INTERNSHIP REPORT ON SMARTPHONE INDUSTRY

Submitted in the partial fulfillment of the requirement for the award of the degree of

Master of Business Administration of University of Kerala

Submitted By

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Under the guidance of,

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UNIVERSITY INSTITUTE OF MANAGEMENT, ADOOR

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DECLARATION

I declare that the internship report entitled '**Smartphone Industry**' submitted by me for the award of the degree of Master of Business Administration of University of Kerala is my own work. The report has not been submitted for the award of any degree of this university or any other universities.

Place: **ABIN**

Date: **Reg.NO:59519943003**

UNIVERSITY INSTITUTE OF MANAGEMENT

UNIVERSITY OF KERALA
(Re-accredited by NAAC with 'A' Grade)
PARAKODE, ADOOR
(Providing full-time MBA Programme)

Dr. Jugunu R. Nair
Principal Mob: 9895509828

Date……..

CERTIFICATE

This is to certify that the internship report entitled" **INTERNSHIP REPORT ON SMARTPHONE INDUSTRY**" submitted here is a bona-fide record of the work done by **Mr. Abin** under my guidance in partial fulfillment of the requirement for the award of Degree of **Master of Business Administration** of the University of Kerala and this work has not been submitted by anyone else for the award of any other degree, diploma or title of recognition earlier. During the period of study, the student has not been allowed to travel outside for the collection of data for the internship.

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ABIN

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CHAPTER 1

INTRODUCTION

An internship is a trained and supervised experience in a professional setting in which the student is learning and gaining essential experience and expertise. It is meant for introducing candidates either full-time or part-time to a real world experience related to their career goals and interests. It is an excellent way to build those important connections that are invaluable in developing and maintaining a strong professional network for the future.

An internship is a period of work experience offered by an employer to give students and graduates exposure to the working environment, often within a specific industry, which relates to their field of study. Throughout an internship will develop a variety of soft skills, including communication skills, personal effectiveness, presentation skills, creative problem solving and influencing skills.

It provides real world experience to those looking to explore or gain the relevant knowledge and skill required to enter into a particular career field. Internship is relatively short term in nature with the primary focus on getting some on the job training and taking what's learning in the classroom and applying it to the real world.

The industry chosen for the internship was smartphone industry with reference to OPPO, HTC& LENOVO.

The cell phone industry is the fastest growing sector in the larger communications industry today. Right now, the Internet is one of the industries attracting use by the largest numbers of people globally. The cell phone industry is primarily engaged in the manufacturing of mobile phones, including mobile phone handsets. As of now, the smartphone industry is totally concentrated on moving forward technologically. It is one of the fastest moving industries in the world, growing alongside up-and-coming technologies and innovations, building upon the progress of smartphones and other phone feature and segments made in recent years.

In this report briefly studied about the SWOT analysis, 5Forces, BCG matrix, Future prospects of the smartphone industry and the selected companies.

Objectives of study

1. To understand the basic concept of Smartphone Industry sector.
2. To study the growth of Indian Smartphone Industry sector by understanding BCG matrices
3. To practically learn Porter's Five Force Analysis

Scope of the study

Internship experience plays a vital role for every student to implement their theoretical knowledge and get a practical knowledge from any organization. This report is based on the study of smartphone industry sector. The smartphone industry is expected to experience further growth as advanced features are continuously emerging. With today's ever-emerging technologies and innovations in improving smartphones, the industry is growing at a rapid pace. Smartphones, with strong hardware capabilities, extensive mobile operating systems, facilitating wider software applications, internet, and multimedia functionality (music, videos, and gaming), alongside core phone functions such as voice calls and text messaging, are considered in this study. The scope of the study extends to all the consumers, who purchase smartphone.

This report is descriptive in nature. The study has been done mainly on the basis of secondary data and information available from books, and published works and reports.

CHAPTER 02

INDUSTRY PROFILE

Consumer Electronics

Consumer electronics are products used in a domestic or personal context, in contrast to items used for business, industrial, or professional recording purposes. These can include television sets, video players and recorders (VHS, DVD and Blu-ray), videocams, audio equipment, mobile telephones and pagers, portable devices and computers and related devices.

Consumer electronics or home electronics are electronic (analog or digital) equipment intended for everyday use, typically in private homes. Consumer electronics include devices used for entertainment, communications and recreation. In British English, they are often called brown goods by producers and sellers, to distinguish them from "white goods" which are meant for housekeeping tasks, such as washing machines and refrigerators, although nowadays, these would be considered brown goods, some of these being connected to the Internet. In the 2010s, this distinction is absent in large big box consumer electronics stores, which sell both entertainment, communication, and home office devices and kitchen appliances such as refrigerators. The highest selling consumer electronics products are Compact discs.

Radio broadcasting in the early 20th century brought the first major consumer product, the broadcast receiver. Later products included telephones, televisions and calculators, then audio and video recorders and players, game consoles, personal computers and MP3 players. In the 2010s, consumer electronics stores often sell GPS, automotive electronics (car stereos), (e.g., synthesizer keyboards), karaoke machines, digital cameras, and video players (VCRs in the 1980s and 1990s, followed by DVD players and Blu-ray players). Stores also sell smart appliances, digital cameras, camcorders, cell phones, and smartphones. Some of the newer products sold include virtual reality head-mounted display goggles, smart home devices that connect home devices to the Internet and wearable technology.

In the 2010s, most consumer electronics have become based on digital technologies, and have largely merged with the computer industry in what is increasingly referred to as the consumerization of information technology. Some consumer electronics stores have also begun selling office and baby furniture. Consumer electronics stores may be "brick and mortar" physical retail stores, online stores, or combinations of both.

Annual consumer electronics sales are expected to reach $2.9 trillion by 2020. It is part of the wider electronics industry. In turn, the driving force behind the electronics industry is the semiconductor industry. The basic building block of modern electronics is the MOSFET (metal-oxide-silicon field-effect transistor, or MOS transistor), the scaling and miniaturization of which has been the primary factor behind the rapid exponential growth of electronic technology since the 1960s.

Consumer electronics are products intended for everyday use, most often in entertainment, communications and office productivity. Radio broadcasting in the early 20th century brought the first major consumer product, the broadcast receiver. Later products include personals computers, telephones, MP3 players, audio equipment, televisions, calculators, GPS automotive electronics, digital cameras and players and recorders using video media such as DVDs, VCRs or camcorders. Increasingly these products have become based on digital technologies, and have largely merged with the computer industry in what is increasingly referred to as the consumerization of information technology.

The CEA (Consumer Electronics Association) projected the value of annual consumer electronics sales in the United States to be over $170 billion in 2008. Global annual consumer electronic sales are expected to reach $2.9 trillion by 2020.

2.1 Introduction to Smartphone industry

Smartphone, a device which is no longer a strange thing to majority of people since it has gradually entered people everyday life. Smartphones are mobile phones with computers abilities and internet search; the only difference could be the size and its mobility. In another word, it has become a source of entertainment, a communication tool, a search engine and so much more. This has led to the decision of choosing smartphone industry as the main topic for this study.

But smartphone itself is not appealing enough since smartphone is just another artificial item. However, the brand and the owners are far more tempting. Same device, similar features but each kind has its own operating system which leads to different experience. Some are opened and everyone can use, some are closed which means much higher privacy for users but not everybody can use it. Nevertheless, each brand has its own history, and it is the history development that is the most

fascinating. How the brand was born, what innovation it had to go through, what kind of strategy the company chosed to compete with each other, all led to very different outcomes.

A smartphone is a mobile device that combines cellular and mobile computing functions into one unit. They are distinguished from feature phones by their stronger hardware capabilities and extensive mobile operating systems, which facilitate wider software, internet (including web browsing over mobile broadband), and multimedia functionality (including music, video, cameras, and gaming), alongside core phone functions such as voice calls and text messaging. Smartphones typically contain a number of metal–oxide–semiconductor (MOS) integrated circuit (IC) chips, include various sensors that can be leveraged by their software (such as a magnetometer, proximity sensors, barometer, gyroscope, or accelerometer), and support wireless communications protocols (such as Bluetooth, Wi-Fi, or satellite navigation).

Early smartphones were marketed primarily towards the enterprise market, attempting to bridge the functionality of standalone personal digital assistant (PDA) devices with support for cellular telephony, but were limited by their bulky form, short battery life, slow analog cellular networks, and the immaturity of wireless data services. These issues were eventually resolved with the exponential scaling and miniaturization of MOS transistors down to sub-micron levels (Moore's law), the improved lithium-ion battery, faster digital mobile data networks (Edholm's law), and more mature software platforms that allowed mobile device ecosystems to develop independently of data providers.

In the 2000s, NTT DoCoMo's i-mode platform, BlackBerry, Nokia's Symbian platform, and Windows Mobile began to gain market traction, with models often featuring QWERTY keyboards or resistive touchscreen input, and emphasizing access to push email and wireless internet. Since the unveiling of the iPhone in 2007, the majority of smartphones have featured thin, slate-like form factors, with large, capacitive screens with support for multi-touch gestures rather than physical keyboards, and offer the ability for users to download or purchase additional applications from a centralized store, and use cloud storage and synchronization, virtual assistants, as well as mobile payment services.

Improved hardware and faster wireless communication (due to standards such as LTE) have bolstered the growth of the smartphone industry. In the third quarter of 2012, one billion smartphones were in use worldwide. Global smartphone sales surpassed the sales figures for feature phones in early 2013.

In fact, it has been speculated by many in the industry that mobile devices now pose a large threat for the gaming market – and for handheld gaming in particular. Smartphones are also used for music, for watching films and television, for navigation and for much more.

It should come as no surprise then that smartphones are seen by many as being completely necessary. This is why it is estimated that there will be as many as 6 billion smartphones in circulation as soon as 2020. It has also been suggested that the smartphone market alone will be worth $355 billion dollars. This makes the smartphone industry one of the biggest to watch.

SMARTPHONE MARKET SHARE

Quarter	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2
Huawei	15,9%	14,6%	16,2%	18,9%	17,7%	18,6%	15,2%	17,8%	20,2%
Samsung	21.0%	20,3%	18,8%	23,0%	23,0%	21,8%	18,8%	21,2%	19,5%
Apple	12,1%	13,2%	18,3%	11,8%	10,2%	13,0%	19,9%	13,3%	13,6%
Xiaomi	9,5%	9,5%	6,7%	8,9%	9.7%	9.1%	8.9%	10.7%	10,3%
OPPO	8,6%	8,4%	7,9%	7,4%	8,9%	8,7%	8,3%	8,3%	8,7%
Others	32,9%	34,0%	32,0%	30,0%	30,5%	28,8%	28,9%	28,7%	27,8%
TOTAL	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

History of smartphone industry

Today‘s Smartphone‘s has been around since last six years when Apple introduced the Smartphone in mass consumer market, but in reality the Smartphone has been in market since 1993. The different between today‘s Smartphone and early Smartphone‘s is that early Smartphone‘s were predominantly meant for corporate

users and used as enterprise devices and also those phone were too expensive for the general consumers.

The Smartphone era is divided into three main phases. First phase was purely meant for enterprises. During this phase all the Smartphone‘s were targeting the corporations and the features and functions were as per corporate requirements. This era began with the advent of the very first Smartphone ‘The Simon’ from IBM in 1993. Blackberry is considered as the evolutionary device of this era, it introduced many features including Email, Internet, Fax, Web browsing, Camera. This phase was totally based on Smartphone targeting enterprises. The second phase of Smartphone era started with the advent of iPhone, the major breakthrough Smartphone market in 2007. Apple revealed its first smartphone in 2007. This was the time when first time ever industry introduced the Smartphone for general consumers market. End of 2007 Google unveiled its Android Operating System with the intention to approach the consumer Smartphone market. The emphasis during this time period was to introduce features that the general consumer requires and at the same time keep the cost at lower side to attract more and more customers. Feature like, email, social website integration, audio/video, internet access, chatting along with general features of the phone were part of these entire phone. Third phase of Smartphone was mainly closing the gap between enterprise centric and general consumer centric Smartphone and improvement the display quality, display technology and on top of that also aiming to stabile the mobile operating system, introduce more powerful batteries and enhance the user interface and many more features within these smart devices. This phase logical started in 2008 with the upgrades in the mobile operating system and within last five year there have been several upgrades in Apple iOS, Android and Blackberry OS. The most popular mobile Operating systems (iOS, Android, Blackberry OS, Windows Mobile) and key Smartphone vendors (Apple, Samsung, HTC, Motorola, Nokia, LG, Sony etc.)are concentrating to bring features both in operating systems and devices which will provide exciting feature to enterprise and general consumers. The role of Android has been tremendous during this time period as it provided a great opportunity to all vendors to build devices using the great open source Android technology.

Top 10 Smartphone Companies in the World [2020]

1. Samsung

Samsung is a global leader in the smartphone industry, as it consistently strives to enhance product capabilities through its extensive R&D. Samsung has expanded its product portfolio for affordably priced smartphones to high-end mobile phones to suit everybody's needs. Samsung is known for its Samsung Galaxy smartphone range, and the flagship products of Samsung are Samsung Galaxy S7 edge+ and Galaxy Note 7.

Recently, Samsung developed the unique Tizen OS for its smartphones as an alternative to its Android smartphones. For its latest launch of Galaxy S9, Samsung also partnered with Audio companies such as AKG and Dolby, offering a high-quality sound experience. Samsung's market share accounted for approximately 20%, making it one of the top mobile phone brands.

Units Shipped: 315 million

Profit: USD 18,947 million

Sales: USD 170,625 million

2. Apple

Apple has a large customer base as it offers products that have superior design and features, which have become more of an aspirational brand for people worldwide. Apple has a global footprint in around 22 countries with 499 retail stores as of December 2017. The company is known for its high specifications and stylish, simple iPhone that is the signature product of Apple. Apple released its first- generation iPhone in 2007, and the most recent iPhone models are the iPhone 11, iPhone 11 pro and iPhone 11 pro max. The new generation of iPhone has advanced three-lens cameras with the most powerful and smartest chip ever in any smartphone.

Units Shipped: 215 million

Profit: USD 48,351 million

Sales: USD 229,234 million

3. Huawei

Huawei has one of the best innovation centers across the globe, and in 2016, Huawei invested 14% of its revenue in R&D. Huawei operates in more than 170 countries and is also expected to develop its own operating system, which shows its strong potential in the mobile market.

In March 2018, Huawei released the much-anticipated smartphone models called HUAWEI P20 and HUAWEI P20 Pro, which has the world's first Leica triple camera. These innovations have enabled Huawei to establish itself as a top global mobile phone brand, with setting high expectations for smartphone photography.

Units Shipped: 152 million

Profit: USD 6,890 million

Sales: USD 87,646 million

4. Oppo

Over the years, Oppo has launched a wide range of smartphones ranging from the low segment to targeting the affluent customer segments. Oppo has created a strong brand presence despite being a late entrant in the smartphone market. However, smart marketing campaigns and branding, along with high product quality have made Oppo one of the top mobile phone brands in 2020.

In 2017, Oppo became the official sponsor of the Indian Cricket Team, giving the brand massive credibility and attention. The company in India has engaged with Bollywood actors who became the face of the brand. Apart from this, Oppo has a reliable distribution network that covers more than 200,000 retailers in India itself, and more across the globe.

Units Shipped: 111 million

Profit: USD 1,400 million

Sales: USD 60,000 million

5. Vivo

Vivo entered the mobile phone market within half quarter of 2017 with a global market share of 10.7%. Celebrity endorsements, brilliant advertising, and

sponsorships have propelled the brand to compete with Samsung, Apple, and Oppo.

Vivo recently launched its V9 mobile range that is identical to Apple's iPhone X with its notch display. Hence, Vivo became the first Android mobile phone company to launch phones that features a notch display like that of Apple's iPhone X.

Units Shipped: 95 million

Profit: USD 1,125 million

Sales: USD 46,484 million

6. Xiaomi

Xiaomi is the 8th largest smartphone manufacturer in the world. Xiaomi's flagship brands are the Redmi and Mi series, which have gained popularity and trust of millions of consumers. Xiaomi has created its brand value as it continues to focus on innovation and the latest technology.

The company has its presence in India, China, Brazil, Singapore, Turkey, and Asian nation with its exclusive Mi and Redmi Series smartphones. Xiaomi's shipments of smartphones were approximately 90 million in 2017 and have been able to grab a spot in the top 10 smartphone companies in the world.

Units Shipped: 95 million

Profit: USD 1,000 million

Sales: USD 17,000 million

7. LG

LG has been a known brand name in refrigerators and air-conditioners. But LG's smartphone range has woo-ed over the consumers with their brilliant Android features. LG's premium smartphone models include the K-series, G-series, LG Tribute, Flex, and Nexus. These smartphones have highly-advanced camera features, high-speed autofocus, and noise reduction for better calling and photography.

Units Shipped: 55 million

Profit: USD 110 million

Sales: USD 46,800 million

8. Lenovo

Over the years, Lenovo has made a global presence in 160 countries and has grown to become one of the top global mobile companies. Some of the popular smartphones by Lenovo are P, K and A series, Zuk Series, and VIBE. Lenovo also launched the Moto Z models that live up to its tagline, "Different is better."

