

# GOVERNMENT ARTS COLLEGE, PARAMAKUDI

## UG DEPARTMENT OF MATHEMATICS

**PROJECT TITLE:**

**IREVOLUTION: A Data Driven Exploration Of Apple**

**IPhone's Impact In India**

**SUBMITTED BY:**

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**DEPARTMENT OF MATHEMATICS**

**GOVERNMENT ARTS COLLEGE, PARAMAKUDI.**

## INTRODUCTION

One year after Apple Inc. CEO Steve Jobs announced the company's industry-changing iPhone on January 9, 2007, at the Macworld convention in San Francisco, the share price of Apple's stock has more than doubled to a January 9, 2008, value of \$179.40 (See Chart 1). This stock price incorporates all of Apple's business, but a large part of the rise in value can be attributed to the launch of the cutting-edge iPhone, of which four million have already been sold through mid-January 2008 (Carew, 2008). Based on this simple observation of the stock price, the iPhone can so far be declared a success, at least from a shareholder standpoint. This paper will explore both the pre- and post-launch activities surrounding the iPhone to explain why it was such a success for the stockholders and why Apple's reputation for unparalleled marketing success is deserved.



Chart 1: This chart depicts the astounding growth of Apple's stock from January 9, 2007, to January

The world has changed as a consequence of the increasing use of smartphones, which have improved communication, connected people, and revolutionized many different businesses. With its main product, the iPhone, capturing markets around the world, Apple Inc. has emerged as a prominent player among the top smartphone makers. India, one of the economies with the greatest economic growth, has seen a tremendous increase in smartphone usage, making it an interesting market to study the effects of Apple's iPhone.

## Empathy map



**Saya**

What have we heard them say?  
What can we imagine them saying?

The impact on the Tech Industry: The Apple I marked the beginning of a new era in personal computing, where technology became more accessible to everyday users.

impact of phone in  
intensity of phone use  
were odd response quality  
the third of aspects of age  
part is the structural  
growth of the grid  
shortest of product (GDP)

**Phone launch:** In the years before the iPhone's launch, Apple was still struggling. The iPod was a big growth driver, but it was nothing like what the iPhone would do starting in around 2008.



Persona's name	Short summary of the persona
----------------	------------------------------

### Features of Phoenix Accounting Software

iPhone 14 and iPhone 14 Plus feature a 120 Hz, offering a scrolling smoothness that even keeps up with fast-paced action on the big screen. And it's all powered by the A16 Bionic chip, which is the most powerful chip ever in a smartphone. And it's all in a package that's thinner, lighter, and more durable than ever before. So you can enjoy the best of both worlds: a powerful performance and a sleek design. And it's all in a package that's thinner, lighter, and more durable than ever before. So you can enjoy the best of both worlds: a powerful performance and a sleek design.

[illegible][illegible]

**Thinks**  
What are their wants, needs, hopes, and dreams?  
What other thoughts might influence their behavior?



Suggest I ask her to write it. One of the things I like about her is that she's a good writer. I'll be sure to let her know that I'm a good writer, too. I'll be sure to let her know that I'm a good writer, too. I'll be sure to let her know that I'm a good writer, too.

replaced all the iPhone and iPod touch devices. Apple says it has 75% of the software market share in the United States, and that it has a 70% share in the mobile operating system market. Apple also says it has a 70% share in the mobile operating system market. Apple also says it has a 70% share in the mobile operating system market.

**Perman+:** I Perman+ will be in a week or so. IPhone users: it's subtle; but I can and enjoy either. I discount it as altered it, even if they don't have an App behind it.

iPhone users: Apple Forum + for All iPhone Users

Phone users will have access to the entire service featuring over 3,000 studio-style workouts and real trainers, all led by a diverse and inclusive team of trainers.

Phones offer more security and privacy: The iPhone even stops apps from tracking your activity online because of a limited OS and platform. Its iMessages and FaceTime video calls are also end-to-end encrypted.

**The Phone Has Changed The Way We Communicate**  
Before the first phone hit the market, a few cell phone companies put carriers in their phones, but the carriers used in these phones were head and shoulders above the rest.

## Does

What behavior have we observed?  
What can we imagine them doing?



### Feels

What are their fears, frustrations, and anxieties?  
What other feelings might influence their behavior?



④ See an example

2

## Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕒 10 minutes

### TIP

You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

### Person 1

1. How do you know the top of the mountain is the best place to build a house? How do you know the top of the mountain is the best place to build a house? How do you know the top of the mountain is the best place to build a house?

### Person 2

2. How do you know the top of the mountain is the best place to build a house? How do you know the top of the mountain is the best place to build a house? How do you know the top of the mountain is the best place to build a house?

### Person 3

3. How do you know the top of the mountain is the best place to build a house? How do you know the top of the mountain is the best place to build a house? How do you know the top of the mountain is the best place to build a house?

### Person 4

4. How do you know the top of the mountain is the best place to build a house? How do you know the top of the mountain is the best place to build a house? How do you know the top of the mountain is the best place to build a house?

