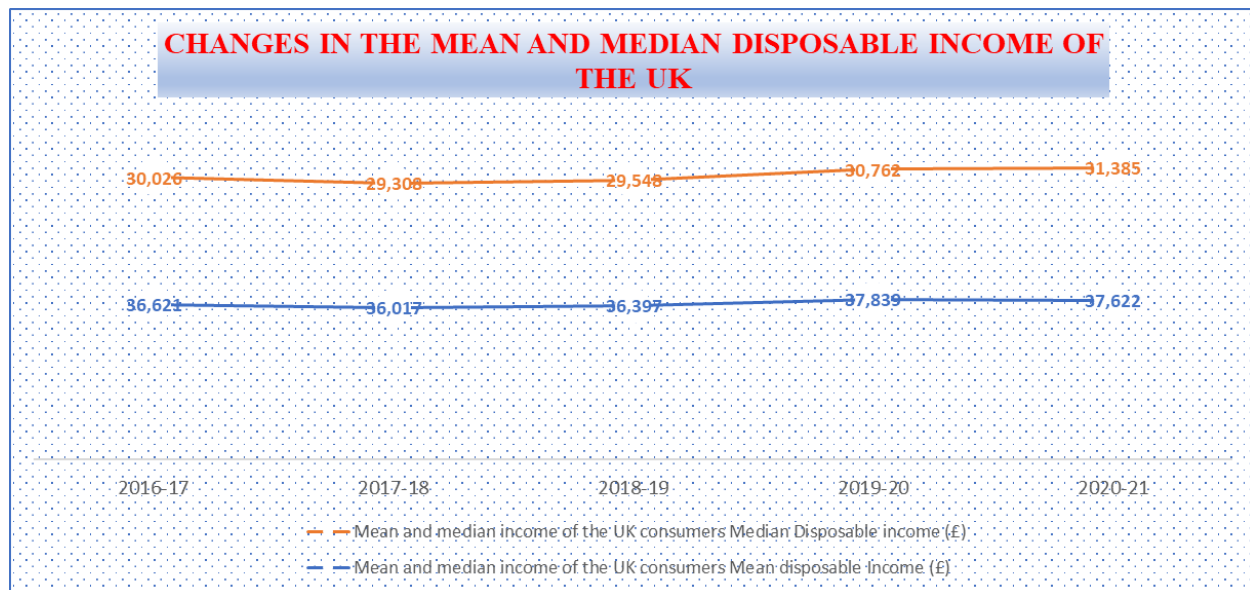


**Fig. 6: Changes in the mean and median disposable income of the UK people**

(Source: Self-prepared, 2022)

As one can see the average income per person has fallen in 2020-21 compared to 2019-20 and this would result in a reduction in the demand for the iPhones the income elasticity will become more elastic if the income rate continues to fall in coming years.

### **Recommended pricing policy for Apple Inc.**

The pricing policy of a company refers to the measures and steps taken by the company itself while setting the selling prices of its products. The companies are always helped by the pricing policy to incur more profit from the sale of the products. Price differentiation is also seen in the context of different products of the company (Indeed, 2022).

Different pricing policies are used by the companies- Premium pricing, Penetration pricing, Bundle pricing, Skimming pricing, economy pricing, etc. Premium pricing refers to charging high prices for quality products while penetration pricing refers to acquiring market shares by setting low prices for better products and after that, increasing them slowly. Skimming pricing refers to setting a high price for products that are of low quality (MindTools, 2022).

While Apple uses value-based pricing or penetration pricing policies for its handsets. The company states that the prices are charged according to the quality of the product it provides (Bagwell., 2005). But, in developing countries where the standard of living is not so high, the company should

look to use penetration pricing to acquire the market of that country and then start looking for profitability.

## **Conclusion**

Here, the concepts of managerial economics are firmly studied in the context of Apple Inc.'s handsets that have worldwide fame. The demand for iPhones is affected by various factors that have been discussed here. Also, the effects of the substitution effect and income effect on the demand elasticity of iPhones have been studied with the correspondence of the different tools of managerial economics. The company can assess all these factors and can also consider the pricing policy suggested in this report. Hopefully, the strategy will help to gain more control in the market of the developing countries of Asia, Africa, and South America.