Lenovo's Tango smartphones have unique sensors that are able to track motion and measure the contours of a room; also, it can measure interiors of apartments and buildings by using augmented reality features.

Units Shipped: 50 million

Profit: USD 535 million

Sales: USD 43,035 million

9. ZTE

ZTE is famous for its smartphones, affordable mobile phones, tablets, etc. along with various network and telecommunication equipment. The smartphones made by ZTE are also sold under the brand name "OEM" in multiple countries across the globe. With intelligent marketing, an extensive distribution chain, and smart advertising, ZTE has made its presence in approximately 140 countries.

Units Shipped: 45 million

Profit: USD 719 million

Sales: USD 17,123 million

10. Alcatel Lucent

Alcatel-Lucent was acquired by Nokia back in 2016 but still runs under the name Alcatel-Lucent, with OneTouch series being it's widely proclaimed smartphone range. The high specifications and quality have attracted a lot of customers as the company also allows customization and specialization in technology as per the consumers' needs.

Alcatel-Lucent's premium smartphone range includes are Pixi, Idol, and Pop. The company recently released A50, A30 Plus, Idol 5S, Pop 4 plus smartphone models, incorporating virtual reality in their Idol 4 and Idol 4s series.

Units Shipped: 20 million

Profit: USD 218 million

Sales: USD 15,149 million

2.2 MAJOR SEGMENTS OF THE SMARTPHONE INDUSTRY

In recent years, mobile service usage increase rapidly following the emerging use of smartphone technology by the mobile users. The increase use of mobile service poses challenge for actors in mobile ecosystem to constantly meet the dynamic change of needs and requirement of mobile users. Through market segmentation, actors such as network operator, handset manufacturer, and application provider are able to distinguish behaviour usage or preferences on mobile services for each market segment and use this information to design or offer specific product that meet the behaviour or preferences of the user in each market segment. This paper explores the use of market segmentation on the perspective of actors in mobile ecosystem which are network operator, handset manufacturer and application provider. Furthermore, this paper also explores the interaction that may exist between each actor by analysing the relation between the resulted segments of each perspective. Our findings show that the resulted market segment can be identified based on their level of voice, SMS and data usage and also based on their application usage behaviour. Related to interaction among actor, by correlating the resulted segment of each perspective, we find that handset manufacturer can easily cooperate with both network operator and application provider in designing or offering product and services to each market segment, while the cooperation between network operator and application provider may be quite complex. We also note that incorporating demographic and psychographic for profiling the market segment based on behavioural usage provide additional insight for each actor to perceive their target users and respectively type of marketing strategy and product usage to be offered.

Definition:

Customer segmentation involves dividing customers into groups based on similar traits.

By segmenting users, mobile marketers can make the most of their campaign budgets by targeting the right audiences.

The most common types of customer segmentation are:

- **Demographic Segmentation**

Based on gender, age, occupation, marital status, income, etc.

- **Geographic Segmentation**

Based on country, state, or city of residence. Local businesses may even segment by specific towns or counties.

- **Techno-graphic Segmentation**

Based on preferred technologies, software, and mobile devices.

- **Psychographic Segmentation**

Based on personal attitudes, values, interests, or personality traits.

- **Behavioural Segmentation**

Based on actions or inactions, spending/consumption habits, feature use, session frequency, browsing history, average order value, etc.

Depending on the user data your CRM or mobile marketing platform collects, there are zillions of attributes you could use to divide your audience. But not all of them will help you create meaningful segments that are actually useful for your business.

2.3 Smartphone Industry in India

The market shares have changed dramatically with the influx of the Chinese players in the last two years. Samsung has a market share of 28% while the Chinese smart phone makers viz Xiaomi, Lenovo Group, Vivo and OPPO account for 45%. A brief background of these players is provided. Samsung has smart phones positioned for different segments at different price points. Xiaomi founded in 2010 by Lei Jun in Beijing has a business model for smart phones with emphasis on online sales. In a short time, it has emerged as the 5th top global smart phone maker (2015) and the second in India now. It also manufactures laptops, tablets and smart home devices. Besides India and China, it sells its smart phones in ten other countries viz Indonesia, Vietnam, Singapore, Philippines, Thailand, Malaysia, Turkey, Russia, Mexico and

Brazil. Lenovo was founded in Beijing in 1984 as Legend and was incorporated in Hong Kong in 1988. Lenovo acquired IBM's personal computer business in 2005.

Lenovo entered the smartphone market in 2012 and as of 2014 was the largest vendor of smartphones in Mainland China. In 2014, Lenovo acquired the mobile phone handset maker Motorola Mobility from Google. Vivo is a Chinese technology company that designs, develops, and manufactures smartphones, smartphone accessories, software, and online services. It was founded in 2009 in Dongguan, Guangdong. The brand utilizes Hi-Fi chips in its smartphones. Software developed by the company includes the Vivo App Store, iManager, and a proprietary Android-based operating system called Funtouch OS . OPPO Electronics Corp is a division of BBK Electronics.

In 2001, BBK was founded at Dongguan, China by Chen Mingyong to manufacture Blu-Ray players, Headphones and Amplifiers. OPPO is known for its camera phone brand for young people. It released Selfie Expert F series in 2016. Besides India and China, it sells its smart phones in 8 other countries, viz., Sri Lanka, Bangladesh, Pakistan, Thailand, Vietnam, Malaysia, Philippines, and Myanmar. Earlier, Micromax, an Indian smart phone player had a significant market share of 12.9% which has come down in recent times.

Micromax was founded in 2000 by Rajesh Agarwal, Sumeet Agarwal, Vikas Jain and Rahul Sharma at Gurgaon, Haryana. It makes Laptops, Tablets, Data Cards, Monitors, LED TV and ACs. It has manufacturing plants at Rudrapur in Uttarakand (LED TVs and Tablets), Alwar in Rajasthan and Hyderabad. It entered into the manufacture of smart phones in 2010 with its Funbook series. It forayed into Russia in 2014 for selling its smart phones. Reliance Jio is a recent entry. It has entered into the Indian market as a telecom operator in September 2016. Recently in July 2017, it introduced the Jio, 4G enabled feature phones with the objective to capture the market segment of 500 million who are unable to afford smart phones.

India's smartphone shipments grew 9% YoY to reach over 53 million units in Q3 2020, according to the latest research from Counterpoint's Market Monitor service. This is the highest-ever shipment in a quarter for the Indian smartphone market. The push from the brands coupled with the pent-up demand due to the

lockdown and strong sales on online platforms led to this growth. Consumers are still preferring online platforms due to COVID-19 fears.

The Indian mobile handset market grew 8% YoY in Q3 2020 due to stronger consumer demand in the smartphone segment and stronger sales of feature phones. The feature phone market registered a 5% YoY growth in Q3 2020 with Itel being the number one brand followed by Samsung and Lava.

Market Summary

Samsung became the leading brand in the India smartphone market after two years with 32% YoY growth. It was also the fastest to recover, surpassing the pre-COVID levels in Q3 2020. This strong performance was the result of multiple strategies, including effective supply chain and touching various price points through new launches. Samsung's aggressive push in online channels, with highest ever online contribution within its portfolio, also helped it regain its number one spot.

Xiaomi slipped to number two positions for the first time since Q3 2018 with 4% YoY decline. Manufacturing constraints due to the COVID-19 situation affected its supply chain, leading to a supply-demand gap. With ramped-up manufacturing, strong demand for the Redmi 9 and Note 9 series, aggressive product strategy and growing offline presence, we believe Xiaomi will come back strongly in the coming quarter.

Vivo grew 4% YoY and retained its third position in Q3, driven by strong demand for its Y-series models in offline channels. In Q3 2020, it entered the premium market with the X50 series and was the first OEM to launch a gimbal camera that got positive feedback from consumers.

realme also grew 4% YoY in Q3 2020 as it was able to manage supply issues with increased production. It focused on the budget segment with multiple C-series launches to leverage the pent-up demand. Its Narzo series also gained significant attention and was a successful addition to its portfolio. realme shipments grew 52% YoY in the mid-tier segment, driven by the realme 6 and 7 series. It also retained its leadership position on Flipkart.

OPPO shipments grew 30% YoY in Q3 2020, driven by the demand for its budget segment devices, the A12 and A11k, as well as a good performance of the recently launched A52, A53 2020 and F15 in the offline segment.

Poco crossed 1 million smartphone units for the first time, driven by its new launches – M2, M2 Pro and X3.

Transsion Group brands (Itel, Infinix and Tecno) regained their market share in Q3 2020, registering 73% YoY growth. Transsion brands remained strong in Tier 3 and Tier 4 cities, and rural India, capturing fourth position in the overall handset market. It got a spot in top 5 brands in the budget segment (INR 6,000 – INR 10,000 ~$80-$135), driven by the newly launched Tecno Spark 6 Air and Itel Vision 1. Itel recaptured its number one smartphone brand status in the entry-level sub-INR 4,000 (~$ 55) price segment, driven by the Itel also remained the no.1 feature phone brand during the quarter.

Apple led the premium segment (>INR 30,000 ~$400) surpassing OnePlus even before its flagship launch, driven by strong demand for its iPhone SE 2020 and the iPhone 11. Its upcoming flagship iPhone 12 will further strengthen its position in the coming quarter.

OnePlus remained the top brand in the affordable premium segment (INR 30,000-INR 45,000 ~ $400-$600), driven by OnePlus 8 sales. It re-entered the upper mid-tier (INR 20,000 – INR 30,000 ~ $270-$400) with its

Nord series and the OnePlus Nord became the best-selling model within the segment in the initial quarter of launch.

A Basic Customs Duty (BCD) of 10% was announced on display modules and touch panels, which will be effective from next quarter. This move by the Indian government will impact the cost of production since displays are majorly imported. But it will boost the overall handset manufacturing ecosystem and local sourcing contribution in the long run.

2.4 The future of smartphone industry

In an ever-changing, VUCA world, staying ahead through innovation and customer-centricity is paramount. While adapting to a new set of cautious consumers, social distancing norms, and market volatility, brands are building up strengths with recalibrated strategies and new pivots. The smartphone industry is poised at the cusp of interesting change as well, with consumers seeking to experience technology and enrich their communication through a fresh new lens.

Some of the key trends that will re-shape the frontiers of the smartphone industry are:

Co-creation, a lynchpin for innovation

Changing human attitudes and behaviors are calling for new strategies, and consumers are at the very heart of it. We have a technologically savvy, entrepreneurial generation of consumers with a keen appreciation for the latest gadgets, technologies, and a connected lifestyle. For a consumption-intensive industry as the smartphone sector, co-creation is gaining prominence as the voices, ideas, and feedback of people are playing a critical role in product innovation and development. For instance, a quad camera with high pixel count used to be an aspirational feature, available primarily in the premium range of smartphones. As Indian consumers evolved to seek more sophisticated camera functions at an affordable price point, these premium specs have now been democratized across entry-level smartphones as well, finding mass favor. If the pulse of the people is harnessed properly, brands can co-create with fans and consumers to build products with superior design, performance, and quality. Not only does co-creation play a huge role in product development, but also presents the opportunity to improve customer servicing and operational processes.

Sharpening UX with next-gen technologies

Simply put, user experience is wholly inclusive of a user's journey and experience with an organization, its services, and products. Today, user experience has moved far away from a consumer's journey with a single product. Technology is the great enabler, and companies are investing strategically in tools and platforms to augment their UX edge. And we are witnessing a direct impact of this with an ever-proliferating IoT ecosystem. Today, consumers demand a seamless, multi-device journey to complement a connected lifestyle, pushing smartphone brands to create a rich and immersive experience across the product ecosystem. Wearable devices have become an extension of smartphones, sending you urgent reminders in case of a sudden dip in SpO2 (oxygen saturation) levels, body temperature, heart rate, etc. With 2019 driving demand for VR headsets to satisfy gaming needs, brands are also incorporating AR and VR pitstops in their user journey. From AI screen recognition in smartphones to augmented reality capabilities such as motion tracking and light estimation, disruptive technologies are playing a critical role in transforming the user experience.

Redefine the barometer of customer experience

The rules of engagement are undergoing a drastic change, post-Covid-19. With consumers across the world reeling under a health crisis, there is an element of cautiousness in the air. A recent study by Kantar highlights that there is a huge gap between brand promise and customer experience for retailers. It is now, more than ever, that masses are seeking a personalized communication outreach, imbued with empathy. Brands are strengthening the focus on carving out an unparalleled customer experience with sophisticated chatbots, real-time support, and self-service options. In fact, with customers being on the move constantly, they expect quick turn-around and doorstep service. Utilizing machine-learning and predictive analytics capabilities, brands can gain a deeper understanding of a customer's liking, preferences, purchase patterns, and create a seamless experience. Technology evolution in the smartphone, AI, and IoT ecosystem is also playing a key role in re-sharping the brand-customer equation, with the latter opting for a responsive mobile-first strategy.

2.5 Expert views and Research studies

Despite being lighter than a roll of quarters and occupying less space than a paperback book, the smartphone's role in shaping human interaction in the 21st century has been as dramatic as it is far-reaching.

"My smartphone has had a monumental impact on my life," says DeWayne Hamby, a Chattanooga-based communications specialist.

"I used to talk on the phone much more as a social connection, and now I use texts and social media to keep up with everyone," he explains. "Information is also so rapid and up-to-the-minute. … Ten years ago, we'd all be crowding around a television to hear what's happening, and now we have our phones."

The launch of the iPhone in 2007 transformed the humble mobile phone from a one-trick tool for communication into a catch-all platform whose functionality is constantly evolving. When the editors of Popular Mechanics drafted a list of "101 Gadgets That Changed the World" in 2012, the smartphone topped the heap, trumping technological milestones such as the TV (No. 3), the personal computer (No. 5), the telephone (No. 7) and the light bulb (No. 10).

"The smartphone … is now a pocket-size PC," the editors wrote. "It facilitates instantaneous personal connections that make phone conversations seem like cave paintings. … The device seems to have limitless potential."

Last year, researchers at the Nielsen group reported that smartphones accounted for four out of every five phones purchased in the U.S. They estimated that a smartphone now sits in about two-thirds of American adults' pockets.

According to the Massachusetts Institute of Technology's Technology Review, the smartphone paced the TV as the consumer technology with the fastest adoption rate, reaching 40 percent market saturation in just 2 1/2 years.

With more than 1 billion users worldwide and 2.5 million apps — and counting — available across Google and Apple's digital marketplaces, smartphones are impacting day-to-day life in some surprising ways.

Human memory

According to a report released in June by researcher ComScore, the majority of Internet traffic (60 percent) now comes from mobile devices rather than desktops, which long served as the dominant online portal. And with search engines and digitally managed contact lists just a touch away, analysts say smartphones are affecting how the brain processes information.

The authors of a study published in the August 2011 issue of "Science" conclude that persistent access to information via search engines — Google, in particular, which fields more than 1 billion search queries per day — is changing how the brain catalogs knowledge. In a sense, the study authors conclude, Internet-connected devices such as smartphones have become a kind of "external memory source."

"These results suggest that processes of human memory are adapting to the advent of new computing and communication technology," the authors write. "We are becoming symbiotic with our computer tools, growing into interconnected systems that remember less by knowing information than by knowing where the information can be found."

Chattanoogan Tris Vickery says, "I appreciate the vast amount of recorded knowledge that is now accessible at any time [via smartphones]. As [punk vocalist/poet] Henry Rollins said not too long ago, 'There's no longer an excuse for stupidity."

In a 2012 survey by Elon University and the Pew Research Center, technology experts debated the merits and pitfalls of the hyper-connectivity and instantaneous access to information afforded by smartphones. If adoption rates and the always-on lifestyle continue unabated through 2020, respondents suggest future generations will have different priorities about what they choose to remember.

"The human brain is wired to adapt to what the environment around it requires for survival," writes Amber Case, a cyber-anthropologist and CEO of mobile platform Geoloqi, in her survey response. "Today and in the future, it will not be as important to internalize information but to elastically be able to take multiple sources of information in, synthesize them and make rapid decisions."

Social interaction

In a 2010 TED Talk lecture, "We Are All Cyborgs Now," Case argues that smartphones — and the connection they represent to a global social network — have become more than just a device in our pockets but something closer to a digital extension of ourselves.

"This is the first time in the entire history of humanity that we've connected in this way," she says in a transcript from the speech. "And it's not that machines are taking over. It's that they're helping us to be more human, helping us to connect with each other.

"We're just increasing our humanness and our ability to connect with each other, regardless of geography."

In 2012, Time Magazine and mobile technology company Qualcomm conducted a joint survey of 5,000 smartphone users in eight countries. When asked how the smartphone had changed their lives, the most common responses were that it brought them into closer contact with their friends and families and helped them be better informed. At least 75 percent of respondents in every country agreed that this constant connection was mostly positive.

Earlier this year, researchers at Analysys Mason reported that average smartphone use per day doubled between 2011 and 2013, from 1 hour 38 minutes to 3 hours 15

minutes. That's 1 hour 15 minutes shy of a full day every week, during which time researchers at marketing agency TecMark say most users will look at their phones 1,500 times.