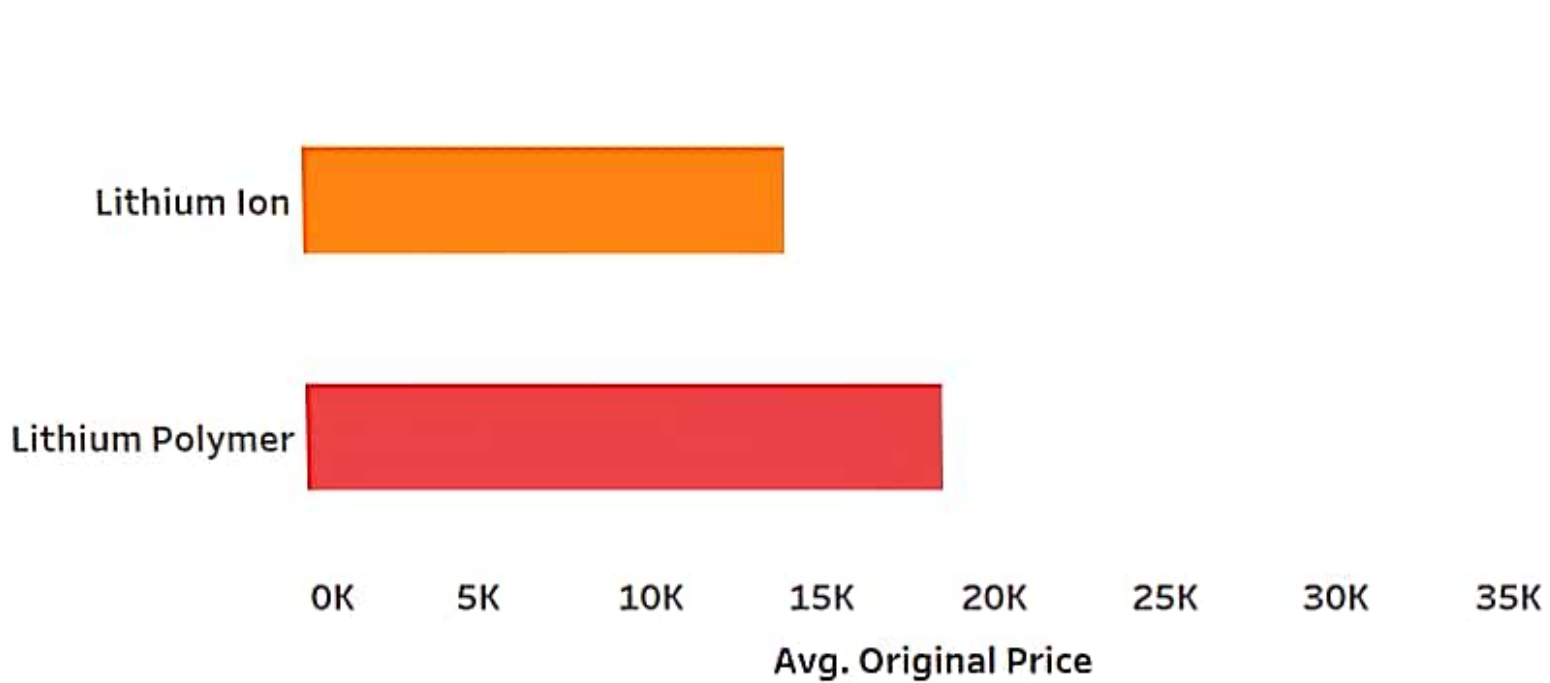


KPI

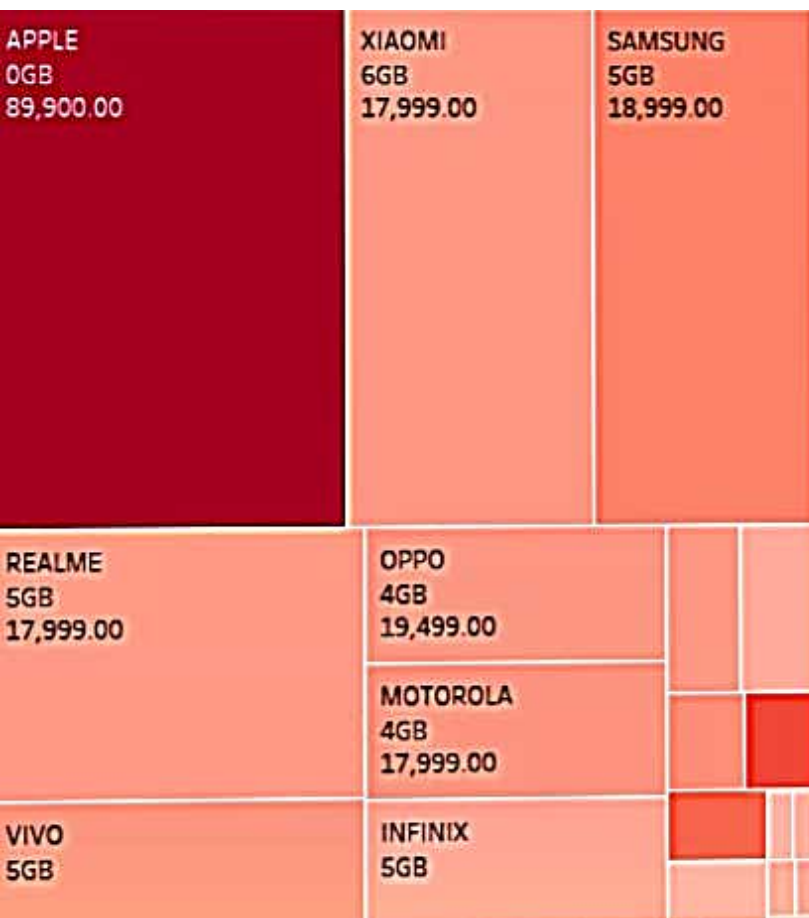
Brand	Disco..	Mrp	Sale P..	Numb..	Star ..
Apple	0	77,000	77,000	11,202	5

MODEL SPECIFICATION

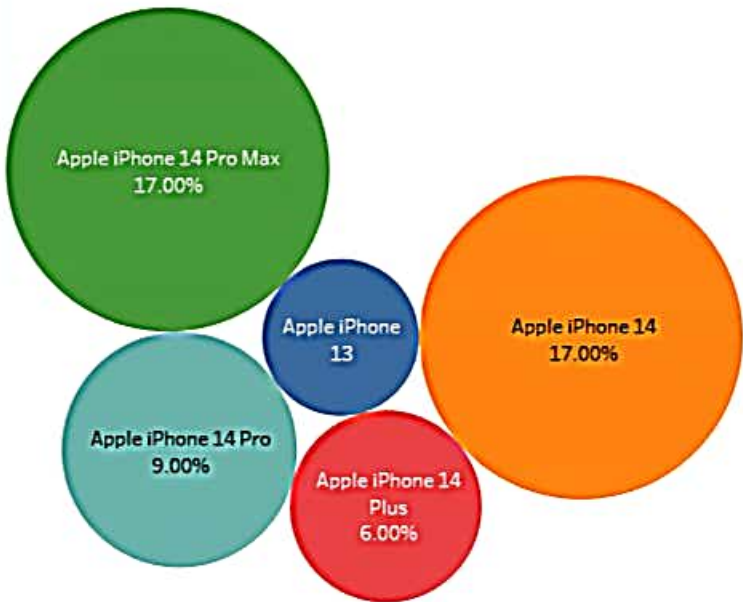
Model	Processor	Front Ca..	Rear Camera	Col..	Price
APPLE IPHONE 11	A Bionic Chip	12MP	12MP + 12MP	Black	92,800
APPLE IPHONE 12	A Bionic Chip with ..	12MP	12MP + 12MP	Blue	59,900
				Black	1,99,700
APPLE IPHONE 12 ..	A Bionic Chip with ..	12MP	12MP + 12MP	Black	74,800
				Blue	74,900
APPLE IPHONE 13	A Bionic Chip	12MP	12MP + 12MP	Blue	1,49,800
APPLE IPHONE 14	A Bionic Chip, Core	12MP	12MP + 12MP	Blue	1,89,800
APPLE IPHONE 14 P..	A Bionic Chip, Core	12MP	12MP + 12MP	Blue	99,900