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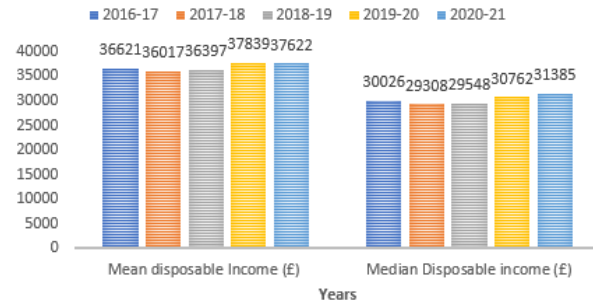
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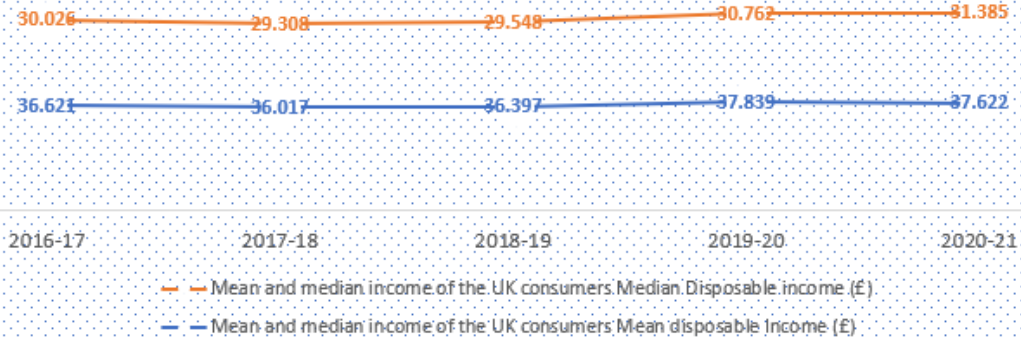
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| Mean and median income of the UK consumers |          |                              |
|--------------------------------------------|----------|------------------------------|
| Years                                      | Mean dis | Median Disposable income (£) |
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### CHANGING TRENDS IN THE INCOME (£) OF THE UK HOUSEHOLDS

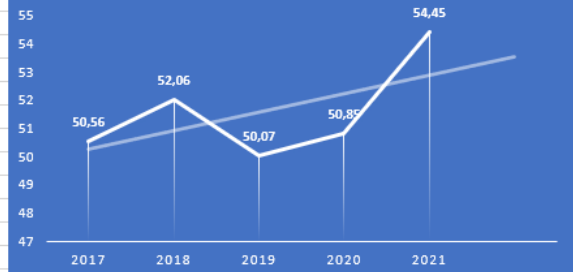


### CHANGES IN THE MEAN AND MEDIAN DISPOSABLE INCOME OF THE UK

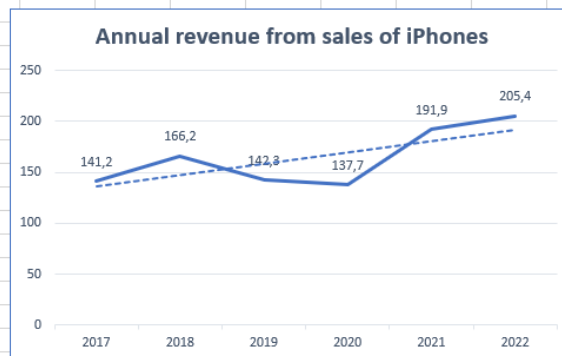


| Market share (%) of the Apple iPhones in the UK |                  |
|-------------------------------------------------|------------------|
| Years                                           | Market share (%) |
| 2017                                            | 50,56            |
| 2018                                            | 52,06            |
| 2019                                            | 50,07            |
| 2020                                            | 50,85            |
| 2021                                            | 54,45            |

### MARKET SHARE (%) OF APPLE IPHONES IN THE UK



| Annual revenue of iPhones |                     |       |
|---------------------------|---------------------|-------|
| Years                     | Revenue (\$ bllion) |       |
| 2017                      |                     | 141,2 |
| 2018                      |                     | 166,2 |
| 2019                      |                     | 142,3 |
| 2020                      |                     | 137,7 |
| 2021                      |                     | 191,9 |
| 2022                      |                     | 205,4 |



| Market equilibrium of Apple Inc. |          |                   |
|----------------------------------|----------|-------------------|
| Price (£)                        | Quantity | Quantity Supplied |
| 5000                             | 9        | 3                 |
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| 8000                             | 6        | 6                 |
| 10000                            | 3        | 8                 |
| 12500                            | 1        | 10                |