But in 2012, security company Lookout's Mobile Mindset Study reflected the ways smartphone users' obsessive need to remain connected is growing by leaps and bounds. According to the study, 60 percent of users don't go more than an hour without checking their phone. More than half (54 percent) said they check their phones while in bed, before going to sleep, upon waking and even during the night. For those aged 18 to 34, that number jumps to 74 percent.

The ability to remain in constant contact can sometimes lead to a disconnect with loved ones. According to Pew Research's 2014 study "Couples, the Internet and Social Media," smartphone attachment can create romantic friction when someone feels ignored in favor of what's on their partner's screen. About 25 percent of married or partnered respondents to the study say they find their significant other's phone use distracting. Among younger users — ages 18 to 29 — more than 40 percent report feeling ignored.

But the networking and interpersonal connectivity offered by smartphones aren't all bad. They also can be boons to those seeking to start or maintain connections.

A Match.com survey released in September found that 39 percent of respondents think they dated more than they normally would because of their smartphones.

To take advantage of their technology's romantic capabilities, however, lonely hearts need to keep their device in tip-top shape. Mobile device replacement provider Protect Your Bubble conducted a survey of its users and found that 61 percent said they wouldn't date someone whose phone screen was cracked.

Chattanoogan Marie Tuggy says she appreciates smartphones' ability to help families stay in touch, but giving someone the cold shoulder over a cracked screen is a pretty negative side effect of a gadget-obsessed culture. "I really don't care for our society these days," she writes in a post to the Times Free Press Facebook page. "Such an insignificant and trivial thing to not date someone over."

Other technologies

It's the nature of technological advancement that newer devices often outstrip their predecessors or offer similar functionality to other devices. Despite only seven years since its introduction to the mainstream, the smartphone's Swiss Army knife-skill set has led to declining sales for a variety of specialized, single-use devices that it rendered redundant.

According to Google's "Our Mobile Planet" survey from 2013, 36 percent of smartphone users would rather give up their TV than their smartphone.

In 2012, Josh Ong, the editor of website The Next Web, decided to catalog and value the devices that were made obsolete by the built-in functions of his smartphone. The resulting list included a feature phone, MP3 player, point-and-shoot digital camera, GPS, alarm clock, flashlight, handheld gaming system, e-reader, guitar tuner, voice recorder, dictionary, infrared remote and web-conferencing device. Collectively, the individual devices weighed more than eight pounds and were worth more than $1,200.

One of the best cases for depicting the reverberations of the smartphone's introduction is in the fate of Apple's iPod, whose original "classic" edition was removed from the company's product line in September, just weeks shy of its 13th birthday.

According to company news releases, year-over-year sales for the once-dominant MP3 player started to slacken in 2007, when Apple released the iPhone. CEO Tim Cook says the decision to halt production was due to the difficulty of sourcing parts, but most analysts agree the iPod Classic was cannibalized by the success of multifunction smartphones.

"A standalone MP3 player has become too antiquated to keep alive," writes CNET's Nick Statt. "Those [sales] numbers began steadily sliding downward as Apple's iPhone and competing Android smartphones began to eat into the MP3 market."

The baked-in GPS functionality of smartphones is having a similar affect on the market for dedicated navigation systems. By the end of 2013, website Technology Review reported that the value of shares in GPS industry leader Garmin were one-third of when smartphones debuted in 2007.

This year, analysts predicted that almost 1 trillion photos will be taken, but the market for digital point-and-shoot cameras is also reeling from the affect of smartphones,

which ship with near-comparable imaging sensors to those of dedicated cameras. Globally, annual shipments of digital cameras fell by 30 percent in 2013 and weren't predicted to improve this year, according to Christopher Chute, the research director of worldwide digital imaging at market analyst the International Data Corp.

"It's especially shocking because this was a market that until recently was growing by double digits," he told the Minneapolis Star Tribune last December. "This is the beginning of the collapse for cameras."

Cultural change

The European Travel Commission estimates that more than 125 million people in the Middle East region are online, and more than 53 million actively use social networks.

According to Google's "Our Mobile Planet" survey, the United Arab Emirates leads the world in smartphone adoption rates, with 73.8 percent of its population owning one, even more than notoriously tech-savvy nations such as South Korea (73 percent). With 72.8 percent adoption, Saudi Arabia has the world's third-highest percentage of smartphone users. Other nations in the region, such as Qatar, Kuwait and Bahrain, all have a majority of smartphone users in their populations as well, according to Google's statistics. And when the Arab Spring began rippling through the Middle East in early 2011, the smartphone quickly demonstrated itself as a powerful tool for driving social revolution. The widespread use of smartphones was a defining factor in the development of the spread of Arab Spring both in how protesters shared information with one another and how events were documented by legions of impromptu citizen journalists, says Berry College professor Matt J. Duffy.

"The introduction of smartphones represents a revolution in the ability of a journalist — and any other observer — to gather information and quickly disseminate it," Duffy writes in an academic paper "Smartphones in the Arab Spring."

Smartphones helped protesters to quickly share information with observers outside the region, which in turn helped drive political pressure during the revolution, he adds.

"They could offer first-hand reports using their smartphones connected to Twitter, Facebook and YouTube," Duffy writes. "Often their information was verified with short video clips or photographs taken from their phones and effortlessly weaved into Facebook or Twitter updates."

After an 18-day occupation of Tahrir Square in downtown Cairo, Egyptian president Hosni Mubarak left office. That decision likely was fueled by pressure driven by social media posts and live streaming video of the protests, says Naila Hamdy, an assistant professor of journalism at the American University of Cairo, in a 2011 interview with the International Press Institute.

This year, smartphones have played similar roles in documenting events in Ferguson, Mo., after the shooting death of Michael Brown and the ongoing political protests in Hong Kong. After the start of the Hong Kong protests in September, downloads jumped by more than 500,000 for "FireChat," a smartphone app that allows users to exchange information "off-the-grid," using the wireless and Bluetooth connections between devices. According to interviews with the app's developers, users shared information about areas that were blocked, where police were located and the location of people who needed assistance.

Originally, "FireChat" was created to help people connect in cities with poor Wi-Fi coverage or during large-scale events where the volume of users can cause traditional wireless and cellular networks to grind to a halt. Instead, the ability of smartphones to nimbly add functionality such as FireChat's by downloading an app helped protestors to stay in touch when communication might otherwise have been hampered, says Micha Benoliel, the co-founder of the app's developer Open Garden. "Mobiles [smartphones] provide the opportunity to create a new dynamic network," Benoliel said in an October interview with Vice Magazine. "People can create their own local Internet, and we believe this is, if you like, the beginning of the 'new Internet.'"

CHAPTER 03

COMPANY PROFILE

3.1 OPPO

BBK Electronics Corporation

BBK Electronics Corporation is a Chinese multinational conglomerate specializing in electronics such as television sets, MP3 players, digital cameras and smartphones. It also markets Blu-ray players, headphones, headphone amplifiers and smartwatches under Oppo Digital brand. In March 2019, BBK Electronics announced iQOO as its newest member and is also a performance sub-brand.

BBK Electronics' headquarters and production base are located in Chang'an, Dongguan. The corporate address is 23 Bubugao Avenue, Wusha Village, Chang'an Dist, Dongguan, 523860 China. It is the highest taxpayer in Chang'an.

In Q1 2017, BBK Electronics shipped 56.7 million smartphones, surpassing both Huawei and Apple to become the 2nd largest smartphone manufacturer in the world, just behind Samsung.

BBK Electronics has been operating in various sections of China's electronics industry since the 1990's. Duan Yongping, a reclusive billionaire, spearheaded the company. After successfully generating more than 1 billion Yuan from the "Subor" gaming console, a competitor to the Nintendo Entertainment System, Duan left his position running a Chinese factory in 1995. He then started the company Bubugao, which would eventually become BBK. The company now owns factories spread over 10 hectares of land and more than 17,000 employees.

BBK Electronics began by manufacturing a range of CD, MP3, and DVD players, along with other household appliances. These appeared under a range of global brands. In 2004 Duan founded Oppo with CEO Tony Chen. Oppo built on Duan's experience in the video market by selling DVD and Blu-ray players, before moving into the smartphone market.

Vivo was the first major BBK subsidiary. Founded by Duan and Vivo CEO Shen Wei in 2009. The first Vivo smartphones appeared in 2011 with a focus on ultra-slim form factors, while relying on celebrity endorsements to capitalize on the smartphone boom. Vivo's core business is feature- packed mid-rangers, but has grabbed headlines in recent years with its experimental Apex concept phones and the Nex series.

Realme is a similar but much newer Oppo spin-off. It was established by Sky Li (born Bingzhong Li), previously the Vice-President of Oppo Electronics, on May 4, 2018. The brand originally appeared in China as Oppo Real back in 2010 before rebranding and entering a series of new markets, including Europe and India, in 2018 and 2019. Realme's phones combine cutting-edge tech with affordable price tags. It even managed to snag our Best of Android 2019 award.

Duan didn't start OnePlus either, the BBK brand that Western customers might be most familiar with. Instead, former Oppo vice president Pete Lau and co-founder Carl Pei set up the company in 2013. While OnePlus has the highest global profile of any of the BBK brands, it is still a subsidiary of Oppo, making it a subsidiary of parent company BBK too. OnePlus is also arguably the most premium brand of the bunch. However, it takes a different approach to Oppo and Vivo's retail-based business model. OnePlus primarily targets online sales via platforms like Amazon, which has helped BBK enter European and US markets

When it comes to smartphones, BBK Electronics is a big deal, even though most consumers have never heard of it. Oppo and Vivo have long been major players not just in the Chinese smartphone market, but internationally too. OnePlus and Realme are quickly adding additional markets and sales on top of the company's Chinese stronghold.

In China, Oppo and Vivo have managed to surpass the growth rate of the once seemingly invincible Xiaomi by building a network of local stores, while its competitor focused on its efforts online. Apple and Samsung have struggled to keep pace with the cost-competitive nature of China's homegrown mobile brands, including those in the BBK network.

On a global scale, data from Counter Point consistently places combined BBK brand market shares in second place towards the end of 2019. At the last count, BBK moves

ahead of the combined might of Huawei and Honor and is right behind Samsung in terms of global shipments and share. Apple retains its second spot during its fourth-quarter new release surge. However, it is otherwise now fourth place in the global scheme of things. Looking at the BBK brands individually paints quite a different picture. There's a familiar first, second, and third-ranking for Samsung, Huawei, and Apple respectively. Oppo remains BBK's largest individual brand and is only a couple of percentage points behind Apple for third place on its own.

BBK Electronics isn't satisfied with just having a strong lead in China. The company is battling it out with Xiaomi for the top spot in India, which remains a key growth market. Meanwhile, Realme and OnePlus are broadening the company's horizons outside of Asia. BBK also launched another brand named ikoo a few years ago. This smartphone sub-brand leverages experience in children's educational electronic toys to create the world's first education handset.

By spreading itself across multiple brands, BBK has managed to tailor its products to suit various market segments. The strategy has clearly paid off in China and is quickly growing across India and now in parts of Europe too. After all, the company is hard to ignore when its subsidiaries are pumping out devices like the OnePlus 7T and Realme X2 Pro.

Of the three verticals set up by BBK, OPPO was tasked with leading audiovisual equipment. The brand launched off in 2004 as a manufacturer of MP3 and DVD players, and it expanded to Blu-ray players, amplifiers, and headphones. OPPO's $1,200 HA-1 amplifier was one of the best products in its category, and the same goes for the PM-3 planar magnetic headphones.

OPPO turned its attention to phones with the Smile Phone in 2008, a feature phone that had a smiley face emoji on the back. OPPO's first smartphone made its debut in 2012, and the brand scored several firsts in the industry. The 2012 Ulike 2 was the first phone to offer a beautification feature for the 5MP front camera, and in the same year, the company introduced the Find 5, one of the first phones to feature a 1080p screen.

OPPO started off making Blu-ray players and headphones, and it pivoted to smartphones in 2012.

OPPO quickly gained momentum in the smartphone segment in China, and it capitalized on that growth with exciting new phones. The OPPO N1 was the first phone to feature a rotating camera module, with the rear 13MP lens offering a 206-degree angle of rotation, giving users the ability to take selfies with the rear camera. The phone debuted with OPPO's custom Color OS skin out of the box, but users had the option of loading CyanogenMod onto their units.

Then there was the Find 7: the phone debuted in March 2014, and it was the first in the world to offer a QHD display, with OPPO managing to beat the L.G. G3 to market by two months. The Find 7 had an innovative camera feature that several 13MP shots together to produce a 50MP image. The Find 7 also introduced the 20W VOOC fast-charging standard, and the standard became a mainstay on subsequent OPPO phones and on OnePlus devices as Dash Charge/Warp Charge. The Find 7 was a breakout device for OPPO, and it allowed the brand to rise up the ranks in China.

A few years later, OPPO partnered with Sony to introduce the IMX398 module in the R9s series, with the brand touting huge gains in low-light photos. And in 2017, OPPO showed up at Mobile World Congress with a phone that had a 5x zoom lens. The Find X from 2018 had a retractable motor that hid both the front and back cameras and the Reno series in 2019 introduced 10x zoom.

OPPO discontinued the production of its audiovisual equipment in 2018, focusing solely on phones. The company is now the world's fifth-largest manufacturer of phones, and it is increasingly turning its attention to Western markets. Over the years, OPPO built a massive retail distribution network in China and India, and the retail network combined with massive advertising campaigns allowed the company to gain momentum in these markets.

Vivo was one of the three verticals at BBK that were branded out into standalone businesses. From the very beginning, Vivo was tasked with communications devices, and in the last 10 years, the company has expanded to over 100 global markets.

Vivo is increasingly becoming BBK's R&D unit — the latest and greatest tech debuts here. Whereas OPPO focused on camera-driven innovation, Vivo turned to sleek designs and Hi-Fi audio to set itself apart. The brand was the first to offer a phone with a dedicated Hi-Fi audio chip in the X1 back in 2012, and in 2014 and 2015, it rolled out a series of ultra-thin devices. The V5 Max, in particular, was a standout as

it was just 5.1mm thick. Vivo also has the distinction of being the first manufacturer to offer a phone with 6GB of RAM in the 2016 Xplay 5. The V3 was the first phone to feature a 20MP front camera, and Vivo followed it up with a 24MP front camera in the 2017 V7 series.

That's just the start: 2018 was when Vivo kicked things into another gear, showing off the first phone with an in-display fingerprint sensor. Vivo showed off another device just a month later that had ultra-thin bezels, and Vivo released a commercial device with these technologies baked in later in the year. Vivo also claimed another first that year with the first-generation NEX, which became the first phone in the world to offer a retractable front camera module.

Vivo continued to show off insane designs in 2019, including a 120W fast charging solution. Vivo also showed off a waterfall display with extreme curves on both sides and debuted the panel on the NEX 3 5G. For 2020, Vivo showed off a device with an in-display camera and 60W wireless charging. We don't have many details on the device yet, but it is looking likely that some of the new features will show up in this year's NEX flagship.

Like OPPO, Vivo's success is down to its aggressive retail push, with the company setting up stores of its own or incentivizing chain stores to sell its products. Vivo also nabbed advertising rights to several lucrative sporting franchises, including the Indian Premier League, and it was the title sponsor of the 2018 FIFA World Cup. Vivo also counts Stephen Curry as one of its ambassadors in China.

Oh, and in Captain America: Civil War, the transparent phone that Tony Stark uses is a Vivo concept device. Vivo hasn't been shy about splashing the cash on major advertising deals in the last five years, and it has allowed the brand to gain ground in a lot of markets.

Whereas the rest of BBK companies started off in Asian markets like China and India, OnePlus had global ambitions from the start. The manufacturer started selling its first phone in the U.S. a few months after China. To this day, OnePlus is the only BBK company that's recognizable in most global markets.

Unlike OPPO and Vivo, OnePlus focused its attention on the U.S., India, and the U.K. from the very beginning.

Although OnePlus dominates the mind share in markets like India, the U.S., and the U.K., it doesn't have the scale of OPPO or Vivo. As such, the company leverages OPPO for the design and manufacture of its phones. Interestingly, OnePlus CEO Pete Lau was a vice-president at OPPO before he co-founded the company. In fact, the OnePlus One was based on the OPPO Find 7a, and that trend of co-opting OPPO hardware has continued over the years. The OnePlus 5 was nearly identical to OPPO's R11, and this year's OnePlus 8 Pro is turning out to be very similar to the Find X2 Pro. All OnePlus phones sold in global markets are built at OPPO's sprawling Dongguan manufacturing facility, and the devices sold in India are assembled at an OPPO India factory.

While OPPO and Vivo focused on cameras and audio as being the differentiator for their phones, OnePlus turned its attention to the internal hardware. From the very first OnePlus phone, the company's obsessive focus on performance allowed it to stand out. Over the years, OnePlus focused on improving the software on its phones, with Oxygen OS delivering a clean and uncluttered experience that's one of the best you'll find on Android. OnePlus may not have scored many firsts in the industry, but it has amassed millions of fans for its focus on clean software combined with robust internals. By focusing on global markets from the very beginning, OnePlus was able to secure a firm foothold in countries like the U.S., UK, India, and more. OnePlus is also different from OPPO and Vivo in that it sells its phones online, and while it is increasingly turning to mainstream advertising, in its initial years, its sales were primarily word-of-mouth.