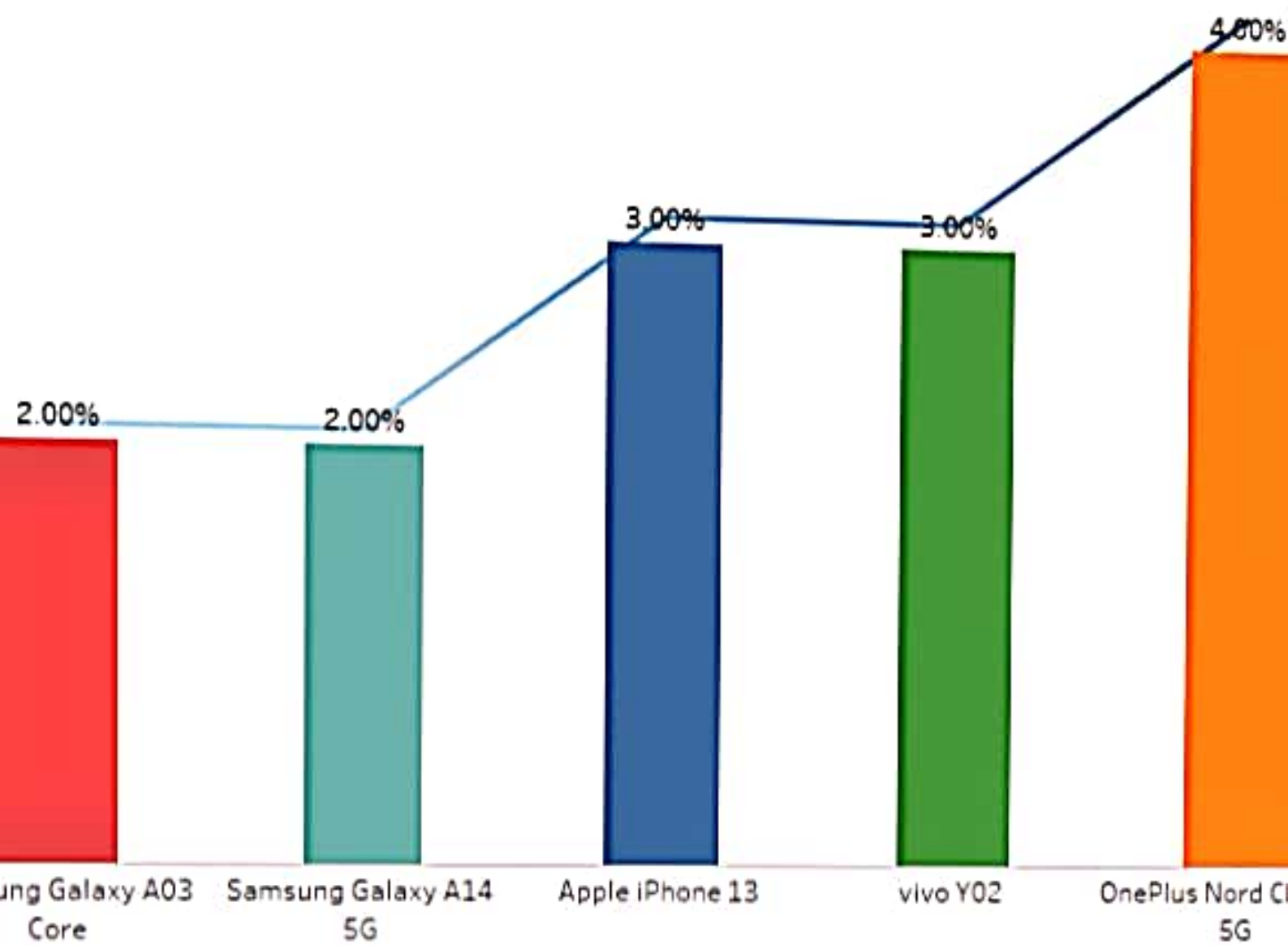




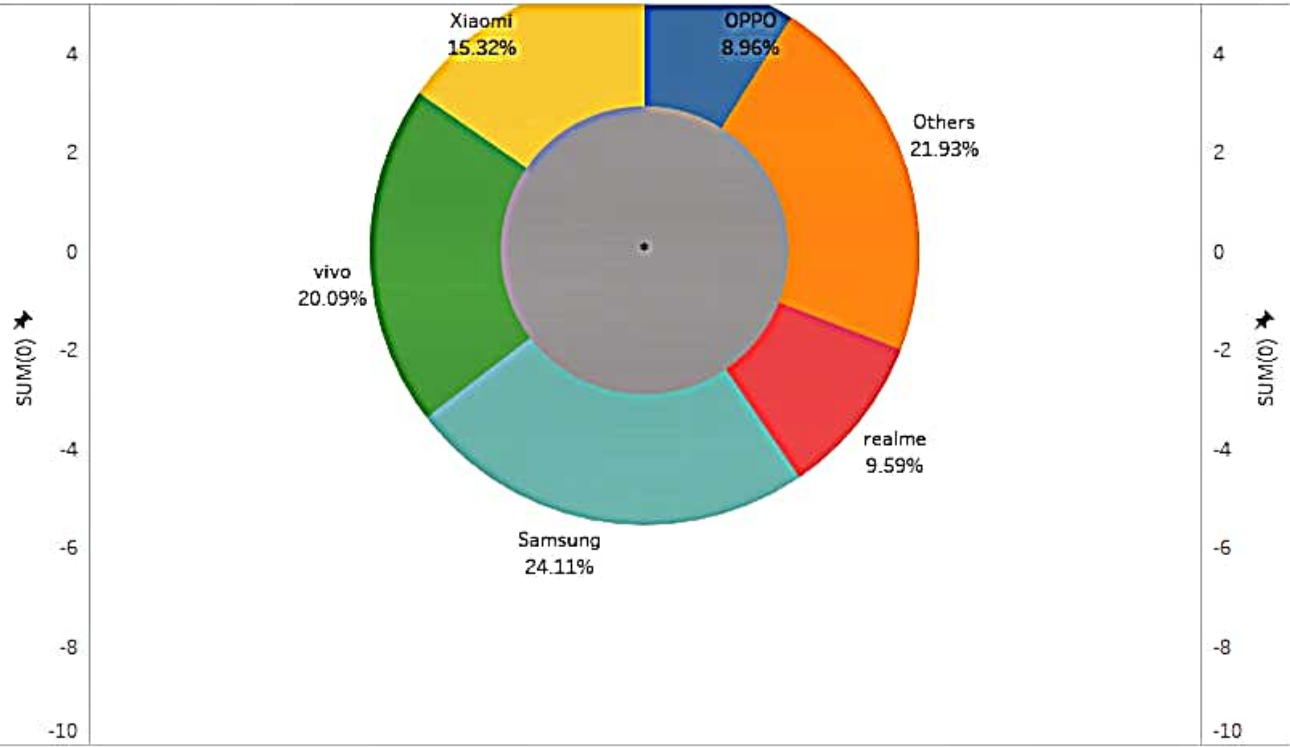
MODEL SHARE



- Models
- Apple iPhone 13
  - Apple iPhone 14
  - Apple iPhone 14 Plus
  - Apple iPhone 14 Pro
  - Apple iPhone 14 Pro...