OnePlus launched 18 phones to date, and there were several standouts: from the Sandstone finish on the OnePlus One to the metal design of the OnePlus 3 series, the switch to the 18:9 form factor with the OnePlus

5T, and the all-screen front on the OnePlus 7 Pro, OnePlus had a lot to offer in this industry in the last six years.

OnePlus retrospective: Looking back at all OnePlus phones over the last six years

Realme: The budget challenger to Xiaomi

Realme is a relatively new entrant into the industry, with the brand rolling out its first phone just two years ago. Realme was created as a sub-brand of OPPO to challenge Xiaomi in India, with the brand focusing on the entry-level and budget segments.

Realme burst onto the scene in 2018 and did the unthinkable: it beat Xiaomi at its own game.

Thanks to aggressive pricing and a frenetic launch schedule, Realme managed to do just that. The brand launched 27 phones in under two years, and amassed a market share of 16.2% in India, an astonishing feat all things considered. Realme has managed to undercut Xiaomi by leveraging BBK's massive scale, allowing the brand to sell phones at rock-bottom prices. Everything about the brand is designed with Xiaomi in mind — heck, even the name Realme sounds like a riff on Xiaomi's Redmi subsidiary.

But by emulating Xiaomi's playbook, Realme was able to carve out a niche for itself in India in a very short time. The budget segment in India is the most competitive in the world, and in spite of that, Realme was able to record a meteoric rise in this category over the last two years.

Realme is now branching out into the mid-range segment, with devices like the X2 Pro and X50 Pro 5G introducing high refresh rate screens and enticing new features like 5G connectivity.

Realme X50 Pro 5G hands-on preview: A bold new frontier

iQOO: Designed for the 5G era

iQOO is BBK's latest smartphone brand, with the entity making its debut with the iQOO 3 in India earlier this year. While it is a new unit, it is taking a leaf out of OPPO and Vivo's playbook by focusing heavily on advertising.

The phone itself is pretty interesting: it is one of the first devices in the world to be powered by the Snapdragon 865, and it is available in two variants in India: one with 4G connectivity, and the other with a 5G modem. There's not a lot to talk about iQOO right now, but it is clear that BBK wanted a standalone entity to focus on 5G.

BBK now has five smartphone brands, and with the likes of OPPO and Vivo setting their sights on the U.K. and other Western markets, you will only hear more about these brands in the coming months and years. While each brand works in a silo, they share hardware resources, giving them a huge advantage over smaller brands. That is one of the reasons why Realme was able to move up the ladder in India in a matter of

two years, and with BBK now fielding devices from $100 to $1,000, it is a force to be reckoned with in the smartphone industry\

BBK Electronics Corporation markets smartphones under

- **Oppo**
- **Vivo**
- **OnePlus**
- **Realme**
- **iQOO**

- **Oppo**

Guangdong Oppo Mobile Telecommunications Corp., Ltd, stylized as oppo, is a Chinese consumer electronics and mobile communications company headquartered in Dongguan, Guangdong. It is a subsidiary of BBK Electronics along with Vivo, One Plus and Realme. The Oppo Logo changed in 2019 after the launch of Oppo Reno. Its major product lines include smartphones, audio devices, power banks, Blu-ray players, and other electronic products.

OPPO is a global electronics and technology service provider that delivers the latest and most exquisite mobile electronic devices in over 20 countries, including the United States, China, Australia and many countries throughout Europe, Southeast Asia, South Asia, the Middle East and Africa. OPPO is dedicated to delivering customers with the most extraordinary mobile experience through meticulous designs and smart technology.

OPPO is a camera phone brand enjoyed by young people around the world. For the last 10 years, OPPO has been focusing on manufacturing camera phones, while innovating mobile photography technology breakthroughs. OPPO started the era of selfie beautification, and was the first brand to launch smartphones with 5MP and 16MP front cameras. OPPO was also the first brand to introduce the motorized rotating camera, the Ultra HD feature and the 5x Dual Camera Zoom technology. OPPO's Selfie Expert F series launched in 2016 drove a selfie trend in the smartphone industry. In 2016, OPPO was ranked as the number 4 smartphone brand globally, according to IDC.

History

OPPO Electronics Corporation is simply known as OPPO and is of Chinese origins. It is associated with consumer electronics industry and deals with mobile phones. OPPO is a subsidiary of its parent company BBK Electronics. It was founded in the year 2001 by its founder Chen Mingyong but was registered in the year 2004 with brand name OPPO. OPPO is one of the leading global names in the mobile-phone industry. It deals in designing, manufacturing and marketing of smartphones. At its onset, it was a technology and electronics organization with its focus on MP3 players but in the year 2008, it diversified its portfolio and stepped in a segment of smartphones. It was able to create new and better opportunities for itself by including Blu-ray players, smartphones and other electronic devices in its kit.

In June 2016, OPPO became the biggest smartphone manufacturer in China, selling its phones at more than 200,000 retail outlets. OPPO was the top smartphone brand in China in 2019 and was ranked No. 5, in market share, worldwide.

Ellent smartphone photography experience to over 100 million young people aroundthe world.

Branding

OPPO logo used until March 19, 2019 in China and August 2019 in other countries.

The South Korean boy band 2PM prepared a song known as "Follow Your Soul" in a promotional deal with OPPO for launching its brand in Thailand in 2010.In June 2015, the company signed an agreement with FC Barcelona to become a sponsor of the Spanish football club.

In 2016, the Philippine Basketball Association tied up with this company as its official smartphone partner, beginning with the 2016 PBA Commissioner's Cup which began on 10 February.

OPPO hires celebrity endorsers in Vietnam. SơnTùng M-TP endorsed three smartphone units: Neo 5, Neo 7, and F1s. OPPO made a sponsorship to one of Vietnam's top-rated reality shows, The Face Vietnam.

In 2017, OPPO won the bid to sponsor the India national cricket team which allows their logo to be used on the team's kits from 2017 to 2019.

In 2019, OPPO became a sponsoring partner of the French Open tennis tournament held in Roland-Garros, Paris. The same year, they also became a sponsoring partner of Wimbledon for 5 years as the first official smartphone partner. Starting with the 2019 World Championship, Oppo is the exclusive global smartphone partner for League of Legends esports through 2024, OPPO will have year-round activations centered around the sport's three annual global tournaments: the Mid-Season Invitational, the All-Star Event, and the World Championship.

Vision

- To Become a Healthier, Long Term Enterprise

Mission

- To allow extra ordinary people to enjoy perfect technology

Core values

- Benfen, User Oriented, Striving for perfection, Result Oriented

Culture and Philosophy: -

At OPPO, believe that true innovation is all about changing, renewing or creating more effective products that make life simpler. A core part of OPPO's company culture lies in its commitment to working with its fans to develop and deliver the best products possible, through openness to customer feedback. OPPO's brand philosophy is summed up in the phrase "The art of technology". It conveys our business principles of honesty, integrity and ethics. OPPO is consistent in its determination to not only do things right, but also to do the right thing in any given situation.

OPPO is wholeheartedly inspired by its customers. OPPO co- develops products with customers based on their feedback on both the hardware and software user experience. OPPO has adopted a strategy of rapid release for smartphone development, releasing firmware updates as well as expanding its reach and service across the globe.

OPPO is continually striving to impress and capture young hearts with elegant trendsetting design, excellent user experience, customer-centered product development, quality service, and most importantly an attitude of the relentless pursuit for perfection.

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Marketing Strategies By Oppo:-

1) Newer, and better products:-

oppo mobile launch World's first rotating camera with flash light

O-touch panel, world's first Smartphone with rear touch back panel

O-click, a Bluetooth remote camera trigger and a device locator in oppo N1

Oppo launch oppo finder worlds slimmest phone just 6.65

Oppo develop VOOC rapid charge the world fastest and safest mobile device charging technology.

2) Focus on mobile features:-

Oppo mobile focus on mobile features according to market oppo develop color os for develop new feature in mobile motions and gestures for an easy using, for a security.

3) Control mop in market: -

Oppo mobiles focus on control mop in market for save dealers profit.

4) Brand building:-

Brand building was one of the major tasks it had in hand. It went with Bollywood stars Hrithik Roshan and Sonam Kapoor as its brand ambassador. "We feel that Hrithik and Sonam are elegant and truly match with Oppo's brand image. OPPO is the new partner of FC Barcelona for the next 3 years.

5)New products:-

Oppo launch new mobiles and develop new features in mobile like neo5 Wi-Fi display for increase sale.

6) Events:-

Oppo doing event for making customer relationship and brand awareness and oppo also doing event in cultural days like diwali, new year, other cultural days and every month celebrate oppo day and in these event give gifts to customers and also other offer.

7) Schemes to dealers:-

Oppo mobile give schemes to dealers like trip on sale 500pcs and also give to branding offers and promoters for sale product and also give extra profit on mobile.

Color OS Features:-

- App encrypt
- Global gesture panel
- ON screen gesture
- Permission monitor
- Guest mode
- Convenient mode
- Easy volume
- Ringtone editor
- Control
- Live weather
- Multi window
- Easy screenshot
- Hand writing note
- Gloves mode
- Data saving
- off-screen gestures
- Call recorder
- Call Blocker
- Customize themes
- Holiday mode
- kingsoft office

OPPO SMARTPHONES

- OPPO Reno4 Pro
- OPPO Reno3 Pro
- OPPO F17 Pro
- OPPO F17
- OPPO F15
- OPPO Reno 10X Zoom
- OPPO A53
- OPPO A52
- OPPO A12
- OPPO A31

OPPO ACCESSORIES

- OPPO Watch
- OPPO Enco W51
- OPPO Enco Free
- OPPO Enco W31
- OPPO Enco Q1
- OPPO Enco M31
- OPPOEncoW11

Headphones and amplifiers

In 2014, OPPO released a number of high end headphones and amplifiers. The flagship PM-1 and PM-2 headphones along with the HA-1 desktop amplifier have been heavily promoted in the audio community. One blogger declares the PM-1 is "near to perfect".

Released in 2015, the HA-2 was a portable version of the HA-1 amp/DAC which featured a battery pack option as well as a stitched leather casing. The phone played music in real-time to the HA-2 (via the included Android micro USB cable or iOS lightning cable, or USB cable if from PC). It also can be charged using an included "rapid charger" charging kit. The battery pack feature can only be used simultaneously while the HA-2 is used to play music if the playing (source) device is

an Apple iOS device. In October 2016 an updated version was released with a new DAC chip and now named HA-2SE. Otherwise, it was the same as the HA-2.

Smartwatches

Oppo launched its first smartwatch, the Oppo Watch, on 6 March 2020 in the Chinese domestic market.

3.1 HTC

HTC Corporation (High Tech Computer Corporation, literally Hongda International Electronics Co., Ltd.; trading as HTC) is a Taiwanese consumer electronics company headquartered in Xindian District, New Taipei City, Taiwan. Founded in 1997, HTC began as an original design manufacturer and original equipment manufacturer, designing and manufacturing laptop computers.

Its core business is the development, production, and manufacturing of electronic devices that combine the attitudes of a mobile telephone device and a handheld computer. Chairwoman and co-founder of HTC since 1997 is Cher Wang. The development of the company has mainly been driven by Wang as well as by the other two co-founders HT Cho, Board Director, and Peter Chou, Chief Executive Officer. In the beginning, HTC was authorized to develop products using the new Microsoft operating system for consumer electronic products, Windows CE. HTC then developed the world's first handheld personal data assistant (PDA) using Windows CE. The strategic partnership with Microsoft continues to grow and flourish and is as solid as it was in the beginning. Driven by Peter Chou, the company anticipated the growth potential in the sector of mobile telecommunication products and built partnership with Europe's largest telecommunications companies: UK, Orange (France), and T-Mobile (Germany).

After initially making smartphones based mostly on Windows Mobile, HTC became a co-founding member of the Open Handset Alliance, a group of handset manufacturers and mobile network operators dedicated to the development of the Android mobile operating system. The HTC Dream (marketed by T-Mobile in many countries as the T-Mobile G1) was the first phone on the market to run Android.

Although initially successful as a smartphone vendor, competition from Apple Inc. and Samsung Electronics, among others, diluted its market share, which reached

just 7.2% by April 2015, and the company has experienced consecutive net losses. In 2016, HTC began to diversify its business beyond smartphones, having partnered with Valve to produce a virtual reality platform known as HTC Vive. After having collaborated with Google on its Pixel smartphone, HTC sold roughly half of its design and research talent, as well as non-exclusive rights to smartphone-related intellectual property, to Google in 2017 for US$1.1 billion.

HTC's chairwoman and acting CEO is Cher Wang who is the daughter of the late Wang Yung-ching, founder of the plastics and petrochemicals conglomerate Formosa Plastics Group. Peter Chou serves as head of the HTC Future Development Lab, and HT Cho as Director of the Board and Chairman of HTC Foundation. HTC's CFO is Hui-Ming Cheng. In addition to being chair of HTC, Cher Wang is also acting chair of VIA Technologies. HTC's main divisions, including the IA (Information Appliance) engineering division and the WM (Wireless Mobile) engineering division are ISO 9001/ISO 14001-qualified facilities.

The company's growth has accelerated dramatically since being chosen by Microsoft as a hardware platform development partner for the Windows Mobile operating system (based on Windows CE). HTC also works with Google to build mobile phones running Google's Android mobile OS such as the Nexus One.

History

Cher Wang and H. T. Cho founded HTC in 1997. Initially a manufacturer of notebook computers, HTC began designing some of the world's first touch and wireless hand-held devices in 1998.

HTC started making Windows Mobile PDAs and smartphones starting from 2004 under the Qtek brand. In 2006 the range was rebranded as HTC with the launch of the HTC TyTN.

In 2007, HTC acquired the mobile device company Dopod International.

In 2008, HTC unveiled the HTC Max 4G, the first GSM mobile phone to support WiMAX networks.

HTC joined Google's Open Handset Alliance and then developed and released the first device powered by Android in 2008, the HTC Dream.

In November 2009 HTC released the HTC HD2, the first Windows Mobile device with a capacitive touchscreen. The same year, HTC Sense debuted as a user interface which continues to be used as of 2018.

In July 2010, HTC announced it would begin selling HTC-branded smartphones in China in a partnership with China Mobile. In October 2010, HTC launched the brand tagline "quietly brilliant"', and the YOU campaign, HTC's first global advertising campaign. The same month, the HTC HD7 was released as one of the launch models of Microsoft's revitalized Windows Phone. In 2010, HTC sold over 24.6 million handsets, up 111% over 2009.At the Mobile World Congress in February 2011, the GSM Association named HTC the "Device Manufacturer of the Year" in its Global Mobile Awards. In April 2011, HTC surpassed Nokia as the third-largest smartphone manufacturer by market share, behind Apple and Samsung.

On 6 July 2011, it was announced that HTC would buy VIA Technologies' stake in S3 Graphics. On 6 August 2011, HTC acquired Dashwire for $18.5M. In August 2011, HTC confirmed a plan for a strategic partnership with Beats Electronics involving acquiring 51 percent of the company.

The 2011 Best Global Brands rankings released by Interbrand, listed HTC at #98 and valued it at $3.6 billion. Based on researcher Canalys, in Q3 2011 HTC Corporation became the largest smartphone vendor in the U.S. with 24 percent market share, ahead of Samsung's 21 percent, Apple's 20 percent and BlackBerry's 9 percent. HTC Corporation made different models for each operator.

During early 2012, HTC lost much of this U.S. market share due to increased competition from Apple and Samsung. According to analyst firm comScore, HTC only accounted for 9.3% of the United States smartphone market as of February 2013. In light of the company's decrease in prominence, Chief Executive Peter Chou had informed executives that he would step down if the company's newest flagship phone, the 2013 HTC One, had failed to generate impressive sales results. HTC's first quarter results for 2013 showed its year-over-year profit drop by 98.1%, making it the smallest-ever profit for the company—the delay of the launch of the HTC One was cited as one of the factors. In June 2012, HTC moved its headquarters from Taoyuan City (now Taoyuan District) to Xindian District, New Taipei City.On 14 January 2013, HTC launched its smartphones in Burma.

The HTC One was released in mid-2013 and, subsequently won various industry awards in the best smartphone and best design categories, but global sales of the HTC One were lower than those for Samsung's Galaxy S4 flagship handset and HTC recorded its first ever quarterly loss in early October 2013: a deficit of just under NT$3 billion (about US $100m, £62m). Marketing problems were identified by HTC as the primary reason for its comparative performance, a factor that had been previously cited by the company.

During 2013, Microsoft was in negotiations to purchase HTC. This was only revealed in 2018 by Risto Siilasmaa, chairman of Nokia, in an interview with the Helsingin Sanomat. Microsoft would eventually purchase Nokia's mobile phone business that year.

In August 2013, HTC debuted a new "Here's To Change" global marketing campaign featuring actor Robert Downey, Jr., who signed a two-year contract to be HTC's new "Instigator of Change". On 27 September 2013, HTC announced that it would sell back its stake in Beats Electronics following the release of the HTC

One, two variants were released to form a trio for the 2013 HTC One lineup. A smaller variant named the HTC One Mini was released in August 2013, and a larger variant named the HTC One Max was released in October 2013. Similar in design and features to the HTC One, the upgraded aspects of the One Max include a display measuring 5.9 inches (15 cm), a fingerprint sensor and a removable back cover for expandable memory. The product was released into the European and Asian retail environment in October 2013, followed by a US launch in early November 2013.