QUARTERLY SHARE

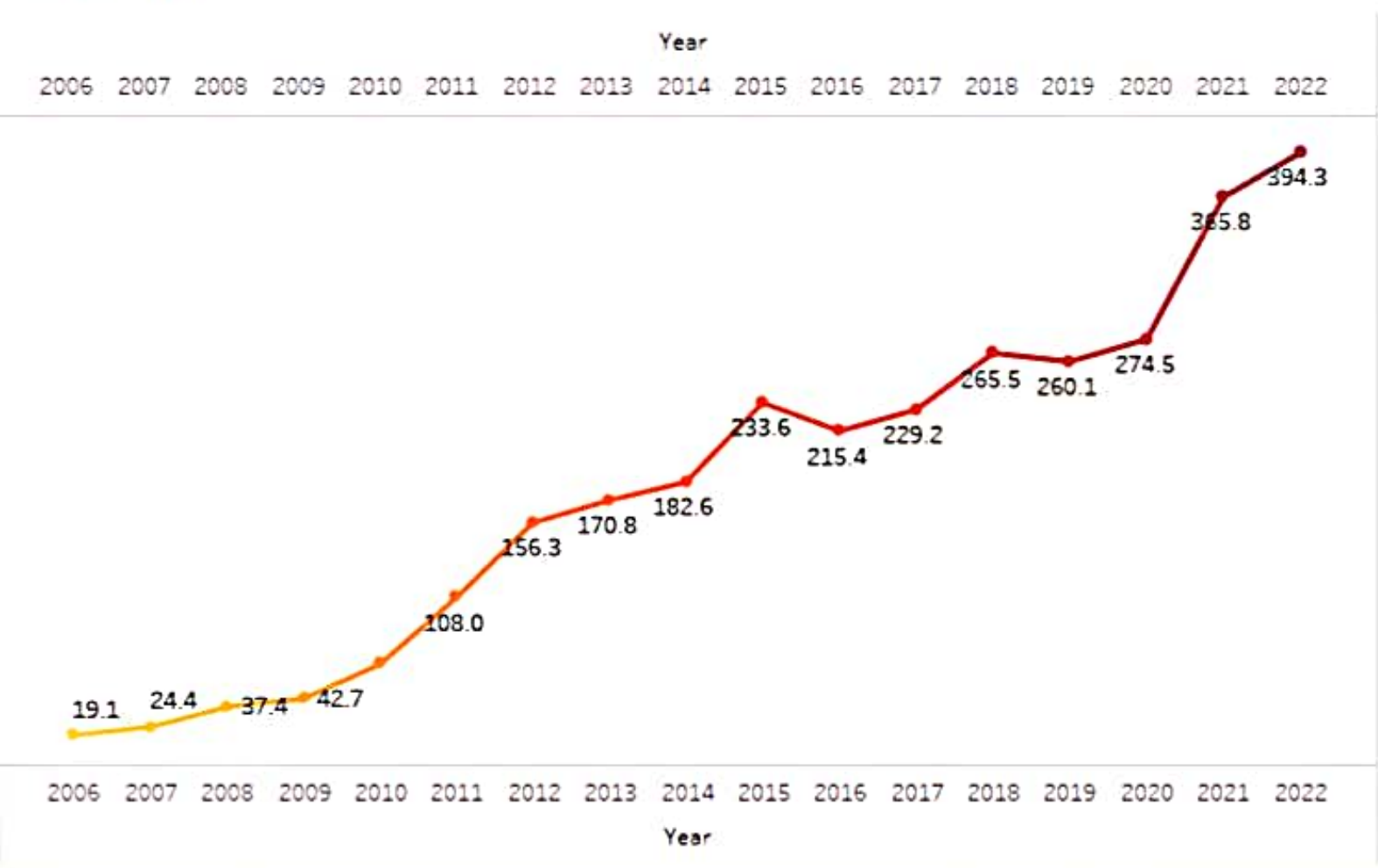


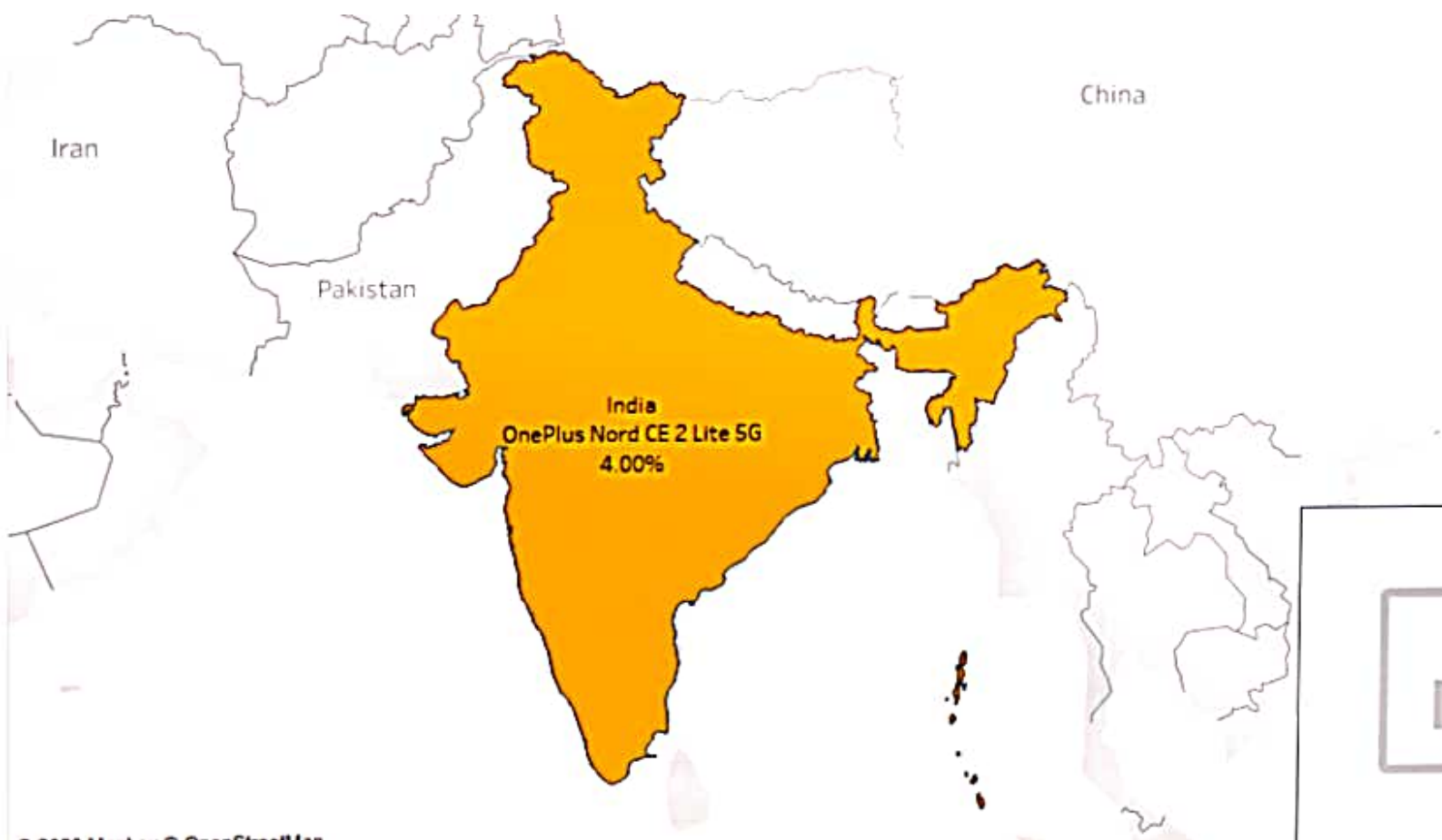
Year  
(All) ▼

Brand

- OPPO
- Others
- realme
- Samsung
- vivo
- Xiaomi

## AL REVENUE







KPI 2

Year

2022

Active Users (mm)

Revenue Generated

Units sold (mm)



## KPI

Brand	Disco..	Mrp	Sale P..	Numb..	Star..
Apple	0	77,000	77,000	11,202	5

## KPI 2

Active Users (mm)	Revenue Generated	Units sold (mm)
1,334	205	232

## ANNUAL REVENUE



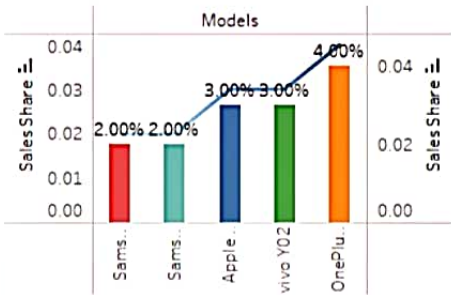
## MODEL SPECIFICATION

Model	Processor	Front Ca..	Rear Camera	Col..	Σ
APPLE IPHONE 11	A Bionic Chip	12MP	12MP + 12MP	Black	92,800
APPLE IPHONE 12	A Bionic Chip with ..	12MP	12MP + 12MP	Blue	59,900
				Black	1,59,700
APPLE IPHONE 1..	A Bionic Chip with ..	12MP	12MP + 12MP	Black	14,900
				Blue	74,900
APPLE IPHONE 13	A Bionic Chip	12MP	12MP + 12MP	Blue	1,49,800
APPLE IPHONE 14	A Bionic Chip, Core	12MP	12MP + 12MP	Blue	1,89,800
APPLE IPHONE 1..	A Bionic Chip, Core	12MP	12MP + 12MP	Blue	99,900

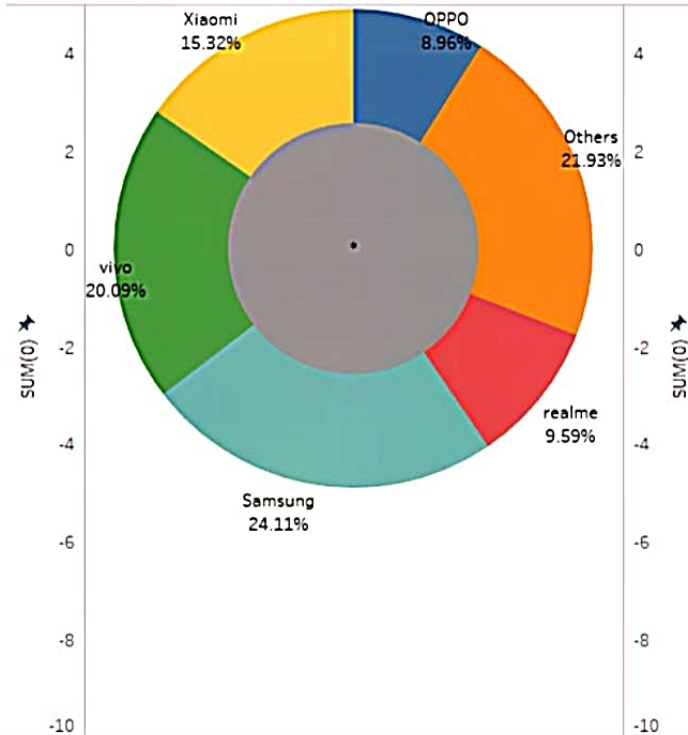
## GLOBAL MARKET SHARE



## COUNTRY WISE BEST SELLING SMARTPHONES



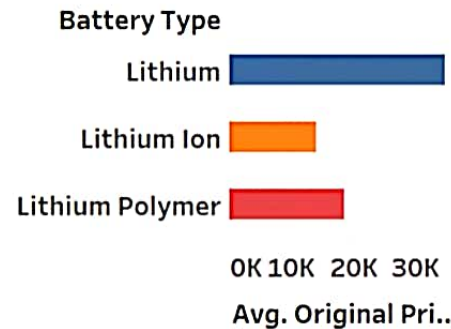
## QUARTERLY SHARE



## BRAND PRICE COMPARISON

APPLE 0GB 89,900.00	REALME 5GB 17,999.00
XIAOMI 6GB 17,999.00	
SAMSUNG 5GB	

## BATTERY TYPE DISTRIBUTION



5.STORIES

Story 1

KPI

MODEL SPECIFICATION

BAR CHART SHOWING BATTERY TYPE

BRAND PRICE COMPARISON

BUBBLE CHART SHOWING MODEL WL.

LINED BAR CHART SHOWING COUNTRY..

DONUT CHART FOR ..

Brand

Disco..

Mrp

Sale P..

Star..

Apple

0

77,000

77,000

5

Measure Nam..

☐ Count of iR..

☒ Discount P..

☒ Mrp

☐ Number Of..

☐ Number Of..

☒ Sale Price

☒ Star Rating

Upc

MOBEXRGVM..