In March 2014, HTC released the HTC One (M8), the next version of the HTC One flagship, at press conferences in London and New York City. In a change from previous launches, the HTC One was made available for purchase on the company website and North American mobile carrier websites on the same day a few hours after the launch.

In April 2014, HTC reported sales climbing 12.7 percent to NT$22.1 billion, the company's fastest growth since October 2011.In September 2014, Google selected HTC to make its Nexus 9 tablet. In August 2014 HTC announced a Windows Phone-powered variant of the One (M8), their first using the operating system since 2012.

HTC ended its long relationship with Microsoft afterwards due to Nokia's dominance in Windows Phone devices, and started focusing solely on Android.

On 1 March 2015, HTC unveiled Vive, a virtual reality head-mounted display in collaboration with Valve. In June and October 2015, HTC reported net losses; the company has faced increased competition from other smartphone makers, including Apple, Samsung, and others, which had resulted in a decline in its smartphone sales, as well a major loss of market share. Its smartphone market share had risen back to 7.2 percent in April 2015 due to its strong sales of recent devices, but HTC's stock price had fallen by 90 percent since 2011.

In November 2016, HTC reported that it had sold at least 140,000 Vive units, and that each unit was being sold at a profit. In January 2017, HTC unveiled its new U series smartphone line, the U Play and U Ultra; the company described the U series as a "new direction" for its phones, emphasizing an integrated virtual assistant developed by the company. In February 2017, HTC reported that in the fourth quarter of 2016, its operating losses had decreased by 13% year-over-year, citing "robust sales performance" and sequential revenue increases throughout the year.

On 21 September 2017, Google announced that it would acquire roughly half of the 4,000 employees who worked in HTC's design and research staff, and non-exclusive licences to smartphone-related intellectual property held by HTC, for US$1.1 billion. The employees included the team involved with Google's Pixel smartphone, which was manufactured by HTC. Google stated that the purchase was part of its efforts to bolster its first-party hardware business. The transaction was completed on 30 January 2018; while HTC will continue to produce its own smartphones, the company has stated that it planned to increase its focus on Internet of Things (IoT) and virtual reality going forward. On 26 March 2018, HTC reported a quarterly net loss of US$337 million in the fourth quarter of 2017, citing "market competition, product mix, pricing, and recognized inventory write-downs". The company's transaction with Google will be reflected in its first quarter 2018 numbers. HTC stated that it would use the revenue to further its investments in "emerging technologies". The company had also cited its increasing VR investments, including its upcoming Vive Pro model, and Vive Focus—a standalone "all-in-one" VR headset unveiled in November 2017.

In July 2018 HTC has revealed that it has entered into a partnership with games and apps developer and publisher Animoca. This includes product development and joint collaboration in areas such as games, blockchain, artificial intelligence, machine learning, augmented reality and virtual reality. Animoca's games will be pre-installed on HTC devices in the future.

On 5 February 2019 HTC released its first "Cryptophone", focused on providing universal finance through Bitcoin and creating a portal towards realizing a truly decentralized web.

On 11 May 2019 HTC announced that its Cryptophone will be the first smartphone to support a bitcoin full node.

On 17 September 2019 HTC appointed Yves Maitre, former executive vice president of consumer equipment and partnerships of Orange, as CEO where Cher Wang will continue her role as chairwoman.

On 3rd September, 2020 HTC CEO Yves Maitre stepped down from the position citing personal reasons. Co-founder Cher Wang then stepped in and is now the current CEO of HTC.

FEATURES

1. **The Power of 10**

HTC 10. It’s more of what you’re looking for in a flagship phone. Unparalleled performance. Superb 24-bit Hi-Res sound. The world’s first* Optical Image Stabilization in both front and back cameras. And one of the highest smartphone camera rankings ever from DxOMark. All in a beautifully crafted metal unibody.

2. **Inspiration realized in metal**

It’s the beauty of light, crafted into a brand new all-metal unibody. Every element of HTC 10 has been designed, refined and perfected. From the bold new chamfered contour to its stunning dual-textured finish and quality construction. All the way down to getting the perfect click from the power button.

3. **Next generation camera**

HTC 10 delivers what may well be the best smartphone camera available today. With innovations like the world’s first OIS front and back, 12 million Ultra Pixels, faster

laser auto focus and more. A DxOMark score of 88*, one of the highest camera quality scores of any smartphone so far, shows we're definitely on the right track.

4. **Off the chart performance**

With HTC10, apps launch faster and run smoother, the screen reacts instantly to your every touch, and things just work brilliantly. It's what you expect from best in class hardware and software tuned to near perfection.

5. **Brilliant Hi-Res Audio**

HTC 10 sets a new gold standard in sound quality with its brand new BoomSound Hi-Fi edition speakers, Personal Audio Profile and Hi-Res audio earphones. All of which works beautifully with HTC 10's certified 24-bit Hi-Res audio. Music has never sounded this good on a smartphone.

6. **Unprecedented control**

One of the greatest things about Android is how it empowers you. HTC 10 magnifies the level of control you have and lets you easily personalize your phone in ways you've never thought possible. All while offering you fine-grained control over apps like never before.

7. **Made to last and last**

Every part of HTC 10 has been optimized from the ground up to run more efficiently. Giving you up to 2 days* of use. It also stays cooler while charging faster than ever – up to 50% in just 30 minutes – enough for a day on the go.

Mission

To become the leading supplier of mobile information and communication devices by providing value-added design, world-class manufacturing, and logistic and service capabilities.

Vision

HTC brings brilliance to life through leading innovation in smart mobile device and experience design. Beginning with a vision to put a personal computer in the palm of our customer's hands. We have led the way in the evolution from palm PC to smartphone.

VALUES

- An unending curiosity
- An unyielding resilience
- A refined approach
- A real impact
- A greater purpose

HTC PRODUCTS:-

1) **SMARTPHONES**
2) **HTC 5G Hub**
3) **THE CRYPTOPHONE**
4) **HTC VIVE™**

1) **SMARTPHONES**

- HTC Wildfire R70
- HTC Wildfire X
- HTC U11+
- HTC Desire 12
- HTC Desire 12+
- HTC U Play
- HTC U11

2) **HTC 5G Hub**

Command the rapid speeds of the future with the HTC 5G Hub. Designed for ease of use in both home and office environments, this versatile device enables smooth 4K video streaming, low-latency gaming, and faster networks. With long-lasting power and Android™ 9 Pie support, the HTC 5G Hub is also made for a wide array of on-the-go situations, harnessing 5G speeds that are dramatically faster than 4G LTE networks.

3) **THE CRYPTOPHONE**

Introducing the Cryptophone, the next-generation device that combines the usability of the smartphone and the security of a crypto hardware wallet. The secure all-in-one

device revolutionizes how we access Bitcoin and Web 3 - empowering you to buy, sell, send, receive, borrow and lend.

SMARTPHONE + HARDWARE WALLET = CRYPTOPHONE

4) **HTC VIVE™**

VR (Virtual Reality) is an exciting feature of next - generation computing and entertainment. HTC VIVE allows users to browse through the VR world and use unique hand-simulation

HTC VIVE incudes:

- Cosmos Series
- Pro Eye Series
- Pro Series

Cosmos Series

Change the face of VR.

The VIVE Cosmos Series is the world's first PC-VR system with a suite of modular options for a wide-range of VR applications. It also offers the highest VIVE visual resolution to date.

Pro Eye Series

Evolving perception. Precision Eye Tracking combined with professional-grade sound and graphics - designed for enterprises, home offices, and VR users who require a premium PC-VR experience.

Pro Series

Professional-Grade PC-VR. Built to meet the needs of today’s most demanding VR users, VIVE Pro is an easy-to-deploy PC-VR system that scales with your business and provides a rich feature set for hardcore gamers. From seated environments to expansive, multi-user deployments, VIVE Pro delivers high quality visual fidelity, powerful audio and an immersive experience.

3.3 LENOVO

Lenovo Group Limited, often shortened to Lenovo is a Chinese multinational technology company. Incorporated in Hong Kong, it has global headquarters in Beijing, China, operational headquarters in Morrisville, North Carolina, US, and an operational center in Singapore.

The company designs, develops, manufactures, and sells personal computers, tablet computers, smartphones, workstations, servers, supercomputers, electronic storage devices, IT management software, and smart televisions, and is the world's largest personal computer vendor by unit sales as of July 2020. It also markets the ThinkPad and ThinkBook business lines of notebook computers; IdeaPad, Yoga, and Legion consumer lines of notebook laptops; and the IdeaCentre and ThinkCentre lines of desktops.

Lenovo has operations in over 60 countries and sells its products in around 180 countries. It has research centers in Beijing, Chengdu, Yamato (Kanagawa Prefecture, Japan), Shanghai, Shenzhen, and Morrisville (North Carolina, US),and also has Lenovo NEC Holdings, a joint venture with NEC that produces personal computers for the Japanese market.

Lenovo was founded in Beijing in November 1984 as Legend, and was incorporated in Hong Kong in 1988. Lenovo acquired IBM's personal computer business in 2005 and agreed to acquire its Intel-based server business in 2014. Lenovo entered the smartphone market in 2012 and as of 2014 was the largest vendor of smartphones in mainland China. In 2014, Lenovo acquired Motorola Mobility from Google. In 2017, Lenovo acquired Fujitsu's personal computer business.

Lenovo is listed on the Hong Kong Stock Exchange and is a constituent of the Hang Seng China-Affiliated Corporations Index, often referred to as the "red chip" stocks.

HISTORY

Liu Chuanzhi, along with a group of ten experienced engineers, founded Lenovo in Beijing on 1 November 1984 with 200,000 yuan. The Chinese government approved Lenovo's incorporation on the same day. Jia Xufu , one of the founders of Lenovo, indicated that the first meeting in preparation for starting the company was held on 17 October. Eleven people, the entirety of the initial staff, attended. Each of the founders was a member of the Institute of Computing Technology of the Chinese Academy of Sciences (CAS). The 200,000 yuan used as start-up capital was approved by Zeng Maochao. The name for the company agreed upon at this meeting was the Chinese Academy of Sciences Computer Technology Research Institute New Technology Development Company.

Their first significant effort, an attempt to import televisions, failed. The group rebuilt itself within a year by conducting quality checks on computers for new buyers. Lenovo soon started developing a circuit board that would allow IBM-compatible personal computers to process Chinese characters. This product was Lenovo's first major success. Lenovo also tried and failed to market a digital watch. Liu said, "Our management team often differed on which commercial road to travel. This led to big discussions, especially between the engineering chief and myself. He felt that if the quality of the product was good, then it would sell itself. But I knew this was not true, that marketing and other factors were part of the eventual success of a product." The fact that its staff had little business experience compounded Lenovo's early difficulties. "We were mainly scientists and didn't understand the market", Liu said, adding that "we just learned by trial-and-error, which was very interesting—but also very dangerous". In 1990, Lenovo started to manufacture and market computers using its own brand name.

In May 1988, Lenovo placed its first recruitment advertisement on the front page of the China Youth News. Such ads were quite rare in China at the time. Out of the 500 respondents, 280 were selected to take a written employment exam. 120 of these candidates were interviewed in person. Although interviewers initially only had authority to hire 16 people, 58 were given offers. The new staff included 18 people

with graduate degrees, 37 with undergraduate degrees, and three students with no university-level education. Their average age was 26. Yang Yuanqing, the current CEO of Lenovo, was among that group.

Liu Chuanzhi received government permission to form a subsidiary in Hong Kong and to move there along with five other employees. Liu's father, already in Hong Kong, furthered his son's ambitions through mentoring and facilitating loans. Liu moved to Hong Kong in 1988. To save money during this period, Liu and his co-workers walked instead of taking public transportation. To keep up appearances, they rented hotel rooms for meetings.

Lenovo became publicly traded after a 1994 Hong Kong listing that raised nearly US$30 million. Prior to its IPO, many analysts were optimistic about Lenovo. The company was praised for its good management, strong brand recognition, and growth potential. Analysts also worried about Lenovo's profitability. Lenovo's IPO was massively over-subscribed. On its first day of trading, the company's stock price hit a high of HK$2.07 and closed at HK$2.00. Proceeds from the offering were used to finance sales offices in Europe, North America and Australia, to expand and improve production and research and development, and to increase working capital.[14]

When Lenovo was first listed, its managers thought the only purpose of going public was to raise capital. They had little understanding of the rules and responsibilities that went along with running a public company. Before Lenovo conducted its first secondary offering in 1997, Liu proudly announced the company's intent to mainland newspapers only to have its stock halted for two days by regulators to punish his statement. This occurred several times until Liu learned that he had to choose his words carefully in public. The first time Liu traveled to Europe on a "roadshow" to discuss his company's stock, he was shocked by the skeptical questions he was subjected to and felt offended. Liu later came to understand that he was accountable to shareholders. He said, "Before I only had one boss, but the Chinese Academy of Sciences (CAS) never asked me anything. I relied on my own initiative to do things. We began to think about issues of credibility. Legend began to learn how to become a truly international company."

To fund its continued growth, Lenovo issued a secondary offering of 50 million shares on the Hong Kong market in March 2000 and raised about US$212 million.

Mary Ma, Lenovo's chief financial officer from 1990 to 2007, was in charge of investor relations. Under her leadership, Lenovo successfully integrated Western-style accountability into its corporate culture. Lenovo's emphasis on transparency earned it a reputation for the best corporate governance among mainland Chinese firms. All major issues regarding its board, management, major share transfers, and mergers and acquisitions were fairly and accurately reported. While Hong Kong-listed firms were only required to issue financial reports twice per year, Lenovo followed the international norm of issuing quarterly reports. Lenovo created an audit committee and a compensation committee with non-management directors. The company started roadshows twice per year to meet institutional investors. Ma organized the first-ever investor relations conference held in mainland China. The conference was held in Beijing in 2002 and televised on China Central Television (CCTV). Liu and Ma co-hosted the conference and both gave speeches on corporate governance. In May 2015, Lenovo revealed a new logo at Lenovo Tech World in Beijing, with the slogan "Innovation Never Stands Still" .Lenovo's new logo, created by Saatchi, New York, can be changed by its advertising agencies and sales partners, within restrictions, to fit the context. It has a lounging "e" and is surrounded by a box that can be changed to use a relevant scene, solid color, or photograph. Lenovo's Chief Marketing Officer David Roman said, "When we first started looking at it, it wasn't about just a change in typography or the look of the logo. We asked 'If we really are a net-driven, customer-centric company, what should the logo look like?' We came up with the idea of a digital logo first … designed to be used on the internet and adaptable to context."

In early June 2015, Lenovo announced plans to sell up to US$650 million in five-year bonds denominated in Chinese yuan. The bonds will be sold in Hong Kong with coupon ranging from 4.95% to 5.05%. This is only the second sale of bonds in Lenovo's history. Financial commentators noted that Lenovo was paying a premium to list the bonds in yuan given relatively low costs for borrowing in US dollars.

Mission

Mission is to become one of the world’s great personal technology companies. We aspire to achieve this objective by leading in three key areas: Personal Computers: Lead in PCs and be respected for our product innovation and quality. Convergence: Lead the industry with an ecosystem of devices, services, applications and content for

people to seamlessly connect to people and web content. Culture: Become recognized as one of the best, most trusted and most well-respected companies to work for and do business with."

Vision

Vision is that Lenovo will create personal devices more people are inspired to own, a culture more people aspire to join and an enduring, trusted business that is well respected around the world. This vision guides us in pursuit of our mission to become one of the world's great personal technology companies. We will accomplish this through: Personal Computers: Lead in PCs and be respected for our product innovation and quality. Convergence: Lead the industry with an ecosystem of devices, services, applications and content for people to seamlessly connect to people and web content. Culture: Become recognised as one of the best, most trusted and most well-respected companies to work for and do business with.

Products and services

1) **Smartphones**
2) **Personal and business computing**
3) **ThinkPad**
4) **ThinkCentre**
5) **ThinkServer**
6) **ThinkStation**
7) **ThinkVision displays**
8) **IdeaPad**
9) **IdeaCentre**
10) **Legion**
11) **Smart Televisions**
12) **Wearables**
13) **IoT / Smart Home**
14) **Lenovo Connect**

1) **Smartphones**

Lenovo smartphones are marketed as the "LePhone" in Mainland China and the "IdeaPhone" overseas. Motorola Mobility, ZUK Mobile and Medion, divisions of

Lenovo, sell smartphones under their own brands. As of September 2015, Lenovo is in the process of rebranding most of its phones using the Motorola brand name.

As of January 2013, Lenovo only manufactured phones that use the Android operating system from Google. Numerous press reports indicated that Lenovo planned to release a phone running Windows Phone 8, According to J. D. Howard, a vice president at Lenovo's mobile division, the company would release a Windows Phone product if there is market demand.