KPI	MODEL SPECIFICATION	BAR CHART SHOWING BATTERY TYPE	BRAND PRICE COMPARISON	BUBBLE CHART SHOWING MODEL WL.	LINED BAR CHART SHOWING COUNTRY ..	DONUT CHART FI
Model	Processor	Front Ca..	Rear Camera	Colour		Colour
APPLE IPHONE 11	A Bionic Chip	12MP	12MP + 12MP	Black Red White Yellow		All
APPLE IPHONE 12	A Bionic Chip with Next Generation Neural Engine	12MP	12MP + 12MP	Blue Black Green Purple Red		APPLE
APPLE IPHONE 12 MINI	A Bionic Chip with Next Generation Ne..	12MP	12MP + 12MP	Blue Black Red		Colour Blue Black Null Deep Purple Gold Green Midnight Pink Purple Red Silver Space Black Starlight White Yellow
APPLE IPHONE 13	A Bionic Chip	12MP	12MP + 12MP	Blue Null Midnight Pink Starlight		
APPLE IPHONE 13 P..	A Bionic Chip	12MP	12MP + 12MP + 12..	Silver		
APPLE IPHONE 14	A Bionic Chip, Core	12MP	12MP + 12MP	Blue Null Midnight Purple Starlight		
APPLE IPHONE 14 PLUS	A Bionic Chip, Core	12MP	12MP + 12MP	Blue Null Midnight Purple Starlight		
APPLE IPHONE 14 PRO	A Bionic Chip, Core	12MP	48MP + 12MP + 12MP + 12MP	Deep Purple Gold Space Black		
APPLE IPHONE 14 PRO MAX	A Bionic Chip, Core	12MP	48MP + 12MP + 12MP + 12MP	Deep Purple Gold Silver Space Black		

KPI

MODEL SPECIFICATION

BAR CHART SHOWING BATTERY TYPE

BRAND PRICE COMPARISON

BUBBLE CHART SHOWING MODEL WL.

LINED BAR CHART SHOWING COUNTRY ..

DONUT CHART FOR ..

Battery Ty..

Brand

All

Battery Type

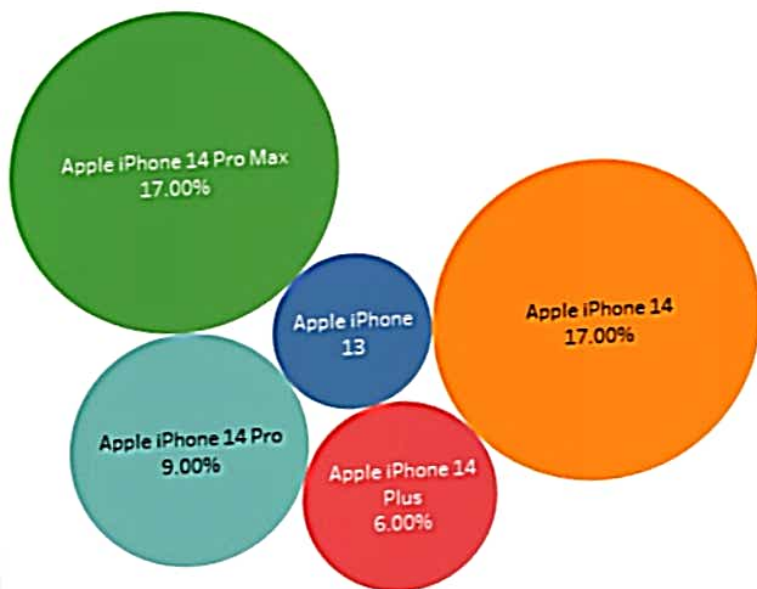
☐ Null

☐ Lithium

☒ Lithium Ion

☐ Lithium Polymer

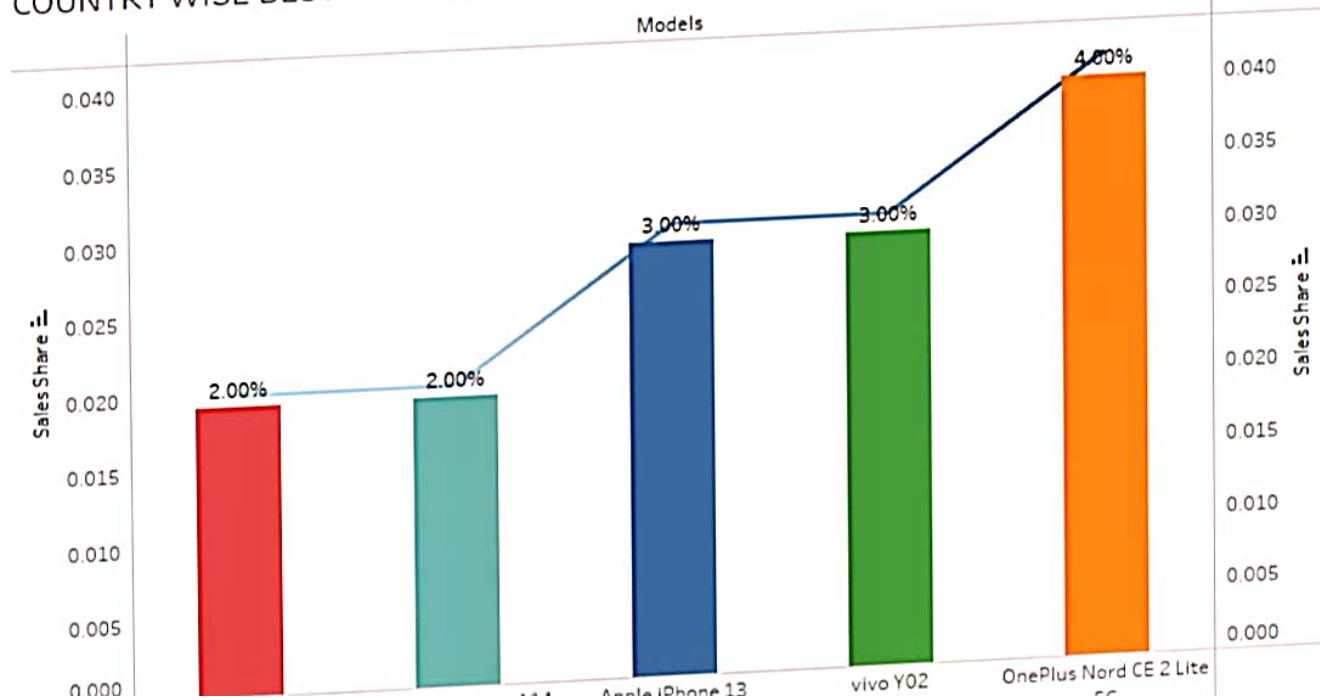
## MODEL SHARE



### Models

- Apple iPhone 13
- Apple iPhone 14
- Apple iPhone 14 Plus
- Apple iPhone 14 Pro
- Apple iPhone 14 Pro ..