Lenovo has implemented an aggressive strategy to replace Samsung Electronics as Mainland China market's top smartphone vendor. It has spent $793.5 million in Wuhan in order to build a plant that can produce 30 to 40 million phones per year. Data from Analysys International shows that Lenovo experienced considerable growth in smartphone sales in China during 2012. Specifically, it saw its market share increase to 14.2% during 2012's third quarter, representing an increase when compared to 4.8% in the same quarter of 2011. IDC analysts said that Lenovo's success is due to its "aggressive ramping-up and improvements in channel partnerships." Analysys International analyst Wang Ying wrote, "Lenovo possesses an obvious advantage over rivals in terms of sales channels." The company's CEO, Yang Yuanqing, said, "Lenovo does not want to be the second player ... we want to be the best. Lenovo has the confidence to outperform Samsung and Apple, at least in the Chinese market."

According to IHS iSuppli, Lenovo was a top-three smartphone maker in China with a 16.5% market share in the first quarter of 2012. According to a May report released by IDC Lenovo ranks fourth in the global tablet market by volume. As of November 2012, Lenovo was the second largest seller of mobile phones in China when measured by volume.

In May 2013, Lenovo CEO Yang Yuanqing indicated that the company had aimed to release smartphones in the United States within the next year. Later in October, Lenovo expressed interest in acquiring the Canadian smartphone maker BlackBerry Ltd. However, its attempt was reportedly blocked by the Government of Canada, citing security concerns due to the use of BlackBerry devices by prominent members of the government. An official stated that "we have been pretty consistent that the

message is Canada is open to foreign investment and investment from China in particular but not at the cost of compromising national security"

In January 2014, Lenovo announced a proposed deal to acquire Motorola Mobility to bolster its plans for the U.S. market. Microsoft officially announced that Lenovo had become the hardware partner of Windows Phone platform at the Mobile World Congress 2014 . In January 2016, Lenovo announced at CES that the company would be producing the first Project Tango phone.

Lenovo plus Motorola was the 3rd largest producer of smartphones by volume in the world between 2011 and 2014. Since Lenovo's acquisition of Motorola Mobility, the combined global market share of Lenovo plus Motorola has fallen from 7.2% in 2014 to 3.9% in the third quarter of 2016. A number of factors have been cited as the cause of this reduced demand, including the fact that Lenovo relied heavily on carriers to sell its phones, its phones lacked strong branding and unique features to distinguish them in the competitive Chinese market where a weak economy and saturated market is slowing demand and the culture clash between a more hierarchical PC company and the need to be nimble to sell rapidly-evolving smartphones. In response to the weak sales, Lenovo announced in August 2015 that it would lay off 3,200 employees, mostly in its Motorola smartphone business.

In the reorganization which followed, Lenovo was uncertain how to brand its Motorola smartphones. In November 2015, members of Lenovo management made statements that Lenovo would use the Motorola brand for all its smartphones.[Then, in January 2016, Lenovo announced that it would be eliminating the Motorola brand in favor of "Moto by Lenovo". The company reversed course in March 2017 and announced that the Motorola brand name would be used in all regions in future products. "In 2016, we just finished transforming ourselves," Motorola Chairman and President Aymar de Lencquesaing said in an interview, "We have clarity on how we present ourselves."

Lenovo-branded phones

- K800
- K900
- A820
- Vibe X

- Vibe X2
- Vibe Z2
- Vibe Z
- Vibe Z2 Pro
- Vibe Shot
- Vibe S1
- Lenovo A7000
- Lenovo K3 Note
- Lenovo K4 Note
- VIBE K5
- VIBE K5 Plus
- VIBE K5 Note
- Lenovo K6 Note
- Lenovo K8 Note
- Lenovo Smart Cast
- Lenovo Lemon 3

  Lenovo Vibe B

2) Personal and business computing

Lenovo markets the ThinkPad, IdeaPad, Yoga, Legion and Xiaoxin (only sells in China) lines of notebook laptops, as well as the IdeaCentre and ThinkCentre lines of desktops. It expanded significantly in 2005 through its acquisition of IBM's personal computer business, including its ThinkPad and ThinkCentre lines. As of January 2013, shipments of THINK-branded computers have doubled since Lenovo's takeover of the brand, with profit margins thought to be above 5%. Lenovo aggressively expanded the THINK brand away from traditional laptop computers in favor of tablets and hybrid devices such as the ThinkPad Tablet 2, ThinkPad Yoga, ThinkPad 8, ThinkPad Helix, and ThinkPad Twist; the shift came as a response to the growing popularity of mobile devices, and the release of Windows 8 in October 2012. Lenovo achieved significant success with this high-value strategy and in 2013 controlled more than 40% of the market for Windows computers priced above $900 in the United States.

3) ThinkPad

The ThinkPad is a line of business oriented laptop computers known for their boxy black design, modeled after a traditional Japanese lunchbox (bento). ThinkPads were originally an IBM product; they have been manufactured and sold by Lenovo since early 2005, following its acquisition of IBM's personal computer division. The ThinkPad has been used in space and were the only laptops certified for use on the International Space Station

4) ThinkCentre

The ThinkCentre is a line of business-oriented desktop computers which was introduced in 2003 by IBM and since has been produced and sold by Lenovo since 2005.ThinkCentre computers typically include mid-range to high-end processors, options for discrete graphics cards, and multi-monitor support. Similar to the ThinkPad line of computers, there have been budget lines of ThinkCentre branded computers in the past. Some examples of this include: M55e series, A50 series, M72 series. These "budget" lines are typically "thin clients" however

5) ThinkServer

The ThinkServer product line began with the TS100 from Lenovo.The server was developed under agreement with IBM, by which Lenovo would produce single-socket and dual-socket servers based on IBM's xSeries technology. An additional feature of the server design was a support package aimed at small businesses.[The focus of this support package was to provide small businesses with software tools to ease the process of server management and reduce dependence on IT support.

6) ThinkStation

Lenovo ThinkStations are workstations designed for high-end computing. In 2008, Lenovo expanded the focus of its THINK brand to include workstations, with the ThinkStation S10 being the first model released.

7) ThinkVision displays

High-end monitors are marketed under the ThinkVision name. ThinkVision displays share a common design language with other THINK devices such as the ThinkPad line of notebook computers and ThinkCentre desktops. At the 2014 International CES, Lenovo announced the ThinkVision Pro2840m, a 28-inch 4K display aimed at

professionals. Lenovo also announced another 28-inch 4K touch-enabled device running Android that can function as an all-in-one PC or an external display for other devices.

At the 2016 International CES, Lenovo announced two displays with both USB-C and Display Port connectivity. The ThinkVision X24 Pro monitor is a 24-inch 1920 by 1080 pixel thin-bezel display that uses an IPS LCD panel. The ThinkVision X1 is a 27-inch 3840 by 2160 pixel thin-bezel display that uses a 10-bit panel with 99% coverage of the sRGB color gamut. The X24 includes a wireless charging base for mobile phones. The X1 is the first monitor to receive the TUV Eye-Comfort certification. Both monitors have HDMI 2.0 ports, support charging laptops, mobile phones, and other devices, and have Intel RealSense 3D cameras in order to support facial recognition. Both displays have dual-array microphones and 3-watt stereo speakers.

8) IdeaPad

The IdeaPad line of consumer-oriented laptop computers was introduced in January 2008. The IdeaPad is the result of Lenovo's own research and development; Unlike the ThinkPad line, its design and branding were not inherited from IBM. The IdeaPad's design language differs markedly from the ThinkPad and has a more consumer-focused look and feel.

On September 21, 2016, Lenovo confirmed that their Yoga series is not meant to be compatible with Linux operating systems, that they know it is impossible to install Linux on some models, and that it is not supported. This came in the wake of media coverage of problems that users were having while trying to install Ubuntu on several Yoga models, including the 900 ISK2, 900 ISK For Business, 900S, and 710, which were traced back to Lenovo disabling and removing support for the AHCI storage mode for the device's Solid State Drive in the computer's BIOS, in favor of a RAID mode that is only supported by Windows 10 drivers that come with the system. Lenovo has since released an alternative firmware that has restored the AHCI mode to the drive controller to allow installation of Linux operating systems.

9) IdeaCentre

All IdeaCentres are all-in-one machines, combining processor and monitor into a single unit. The desktops were described by Hot Hardware as being "uniquely

designed". The first IdeaCentre desktop, the IdeaCentre K210, was announced by Lenovo on 30 June 2008. While the IdeaCentre line consists only of desktops, it shares design elements and features with the IdeaPad line. One such feature was Veriface facial recognition technology.

At CES 2011, Lenovo announced the launch of four IdeaCentre desktops: the A320, B520, B320, and C205. In the autumn of 2012, the firm introduced the more powerful IdeaCentre A720, with a 27-inch touchscreen display and running Windows 8. With a TV tuner and HDMI in, the A720 can also serve as a multimedia hub or home theater PC. In 2013, Lenovo added a table computer to the IdeaCentre line. The Lenovo IdeaCentre Horizon Table PC, introduced at the 2013 International CES is a 27-inch

touch screen computer designed to lay flat for simultaneous use by multiple people. Thanks to its use of Windows 8, the Horizon can also serve as a desktop computer when set upright.

10) Legion

Legion is a series of laptop from Lenovo targeting gaming performance. In year 2020, Lenovo launch Legion 3, 5 and 7 where Legion 7 is the highest specification of the series.

11) Smart Televisions

In November 2011, Lenovo said it would soon unveil a smart television product called LeTV, expected for release in the first quarter of 2012. "The PC, communications and TV industries are currently undergoing a 'smart' transformation. In the future, users will have many smart devices and will desire an integrated experience of hardware, software and cloud services." Liu Jun, president of Lenovo's mobile-Internet and digital-home-business division. In June 2013 Lenovo announced a partnership with Sharp to produce smart televisions. In March 2014, Lenovo announced that it projected smart television sales surpassing one million units for 2014. The same month Lenovo released its flagship S9 Smart TV.

12) Wearables

Rumors that Lenovo was developing a wearable device were confirmed in October 2014 after the company submitted a regulatory finding to the Federal Communications Commission. The device, branded a "Smartband", has a battery life

of seven days. It has an optical heart-rate monitor and can be used to track distance and time spent running and calories burned. It can also notify the user of incoming calls and texts. It can also unlock computers without the use of a password. The Smartband went on sale in October 2014. Lenovo started offering the device for sale on its website without a formal product announcement

13) IoT / Smart Home

In 2015 Lenovo launched a strategic cooperation with IngDan, a subsidiary of the Cogobuy Group to penetrate into the intelligent hardware sector. Lenovo wanted to procure High-Tech hardware in the then newly emerging Internet of Things (IoT) economy[and formed a strategic partnership with Cogobuy in which it previously primarily bought IC components from. Cogobuy's supply chain was utilized by Lenovo to procure consumer devices and bridge gaps in their proprietary hardware and software development. At the IFA 2018, Lenovo launched several smart home products

14) Lenovo Connect

At the Mobile World Congress in 2016 Lenovo introduced Lenovo Connect, a wireless roaming service. This service works across devices, networks, and international borders in China, Europe, the Middle East,

and Africa. Lenovo Connect eliminates the need to buy new SIM cards when crossing borders. Lenovo Connect started service for phones and select ThinkPad laptops in China in February 2016.

Marketing and sponsorships

India

Lenovo has gained significant market share in India through bulk orders to large companies and government agencies. For example, the government of Tamil Nadu ordered a million laptops from Lenovo in 2012 and single-handedly made the firm a market leader. Lenovo distributes most of the personal computers it sells in India through five national distributors such as Ingram Micro and Redington.

Given that most smartphones and tablets are sold to individuals Lenovo is pursuing a different strategy making use of many small state-centric distributors. Amar Babu, Lenovo's managing director for India, said, "To reach out to small towns and the

hinterland, we have tied up with 40 regional distributors. We want our distributors to be exclusive to us. We will, in turn, ensure they have exclusive rights to distribute Lenovo products in their catchment area." As of 2013, Lenovo had about 6,000 retailers selling smartphones and tablets in India. In February 2013, Lenovo established a relationship with Reliance Communications to sell smartphones. The smartphones carried by Reliance have dual-SIM capability and support both GSM and CDMA. Babu claims that the relative under penetration of smartphones in India represents an opportunity for Lenovo.

Lenovo has assembled a team of senior managers familiar with the Indian market, launched mobile phones at all price points there, and worked on branding to build market share. As of February 2014, Lenovo claims that its sales of smartphones in India have been increasing 100% per quarter while the market is only growing 15-20% over the same period. Lenovo did marketing tests of its smartphones in November 2012 in Gujarat and some southern cities, where Lenovo already had a strong presence. Lenovo's strategy has been to create awareness, maintain a broad selection of phones at all price points, and develop distribution networks. Lenovo partnered with two national distributors and over 100 local distributors. As of February 2014, more than 7,000 retail outlets in India sold Lenovo smartphones. Lenovo has also partnered with HCL in order to set up 250 service centres in 110 cities.

In India, Lenovo grants distributors exclusive territories but allows them to sell computers from other companies. Lenovo uses its close relationships with distributors to gain market intelligence and speed up product development. Lenovo reported a year-on-year increase of about 951% in tablet sales in India for the first quarter of 2014. Canalys, a market research firm, said Lenovo took market share away from Apple and Samsung in the country.

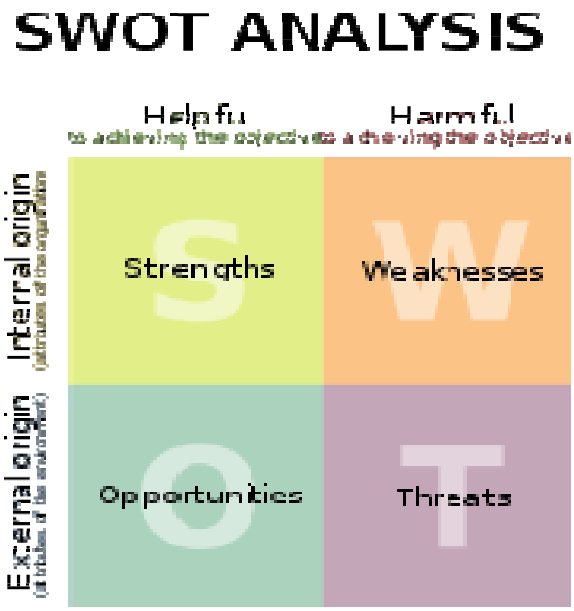
Branding

The "Le" series of devices, including the LePhone, LePad, and the LeTV were sold under the "idea" brand outside of China. The LePhone was thus known as the "ideaphone" in other markets. The "Le" pre-fix means "happy" in Mandarin Chinese and this branding is only used in Mainland China.

In early 2013, Lenovo signed an endorsement deal with Kobe Bryant. Lenovo says Bryant was selected in order to further internationalize its brand while appealing to young consumers. Bryant made numerous appearances on behalf of Lenovo and was its main smartphone marketing campaign of the year in Asia.

CHAPTER 04

SWOT ANALYSIS



[A SWOT analysis, with its four elements in a 2×2 matrix]

SWOT analysis (or SWOT matrix) is a strategic planning technique used to help a person or organization identify strengths, weaknesses, opportunities, and threats related to business competition or project planning.

This technique, which operates by 'peeling back layers of the company is designed for use in the preliminary stages of decision-making processes and can be used as a tool for evaluation of the strategic position of organizations of many kinds (for-profit enterprises, local and national governments, NGOs, etc.).It is intended to specify the objectives of the business venture or project and identify the internal and external factors that are favorable and unfavorable to achieving those objectives. Users of a SWOT analysis often asks and answers questions to generate meaningful information for each category to make the tool useful and identify their competitive advantage. SWOT has been described as the tried-and-true tool of strategic analysis but has also been criticized for its limitations.

SWOT assumes that strengths and weaknesses are frequently internally-related, while opportunities and threats commonly focus are due to the external environment. The name is an acronym for the four parameters the technique examines:

Strengths: characteristics of the business or project that give it an advantage over others.

Weaknesses: characteristics of the business that place the business or project at a disadvantage relative to others.

Opportunities: elements in the environment that the business or project could exploit to its advantage.

Threats: elements in the environment that could cause trouble for the business or project.

The degree to which the internal environment of the firm matches with the external environment is expressed by the concept of strategic fit. Identification of SWOTs is important because they can inform later steps in planning to achieve the objective. First, decision-makers should consider whether the objective is attainable, given the SWOTs. If the objective is not attainable, they must select a different objective and repeat the process.

Uses of SWOT analysis.

SWOT analysis can be used in any decision-making situation when a desired end-state (objective) is defined, not just profit-seeking organizations. Examples include non- profit organizations, governmental units, and individuals. SWOT analysis may also be used in pre-crisis planning and preventivecrisis management. SWOT analysis may also be used in creating a recommendation during a viability study /survey.

1. **Strategy building.**

SWOT analysis can be used to build organizational or personal strategy. Steps necessary to execute strategy-oriented analysis involve identification of internal and external factors (using the popular 2x2 matrix), selection and evaluation of the most important factors, and identification of relations existing between internal and external features.

2. **Matching and converting.**

One way of using SWOT is matching and converting. Matching is used to find competitive advantage by matching the strengths to opportunities. Another tactic is to convert weaknesses or threats into strengths or opportunities. An example of a

conversion strategy is to find new markets. If the threats or weaknesses cannot be converted, a company should try to minimize or avoid them.