## COUNTRY WISE BEST SELLING SMARTPHONES



### Country

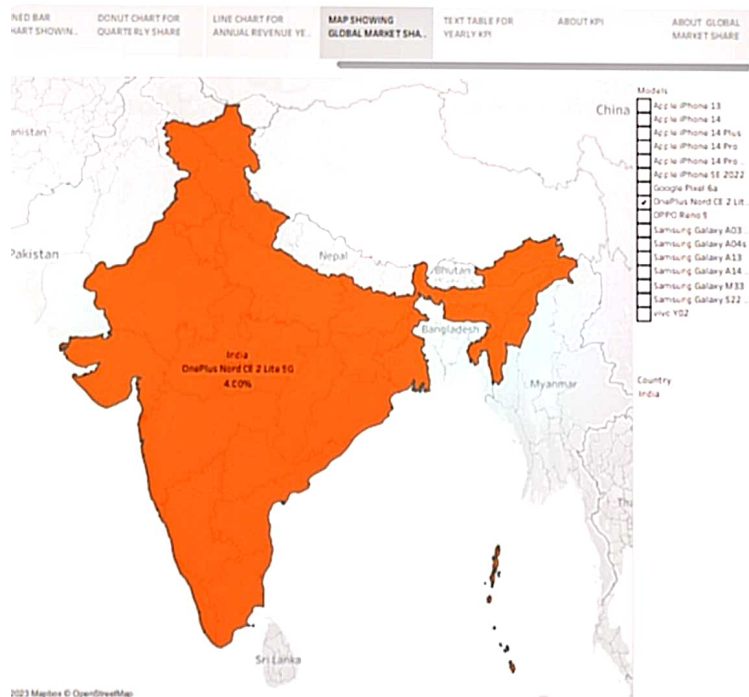
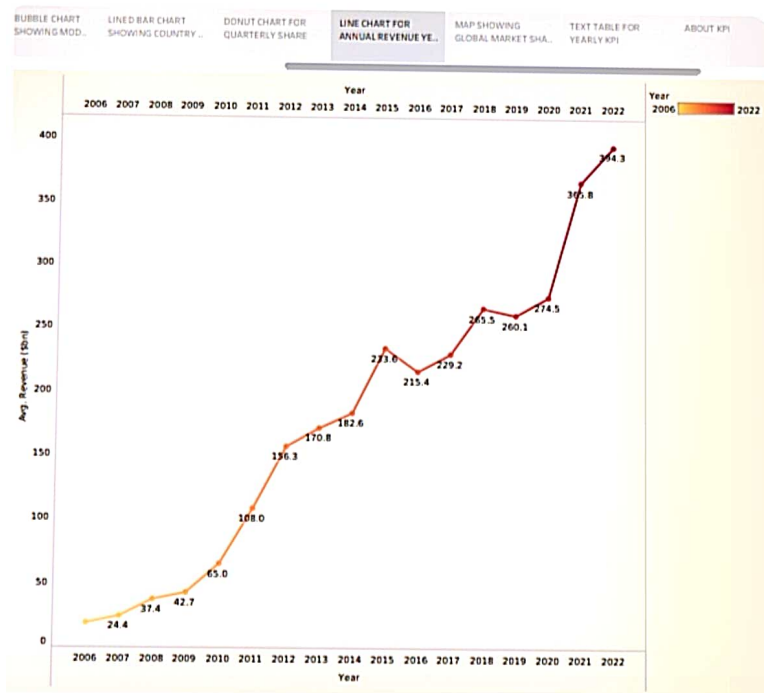
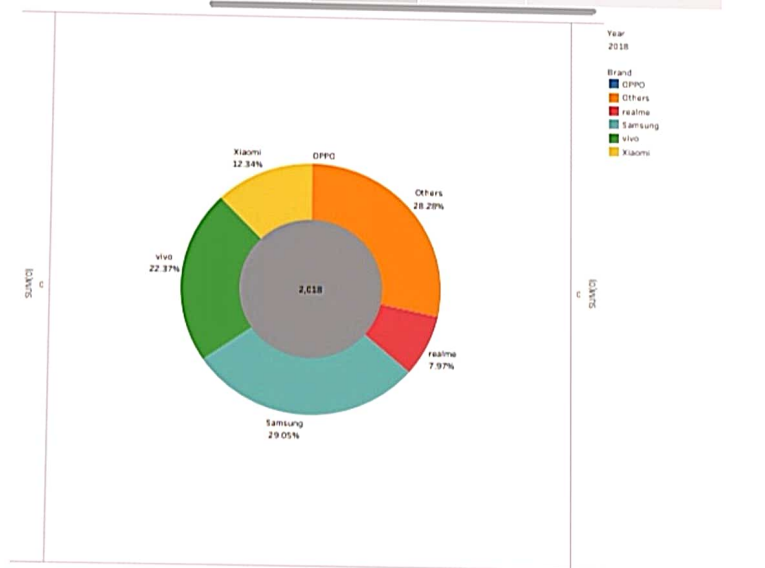
India

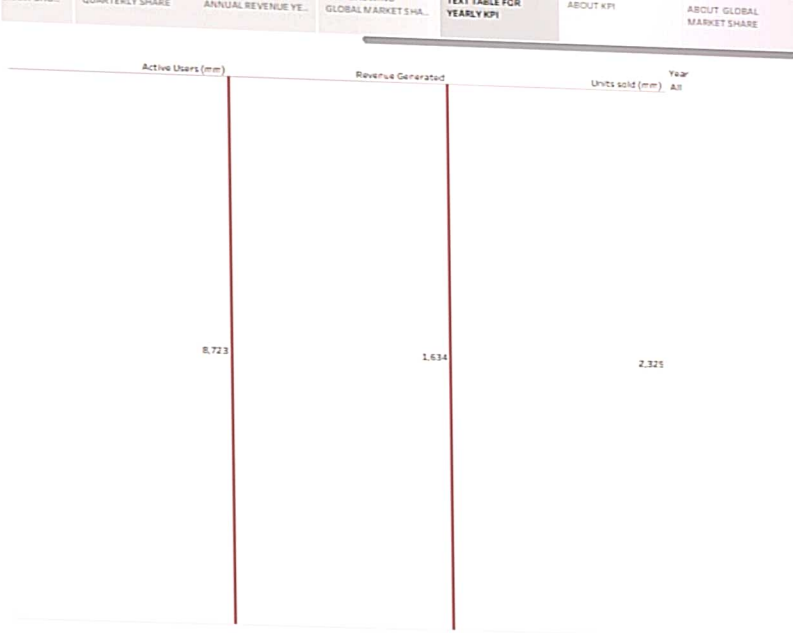
### SUM(Sales Share)

0.02000 0.04000

### Models

- Apple iPhone 13
- OnePlus Nord CE 2 Li..
- Samsung Galaxy A03
- Samsung Galaxy A14
- vivo Y02





KPI

Brand	Disco..	Mrp Sale P..	Star..
Apple	0	77,000	77,000
			5

#### BRAND PRICE COMPARISON

APPLE 128 GB 63,900.00	SAMSUNG 512 GB 18,999.00	OPPO 512 GB 17,999.00	MI 512 GB 17,999.00
XIAOMI 512 GB 17,999.00	REALME 512 GB 17,999.00	REDMI 512 GB 17,999.00	POCO 512 GB 17,999.00

KPI 2



#### ANNUAL REVENUE

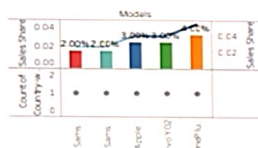


#### MODEL SPECIFICATION

Model	Process..	Front Ca..	Rear Ca..	Colour
APPLE IPHONE 11	A Bionic Chip	12MP	12MP + 12MP	Black Red White Yellow
APPLE IPHONE 12	A Bionic Chip with Next Generat..	12MP	12MP + 12MP	Blue Black Green Purple Red
APPLE IPHONE ..	A Bionic Chip wi t..	12MP	12MP + 12MP	Blue Black Red Red
APPLE IPHONE 13	A Bionic Chip	12MP	12MP + 12MP	Blue Black Midnight Pink



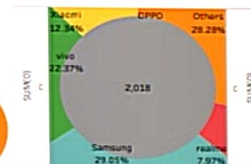
#### COUNTRY WISE BEST SELLING SMART PHONES



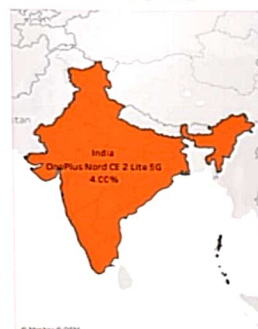
#### MODEL SHARE



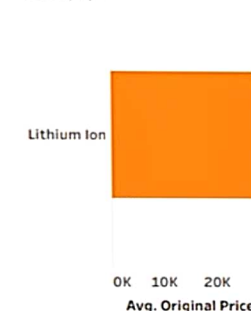
#### QUARTERLY SHARE



#### GLOBAL MARKET SHARE



#### BATTERY TYPE DISTRIBUTION





## **REVIEW AND JUSTIFICATION OF IPHONE FEATURES**

The Wall Street Journal's technology guru, Walter Mossberg, finally published his review of the iPhone only two days before its launch. Overall, he described the iPhone as a breakthrough handheld computer despite some shortcomings (Mossberg and Boehret, 2007). The iPhone's design is creating problems with some iPhone accessories. For example, the headphone jack is deeply recessed on the multimedia device, meaning an adapter will be needed in order to use certain headphones with the iPhone. Secondly, the device does not have the ability to cut, copy, and paste text, which could be extremely annoying if people are going to use the device to send and receive emails throughout their workday. The iPhone is also missing instant messaging software, but it still has the ability to send and receive standard text messages. Though the phone has a two-megapixel camera, it lacks the ability to record videos, a common feature on competing smart phones. Finally, when the iPhone is first released it will not have the ability to play most video on the Internet because it does not utilize Adobe's Flash technology.

Mossberg still has plenty of features to brag about on the iPhone, starting with the gorgeous 3.5-inch screen. Most importantly, during the two-week test the device lacked any protection, and it never received a single scratch on the screen or on any other part of the device. This is potentially very important to the early majority adopters because the iPod plastic screen scratched easily. The highly touted virtual keyboard lived up to the hype as Mossberg found it to be functional during the test. One important question mark regarding the iPhone is its battery life; consumers are concerned the battery will not be sufficient to last all day and still utilize all of the iPhone's capabilities. But Mossberg writes that the battery is adequate and gave him seven hours and 18 minutes of continuous talk time while retrieving email constantly (Mossberg and Boehret, 2007).

Apple is still trying to justify to consumers why the device will use AT&T's EDGE network instead using 3G, which is the fastest wireless technology from AT&T. Jobs is quick to admit the iPhone will not surf the internet as fast as most users would like, but just as quickly he says that is why the device has the ability to seamlessly switch to Wi-Fi, giving the consumer the best of both worlds. AT&T's CEO and Chairman Randall Stephenson says the utilization of the EDGE network is common among smart phones. He notes, "EDGE is the only ubiquitous nationwide broadband network deployed today" (Wingfield and Sharma, 2007). The two executives believe users will find the EDGE network to be sufficient, at least initially.

## **DIFFERENTIATION FROM COMPETITORS**

Apple has been working hard since Jobs made the announcement to differentiate itself from other smart phone on the market. Newspaper articles are constantly mentioning the 3.5-inch screen as an industry first. Also, Mr. Jobs has been obdurate from the beginning that the phone must have a touch-sensitive keyboard because he dislikes the keyboards on Research in Motion's BlackBerry and Palm's Treo (Sharma et. al., 2007). Since January, Apple has worked hard to make sure that their iPhone stays on the front page of newspapers across the country. This has severely limited competitors from fighting back with their new smart phones. Nokia is selling the N95, which is a smart phone geared to compete against the iPhone with its ability to play music and DVD-quality video (Yuan and Sharma, 2007). The N95 has more features than the iPhone, but it lacks a major U.S. partner for widespread distribution and carries a \$749 price tag in the U.S. market. Other competitors such as LG Electronics are also rushing high-end smart phones to the market in an attempt to keep customers using their devices instead of switching to Apple's iPhone.

## **iPhone:**

- **Advantages:**

1. **Sleek and user-friendly design, with a consistent look and feel across all devices.**
2. **Strong ecosystem, with seamless integration between devices and services, such as iCloud and Apple Pay.**
3. **Regular updates and timely access to new features, ensuring users have the latest and most secure software.**

- **Disadvantages:**

1. **Limited options in terms of device sizes and designs, as well as higher prices compared to some Android devices.**

## **IPHONE SALES**

Since the release of Apple's iPhone on June 29, 2007, it has sold an astounding four million units (Carew, 2008). The hype surrounding its release helped it become the fourth most popular handset in the U.S., and by the end of the October, Apple reported selling 1.12 million units. Additionally, it has become AT&T's most popular handset, commanding nearly 13 percent of its overall sales (Appleinsider, 2007). During Apple's 2008 Macworld keynote address Jobs announced that the iPhone had a 19.5 percent share of the smart phone market in the same quarter (Carew, 2008). Consumer satisfaction with the iPhone has been significantly higher than its competitors, according to a 2008 ChangeWave survey. Additionally, the survey shows the iPhone is the top choice among those planning to buy a new phone in the next six months (2008). Despite the fears of a looming consumer-led economic recession, Apple executives still believe the goal of selling 10 million iPhones by the end of 2008 is attainable.

Reaching this goal, however, will depend on future modifications to the iPhone and marketing efforts in the slowing economic conditions. The normally secretive Jobs let it slip in September that consumers can expect a 3G iPhone in 2008 (Miles, 2007). He expects that improvements in technology will allow for the faster network without affecting the battery life of the device. The recent release of a 16 gigabyte iPhone demonstrates Apple's continued ability to recreate their products and spur sales as market conditions change. Additionally, Apple is releasing a software development kit (SDK) which will allow third parties to market software for the iPhone. This is an excellent example of the emerging two-party platform business model (Fitzman, Parker and Van Alstyne, 2006).