3. **Corporate planning.**

As part of the development of strategies and plans to enable the organization to achieve its objectives that organization will use a systematic/rigorous process known as corporate planning. SWOT alongside PEST /PESTLE can be used as a basis for the analysis of business and environmental factors.

- Set objectives—defining what the organization is going to do
- Environmental scanning

Internal appraisals of the organization's SWOT—this needs to include an assessment of the present situation as well as a portfolio of products/services and an analysis of the product/service lifecycle

- Analysis of existing strategies—this should determine relevance from the results of an internal/external appraisal. This may include gap analysis of environmental factors
- Strategic Issues defined—key factors in the development of a corporate plan that the organization must address.
- Develop new/revised strategies—revised analysis of strategic issues may mean the objectives need to change
- Establish critical success factors —the achievement of objectives and strategy implementation
- Preparation of operational, resource, projects plans for strategy implementation.
- Monitoring all results—mapping against plans, taking corrective action, which may mean amending objectives/strategies.

4. **Marketing.**

In many competitor analysis, marketers build detailed profiles of each competitor in the market, focusing especially on their relative competitive strengths and weaknesses

using SWOT analysis. Marketing managers will examine each competitor's cost structure, sources of profits, resources and competencies, competitive positioning and product differentiation, degree of vertical integration, historical responses to industry developments, and other factors.

4.1 SWOT ANALYSIS OF OPPO

Strengths in the SWOT analysis of OPPO

1. **Newer and Better products**

OPPO phones come with great features and have launched first-ever rotating phone camera and many other features which are never launched by any other phone.

2. **Brand Building**

OPPO phones has collaborated with big celebrities and made them ambassadors to market the product better and position the phones in the minds of the customer

3. **Quick Market Capture**

OPPO has been able to make its name and position in the market in a very short period of time due to its very exciting features offered to the customers.

4. **Price Point**

The OPPO phones are available at affordable prices which is another factor which made OPPO phones readily accepted by the consumers in the market.

5. **Product Line**

OPPO has not only being marketing phones but at the same time are into Blu-ray devices and headphones

6. **Parent brand strategy**

OPPO phone's parent brand owns other two famous phone brands as well which are one plus and Vivo. This depicts that BBK has a very strong strategy in place to market phones at different segment

Weaknesses in the SWOT analysis of OPPO

1. **Competition**

Mobile Phone market is highly competitive and there are numerous players who are fighting for the same market and hence it becomes very difficult

2. **User Interface**

The user interface is not made keeping in mind the usage from the non-tech savvy consumers.

3. **Poor Post-Sales Support**

One of the main disadvantages of buying OPPO series is that the after sales support extends by the brand is not good. After sales service built the trust in the brand that in case something goes wrong then service centers are there to help them out but OPPO has not been able to provide good support to the customers which inhibit its growth in the market ass customers cannot trust the brand.

4. **Quality is Poor**

The quality provided by the OPPO phones at the price they put is inferior and hence the tradeoff is clearly seen in the price. Low price low quality.

Opportunities in the SWOT analysis of OPPO

1. **Brand Association**

OPPO can try to associate with events to market to wider and different segments of customer that will help to enhance the customer base.

2. **Flagship Products**

OPPO can launch newer phones that can compete with other big market players like Samsung and Apple which will help to increase the visibility of the brand in the market.

Threats in the SWOT analysis of OPPO

1. **Competition**

The mobile phone market is intensively growing and it is getting price competitive which makes it very difficult to survive in the industry.

2. **Low Barriers to Entry**

The profitability of the mobile phone market attracts new players in the market which eats away the market share further from the cell phone manufactures.

4.2 SWOT ANALYSIS OF HTC

Strengths in the SWOT analysis of HTC

1. **Strong Association with industry leading players**

HTC has associated with technology giants like Apple, Microsoft, Nokia, Philips and Siemens etc. This allows HTC to deliver innovative products. HTC has also partnered with leading telecommunication service providers in US, Asia and Europe. This enables HTC to address large markets.

2. **Strong Global Presence**

HTC has a strong global presence which negates the threat of overdependence on few markets. HTC has a strong presence in key markets such as America, Europe and Asia-Pacific. The geographic footprint allows HTC to enter newer markets.

3. **Focus on R&D**

HTC has invested heavily in research and development from the day of its inception. In FY 2015, HTC invested about 11 percent of its sales on R&D. The strong research facilities of the company allowed it to create a strong product portfolio.

Weaknesses in the SWOT analysis of HTC

1. **Losing market share**

HTC is far behind the giants of the industry like apple and Samsung as far as market share is concerned. HTC's global market share stands at 2% and stands at 15th rank globally. With high competition coming in from China, HTC is losing out on market share.

2. **Poor financial performance**

HTC's global revenue declined by a CAGR of 25% during the period FY2012 to FY2015. The decline in financial performance of HTC has affected HTC's long-term growth prospects.

3. **High competition leads to pricing pressures**

HTC is subject to high competition from some of the industry giants and hence is also subject to pricing pressures. The company has reduced its Average selling price (ASP) in the recent years due to increasing competition.

Opportunities in the SWOT analysis of HTC

1. **Growth for smartphone market**

The global smartphone market has shown rapid growth and is expected to grow at a 6-8 percent in the next five years. Smartphones are increasingly replacing laptops and tablets and hence it's an opportunity for HTC to increase revenues and market share.

2. **Robust demand for 4G-LTE**

There is an increasing demand for 4G-LTE enabled mobile devices. According to industry estimates, the market is set to reach $610.7 billion in 2019 and number of 4G subscribers in expected to grow at a CAGR of 31% from 2015-2020. HTC has already launched 4G LTE-enabled smartphones in the market and is keen to benefit from the expected demand.

3. **Emerging markets**

The emerging markets of the globe are also getting technologically advanced and which creates the great opportunity for the smartphone companies to take advantage of the newly created demand and increase revenue and market share.

4. **Positive outlook for VR market**

Virtual reality is the future in the fast digitizing world. HTC has focused on developing VR devices and entered into a partnership with Value and launched HTC Vive, a VR device. HTC is set to be benefitted by the demand for VR devices.

Threats in the SWOT analysis of HTC

1. **Intense Competition**

Intense competition in the industry limits market share, puts pricing pressures as well as puts pressure on companies to constantly innovate and bring something new to the market. The companies need to constantly innovate to be able to stand the competitive environment.

2. **Rapidly changing technology**

With rapidly changing technology, companies which are affected by the changes also need to abide by the quick transitions of the industry. This requires investing heavily in R&D and make relevant changes as required.

3. A decline in ASPs affect margins

Rising competition and new entrants give rise to pricing pressures on the companies. Pricing pressures influence ASPs which in turn affects the operating margins for the companies.

4.2 SWOT ANALYSIS OF LENOVO

Strengths in the SWOT analysis of LENOVO

1. **One of the leading players in the PC market**

Lenovo is one of the leading players in the PC market globally and had a market share of about 20.7 percent in 2015 ahead of companies like Dell (14.1%), HP (19.4%) etc.

Superior performance across product lines

Lenovo recorded growth in revenue in all its product lines in the FY 2015. Lenovo improved its market share and revenue in PC, mobile business group and data centre group. This indicates increased acceptance of the company's products and improved brand image.

2. **High exposure in China and other emerging markets**

Lenovo's high exposure in the highly growing China market and presence in other emerging markets around the world has helped the company witness high growth in the recent years. It also guarantees high growth in the future.

3. **Positive outlook in PC+ markets**

PC+ markets are extensions of the PC market which includes smartphones, Smart TVs etc. Lenovo has a strong presence in the in the PC+ which is growing worldwide.

Weaknesses in the SWOT analysis of LENOVO

1. **Product recalls affect brand image**

Lenovo has recalled a number of products in the recent years. For instance, recalling lithium-ion batteries in April 2015 globally. These batteries are used to produce ThinkPad computers for Lenovo. Such recalls affect the brand image and trust on the brand.

2. **Slow market share growth**

Due to an entrance of other companies and duplicity of products, Lenovo hasn't been able to expand its market share in smartphone and PC category so much.

Opportunities in the SWOT analysis of LENOVO

1. **Growing Smartphone market**

Smartphone market is growing globally and is expected to grow at a rapid pace in the medium term especially in the emerging markets. This gives an opportunity for Lenovo to expand its revenues.

2. **Cloud Computing**

The global cloud computing market has shown great potential and is expected to grow at a CAGR of 19.4% during 2014-2019 periods. Lenovo has also been focusing on the growing opportunity in the cloud computing market and is set to be benefitted by the growth of cloud computing in the future.

3. **Strategic acquisitions**

In the recent past, Lenovo has strategically acquired a number of companies to broaden its product portfolio and expand its reach. For instance, acquisition of Motorola Mobility from Google in 2014. Such acquisitions help Lenovo to enhance its customer base and revenue and Lenovo should look forward to it.

Threats in the SWOT analysis of LENOVO

1. **Competition can affect market share**

Lenovo faces intense competition from various global companies such as HP, Dell, Samsung, Apple and Acer etc. in the PC and smartphone market. Competitive pressure can affect Lenovo's market share and also challenges Lenovo to constantly innovate.

2. **Declining PC market**

The global PC market is declining with the increase in popularity in mobile computing with smartphone and tablet devices. This could definitely impact the company's bottom-line as 66% of the company's total revenue is from its PC division.

3. **Decline ASPs**

Average selling prices (ASPs) of smartphones are on a declining trend and will continue to decline with cheaper cost of production and other cost reduction methods. With declining ASP for the industry, Lenovo also comes under pricing pressures and thus profitability gets affected.

CHAPTER 05

FIVE FORCES ANALYSIS

Porter’s Five Forces Analysis

Porter's Five Forces Framework is a method for analyzing competition of a business. It draws from industrial organization (IO) economics to derive five forces that determine the competitive intensity and, therefore, the attractiveness (or lack thereof) of an industry in terms of its profitability. An "unattractive" industry is one in which the effect of these five forces reduces overall profitability. The most unattractive industry would be one approaching "pure competition", in which available profits for all firms are driven to normal profit levels. The five-force perspective is associated with its originator, Michael E. Porter of Harvard University. This framework was first published in Harvard Business Review in 1979.

Porter refers to these forces as the micro environment, to contrast it with the more general term macro environment. They consist of those forces close to a company that affect its ability to serve its customers and make a profit. A change in any of the forces normally requires a business unit to re-assess the marketplace given the overall change in industry information. The overall industry attractiveness does not imply that every firm in the industry will return the same profitability. Firms are able to apply their core competencies, business model or network to achieve a profit above the industry average. A clear example of this is the airline industry. As an industry, profitability is low because the industry's underlying structure of high fixed costs and low variable costs afford enormous latitude in the price of airline travel. Airlines tend to compete on cost, and that drives down the profitability of individual carriers as well as the industry itself because it simplifies the decision by a customer to buy or not buy a ticket. A few carriers – Richard Branson's Virgin Atlantic is one – have tried, with limited success, to use sources of differentiation in order to increase profitability.

Porter's five forces include three forces from 'horizontal' competition – the threat of substitute products or services, the threat of established rivals, and the threat of new entrants – and two others from 'vertical' competition – the bargaining power of suppliers and the bargaining power of customers. Porter developed his five forces framework in reaction to the then-popular SWOT analysis, which he found both lacking in rigor and ad hoc. Porter's five-forces framework is based on the structure–conduct–performance paradigm in industrial organizational economics. Other Porter strategy tools include the value chain and generic competitive strategies.

1. THREAT OF NEW ENTRANTS.

Profitable industries that yield high returns will attract new entities. New entrants eventually will decrease profitability for other firms in the industry. Unless the entry of new firms can be made more difficult by incumbents, abnormal profitability will fall towards zero (perfect competition), which is the minimum level of profitability required to keep an industry in business.

Michael E. Porter differentiates two factors which can have an effect on how much of a threat new entrants may pose.

Barriers to entry

The most attractive segment is one in which entry barriers are high and exit barriers are low. It's worth noting, however, that high barriers to entry almost always make exit more difficult.

- Michael E. Porter list 7 major sources of entry barriers:
- Supply-side economies of scale
- Demand-side benefits of scale
- Customer switching costs. These are well illustrated by structural market characteristics such as supply chain integration but also can be created by firms. Airline frequent flyer programs are an example.
- Capital requirements – clearly the Internet has influenced this factor dramatically. Web sites and apps can be launched cheaply and easily as opposed to the brick and mortar industries of the past.
- Incumbency advantages independent of size (e.g. customer loyalty and brand equity)
- Access to distribution channels
- Government policy such as sanctioned monopolies, legal franchise requirements, patents, and regulatory requirements.

Expected retaliation

For example, a specific characteristic of oligopoly markets is that prices generally settle at equilibrium because any price rises or cuts are easily matched by the competition.

2. THREAT OF SUBSTITUTES

A substitute product uses a different technology to try to solve the same economic need. Examples of substitutes are meat, poultry, and fish; landlines and cellular telephones; airlines, automobiles, trains, and ships; beer and wine; and so on. For example, tap water is a substitute for Coke, but Pepsi is a product that uses the same technology (albeit different ingredients) to compete head-to-head with Coke, so it is not a substitute. Increased marketing for drinking tap water might "shrink the pie" for both Coke and Pepsi, whereas increased Pepsi advertising would likely "grow the pie" (increase consumption of all soft drinks), while giving Pepsi a larger market share at Coke's expense.

Potential factors:

Buyer propensity to substitute. This aspect incorporated both tangible and intangible factors. Brand loyalty can be very important as in the Coke and Pepsi example above; however contractual and legal barriers are also effective.

- Relative price performance of substitute
- Buyer's switching costs. This factor is well illustrated by the mobility industry. Uber and its many competitors took advantage of the incumbent taxi industry's dependence on legal barriers to entry and when those fell away, it was trivial for customers to switch. There were no costs as every transaction was atomic, with no incentive for customers not to try another product.
- Perceived level of product differentiation which is classic Michael Porter in the sense that there are only two basic mechanisms for competition – lowest price or differentiation. Developing multiple products for niche markets is one way to mitigate this factor.
- Number of substitute products available in the market
- Ease of substitution
- Availability of close substitute

3. BARGAINING POWER OF CUSTOMERS

The bargaining power of customers is also described as the market of outputs: the ability of customers to put the firm under pressure, which also affects the customer's

sensitivity to price changes. Firms can take measures to reduce buyer power, such as implementing a loyalty program. Buyers' power is high if buyers have many alternatives. It is low if they have few choices.

Potential factors:

- Buyer concentration to firm concentration ratio
- Degree of dependency upon existing channels of distribution
- Bargaining leverage, particularly in industries with high fixed costs
- Buyer switching costs Buyer information availability
- Availability of existing substitute products Buyer price sensitivity
- Differential advantage (uniqueness) of industry products
- RFM (customer value) Analysis

4. BARGAINING POWER OF SUPPLIERS

The bargaining power of suppliers is also described as the market of inputs. Suppliers of raw materials, components, labor, and services (such as expertise) to the firm can be a source of power over the firm when there are few substitutes. If you are making biscuits and there is only one person who sells flour, you have no alternative but to buy it from them. Suppliers may refuse to work with the firm or charge excessively high prices for unique resources.

Potential factors are:

- Supplier switching costs relative to firm switching costs
- Degree of differentiation of inputs
- Impact of inputs on cost and differentiation
- Presence of substitute inputs
- Strength of distribution channel
- Supplier concentration to firm concentration ratio
- Employee solidarity (e.g. labor unions)

5. COMPETITIVE RIVARLY

For most industries the intensity of competitive rivalry is the biggest determinant of the competitiveness of the industry. Having an understanding of industry rivals is vital to successfully marketing a product. Positioning depends on how the public perceives a product and distinguishes it from competitors‘. An organization must be aware of its competitors' marketing strategies and pricing and also be reactive to any changes made. Rivalry among competitors tends to be cutthroat and industry profitability low while having the potential factors below:

Potential factors:

- Sustainable competitive advantage through innovation
- Competition between online and offline organizations
- Level of advertising expense
- Powerful competitive strategy which could potentially be realized by adhering to Porter‘s work on low cost versus differentiation.
- Firm concentration ratio

5.1 FIVE FORCES ANALYSIS OF SMARTPHONE INDUSTRY

The smartphone industry is marked by heavy competition. The leading brands in this industry with the highest market shares are Samsung, Apple, and Huawei. In recent years, the demand for smartphones has plateaued. Overall while adoption and use throughout the world have grown, smartphone demand fell in 2018and 19 compared to previous years. To maintain their competitive position in the industry, smartphone companies are focusing heavily on research and development as well as marketing. There are several forces that affect the competitive position and success of smartphone companies. Porter’s five forces model is an analytical tool to analyze the competitive position of businesses and the profitability of a particular industry. These five forces are a part of every industry. They also play a critical role in the smartphone industry and affect the profitability of individual brands. Following is a five forces analysis of the smartphone industry.

Bargaining power of suppliers :

The bargaining power of suppliers in the smartphone industry is generally low except for the few large players like Google. Google is one of the largest suppliers in the smartphone industry. Most smartphones run on the Android operating system. Recently, the ban on Huawei related to the use of Android OS caused its sales to fall. Otherwise, most of the suppliers are smaller players and most of them are located in the Asian region. Apple has its own operating system and so in its case, the bargaining power of suppliers is even limited. Some of the main factors that limit the bargaining power of suppliers in the smartphone industry include their smaller size and lower financial strength compared to smartphone makers. Leading smartphone brands like Apple, Samsung and Huawei are comparatively larger firms with enormous financial strength compared to the suppliers. It is why suppliers have to follow the quality standards set by the smartphone makers and their bargaining power remains limited. Moreover, most suppliers lack forward integration capability which also leads to lower control.

Bargaining power of buyers :

The bargaining power of buyers in the smartphone industry has increased owing to several factors. One of the primary reasons behind the growing bargaining strength of the customers is the high number of substitutes in the industry. Increasing competition in the industry has added to the bargaining strength of customers worldwide. Moreover, customers are well informed and have several choices before them. While the number of smartphone models has grown in the market, they are now more affordable than some years earlier. Companies invest aggressively in marketing and customer retention. Apart from that, they also invest aggressively in research and development to make their smartphone models stand out from the competition. The focus on customers and customer experience is much higher than ever before. Overall the bargaining power of customers is moderate. Some of the factors that control the bargaining power of the customers include product quality, brand image, and prices. Products with higher quality are higher in demand. For example, smartphones with higher processing power and efficient cameras are higher in demand compared to other models.

The threat of substitutes :

The threat of substitutes in the smartphone industry mainly comes from rival brands and their products. There are several smartphone brands in the market. The top five brands with the largest market share include Samsung, Huawei, Apple, Xiaomi, and Oppo. Except, Apple's iPhone rest of the smartphones run on the Android OS. The number of models with large screen smartphones is very high. While Apple makes only premium models, its products compete with the premium offerings from Samsung and Huawei as well as Xiaomi. The threat of substitutes emerging from competing products also grows higher because differentiation has become difficult. Most models in a category come with similar features and nearly similar processing power. To overcome the threat from substitutes brands invest in marketing and product innovation. Achieving differentiation is difficult and so apart from technology, companies focus on their pricing strategies and customer experience. However, some factors that can moderate the threat from substitute products include product quality and brand image. The overall threat arising from substitute products is moderately high in the smartphone industry.

The threat of new entrants :

The threat of new entrants in the smartphone industry is moderate. The barriers to entry are not very high and generally, you do not need to invest very large capital to enter the market. However, the incumbent players aggressively invest in marketing and innovation to retain their market share and so winning a significant market share is very difficult for any new player. Moreover, companies have to deal with some major challenges to strengthen their competitive advantage in the industry. Apart from investing in technological innovation, which is essential for differentiation and market share, they also need to focus on marketing and customer experience. The legal framework in most countries also acts as a barrier to entry. Another important factor that deters new players is the level of demand which has plateaued in recent years.

Stagnating demand also works as a barrier to entry for new brands since they will have trouble winning customers for new products. The number of substitutes is already high in the market since there are several models in each segment. Other factors that moderate the threat from new players include the brand image of existing

players, their focus upon research and innovation and high standards of product quality. All these factors together limit the threat that arises from the entry of new players in the market. However, large players with a strong image and sufficient investment can still enter. Google entered the market with its Pixel smartphone. While it is still not a leading player in the industry, still the market share of Pixel in the US market has increased over time.

The intensity of rivalry in the industry:

The intensity of rivalry in the smartphone industry is very high. Demand has plateaued in recent years, leading to an increased focus on innovation and customer retention. Companies are investing aggressively in R&D to maintain their market shares. The leading companies are also among leading spenders on research and development. Samsung is one of the top spenders on research and development. Apple has also grown its investment into R&D during recent years. Moreover, while Samsung and Huawei have managed competitive pricing strategies, Apple which is known for its premium prices also priced the base model of the iPhone 11 competitively in order to maintain demand. The result was heavy sales. Xiaomi and Oppo have also maintained competitive prices to retain their market share. Apart from the top five, there are other brands also competing for market share. LG and Vivo have also maintained impressive market shares. Competition has grown stronger because of the low scope for differentiation and demand having grown stagnant in recent year.

CHAPTER 06

BCG MATRIX

The BCG matrix is a strategic management tool that was created by the Boston Consulting Group, which helps in analysing the position of a strategic business unit and the potential it has to offer. The matrix consists of 4 classifications that are based on two dimensions. These first of these dimensions is the industry or market growth. The other of these dimensions is the relative market share of the strategic business unit. Strategic business units are placed in one of these 4 classifications

Strategic business units with high market growth rate and high relative market share are called stars. Businesses should invest in their stars and can implement vertical integration, market penetration, product development, market development, and horizontal integration strategies. Strategic business units with high market growth rate and low relative market share are called question marks. These strategic business units require close considerations whether the business should continue with them or divest. Strategic business units with low market growth rate but with high relative market share are called cash cows. The business should invest in these to maintain their relative market share. Lastly, the strategic business units with low market growth rate and low relative market share are called dogs. The business should divest these strategic business units.

In this four-quadrant BCG matrix template, market share is shown on the horizontal line (low left, high right) and growth rate is found along the vertical line (low bottom, high top). The four quadrants are designated Stars (upper left), Question Marks (upper right), Cash Cows (lower left) and Dogs (lower right). Place each of your products in the appropriate box based on where they rank in market share and growth. Where you choose to set the dividing line between each quadrant depends in part on how your company compares to the competition.

Here is a breakdown of each BCG matrix quadrant:

STARS: The business units or products that have the best market share and generate the most cash are considered stars. Monopolies and first-to-market products are frequently termed stars. However, because of their high growth rate, stars consume large amounts of cash. This generally results in the same amount of money coming in that is going out. Stars can eventually become cash cows if they sustain their success until a time when a high growth market slows down. A key tenet of BCG strategy for growth is for companies to invest in stars.

CASH COWS: A cash cow is a market leader that generates more cash than it consumes. Cash cows are business units or products that have a high market share but low growth prospects. According to Net MBA cash cows provide the cash required to turn a question mark into a market leader, cover the administrative costs of the company, fund research and development, service the corporate debt, and pay dividends to shareholders. Companies are advised to invest in cash cows to maintain the current level of productivity or to "milk" the gains passively.

DOGS: Dogs, or pets as they are sometimes referred to, are units or products that have both a low market share and a low growth rate. They frequently break even, neither earning nor consuming a great deal of cash. Dogs are generally considered cash traps because businesses have money tied up in them, even though they are bringing back basically nothing in return. These business units are prime candidates for divestiture.

QUESTION MARKS: These parts of a business have high growth prospects but a low market share. They consume a lot of cash but bring little in return. In the end, question marks lose money. However, since these business units are growing rapidly, they have the potential to turn into stars in a high growth market. Companies are advised to invest in question marks if the product has the potential for growth, or to sell if it does not.

USING THE BCG MATRIX TO STRATAGIZE

Now that you know where each business unit or product stands, you can evaluate them objectively.

In an article on Marketing 91, author Hitesh Basin outlines four potential strategies you can follow based on the results of your BCG matrix analysis:

Increase investment in a product to increase its market share. For example, you can push a question mark into a star and, finally, a cash cow.

If you can't invest more into a product, hold it in the same quadrant, and leave it be. Reduce your investment and try to take out the maximum cash flow from the product, which increases its overall profitability (best for cash cows).Release the amount of money already stuck in the business (best for dogs).

You need products in every quadrant of your BGC matrix to keep a healthy cash flow and have products that can secure your future.

THE ROLE OF CASH FLOW IN THE BCG MATRIX

Understanding cash flow is key to making the most of the BCG matrix. In 1968, BCG founder Bruce Henderson noted that four rules are responsible for product cash flow:

Margins and cash generated are a function of market share. High margins and high market share go together.

To grow, you need to invest in your assets. The added cash required to hold share is a function of growth rates.

High market share must be earned or bought. Buying market share requires an additional increment or investment.

No product market can grow indefinitely. You need to get your payoff from growth when the growth slows; you lose your opportunity if you hesitate. The payoff is cash that cannot be reinvested in that product.

That last point is even more important now than ever. The market moves more quickly now than it did 40 years ago, and BCG has since published recommended revisions to analyse and act on the matrix information.

Maintaining a healthy supply of question marks readies you to act on the next trend. Cash cows, conversely, need to be milked efficiently, because they may fall out of favour – and profitability – more quickly. You can find more strategies on BCG's website.

"With a few tweaks, the matrix can be adapted to help companies drive the strategic experimentation required for success, even in unpredictable markets," Martin said. "The matrix needs to be applied with accelerated speed while balancing the

investments between exploration in new segments and exploitation of established segments. In addition, the investments and divestments need to be managed rigorously while carefully measuring and monitoring the portfolio economics of experimentation.

6.1 BCG MATRIX OF OPPO

- **STAR:**

These are the products possessing high market share and maximum cash inflows. Most of the monopolies come under this category. The reason behind their massive consumption of cash is high growth rates

It has been operating with two major business segments i.e. Oppo and OnePlus Smartphones.

While the demand of the Oneplus smartphones has been increasing exponentially with the success of Oneplus 5T, its availability on the online platform Amazon and with the promotion of Oneplus 6 receiving good response from the market the future prospect is positive for the company. The brand has 4.3 % market share in 2017.Oneplus smartphones are Star in the BCG matrix. OPPO products cannot be placed in Star quadrant of the BCG matrix.

- **CASH COW:**

These are the products which are in low growth markets with high market share.

Products which are market leaders in their specific industry and their industry is not expected to see any major growth in the future are considered as Cash Cows. OPPO products cannot be placed in Cash Cow quadrant of the BCG matrix.

- **QUESTION MARKS**

There are products that formulate a part of the industry that is still in the phase of development, yet the organization has not been able to create a significant position in that industry. The small market share obtained by the organization makes the future outlook for the product uncertain, therefore investing in such domains is seen as a high-risk decision.

Considering the performance of all the products that OPPO to offer, is one such product which can be placed in the Question Mark quadrant of the BCG Matrix of OPPO.

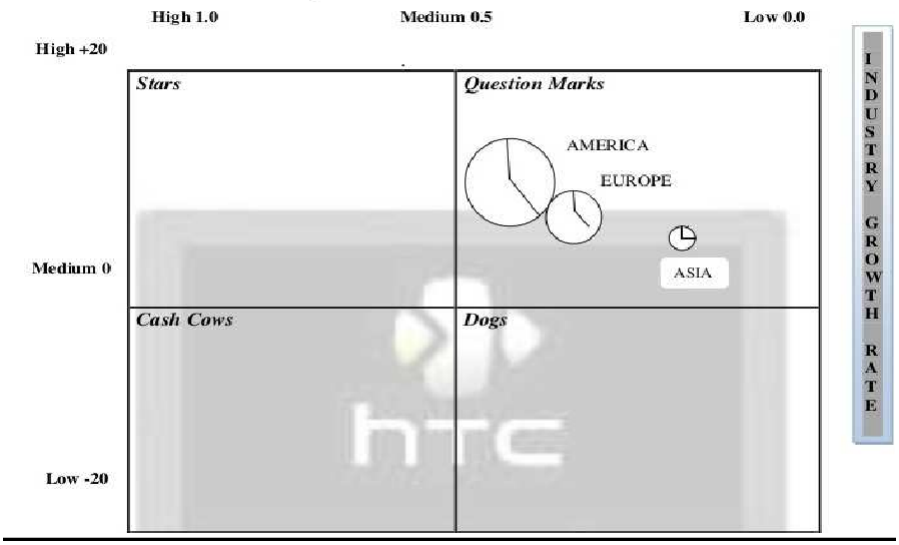
High competition and small market share of the product in the industry is what makes it place in this quadrant.

Oppo smartphones are still fighting with the rivals such as Xiaomi and Huawei and therefore is the question mark in the BCG matrix

- **DOG:**

These are the products with low growth or market share. These are low growth or low market share products and have very few chances of showing any growth. The investment strategy for these products has to be very well thought through by the management as there are chances that these businesses might not yield any profit for the organization are oppo smartphones quite picking up on the market with the price segment of Rs.10000/- onwards and with the market share of 3 % in the year 2017. OPPO products cannot be placed in Dog quadrant of the BCG matrix.

6.2 BCG MATRIX OF HTC



- **STAR:**

The stars product usually refers to those products which have high market share with high market growth according Boston Consultancy group.

HTC products cannot be placed in Star quadrant of the BCG matrix.

- **CASH COW:**

Cash cows are somewhat relating to generating cash and counted among the most profitable brands. Thus being a leader in the market cash cows are known to produce more cash than they consume. HTC products cannot be placed in Cash Cow quadrant of the BCG matrix.

- **QUESTION MARKS:**

Smartphones and Virtual reality devices are the two reporting businesses that HTC operates into.

In Smartphone Business, Company is continuously facing competition from the established players like Samsung, Apple and new entrants to the market such as Xiaomi, Vivo, Oppo etc. The business has been therefore turning into losses to straight 3 years in the year 2016 (revenue decrease from $ 9.7 billion to $ 2.6 billion) and hence it is the question mark in the matrix. In order to diversify its business, it

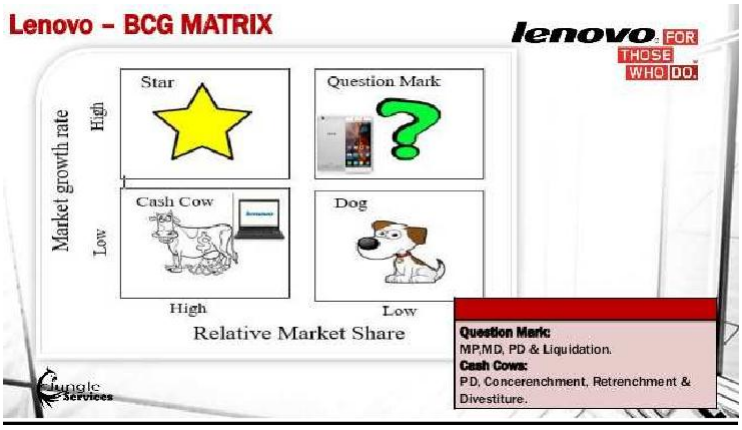
partnered with Valve to produce Virtual reality devices which are still struggling to make its mark in the markets it operates into and due to growth rate and low market share HTC is a question mark in BCG matrix.

All three regions i.e, Asia, Europe and America lie in the Question Mark quadrant, means HTC needs to penetrate its market to bring these regions in Star.

- **DOG:**

The products having both a low market share and a low growth rate are considered as dogs. These products are incapable of earning or consuming cash as they are not suitable to invest in due to their negative cash returns. HTC products cannot be placed in Dog quadrant of the BCG matrix

6.3 BCG MATRIX OF LENOVO



- **STAR:**

These are the products possessing high market share and maximum cash inflows. Most of the monopolies come under this category. The reason behind their massive consumption of cash is high growth rates.

LENOVO products cannot be placed in Star quadrant of the BCG matrix.

- **CASH COW:**

These are the products which are in low growth markets with high market share.

Products which are market leaders in their specific industry and their industry is not expected to see any major growth in the future are considered as Cash Cows. LENOVO laptops can be placed in Cash Cow quadrant of the BCG matrix.

- **QUESTION MARKS:**

Lenovo has recently entered the fastest growing mobile phone market and therefore is not able to capitalize on the opportunities Due to less experience of this business. The industry is already having large no. of players, who are eating up each other's share. Its enterprise solution business is in the niche segment and therefore they are in process of building competitiveness in itself. Mobile phone & enterprise business is question mark in BCG matrix.

- **DOG:**

These are the products with low growth or market share. These are low growth or low market share products and have very few chances of showing any growth. The

investment strategy for these products has to be very well thought through by the management as there are chances that these businesses might not yield any profit for the organization.

LENOVO products cannot be placed in Dog quadrant of the BCG matrix.

CHAPTER 07

FUTURE PROSPECTS

7.1FUTURE PROSPECTUS OF OPPO

OPPO showcased the concept of intelligent connectivity which consisted of four key parts, including the convergence of technology and service, the convergence of organization, the convergence of culture and the convergence of technology, arts and humanities.

The company has announced its plans to invest about USD 7 billion over the next three years on its research and development initiatives that include building core technologies in hardware and software as well as frontier innovations such as 5G/6G, big data, cloud computing and augmented reality (AR)

Major focus was given to the implementation of 5G through three key factors: remaining committed to their core technology, creating a multi-portal eco-system of intelligent devices with smartphone surveying as the key gateway and rethinking user service to optimize its content and service offerings.

The company will use India as the export base for South Asia, West Asia and African countries. Get access to premium Portfolio content for 14 days.The company also has plans to further scale the manufacturing capacity to produce 100 million smartphones annually at its Greater Noida facility.

Currently producing 4 million smartphones a month and by the end of 2020, double existing capacity. With the increased production and future export plans, the company aim to achieve dream of making India a global export hub for smartphone phones.

Oppo plans to export to South Asia, West Asia and Africa markets from the Greater Noida facility, spread across 110 acre.

To ensure quality, the campus has over 10,000 strong workforce engaged across manufacturing line, quality assurance and product testing. The manpower capacity is expected to cross 15,000 by 2020.

Additionally, Oppo is planning to increase investment in the Hyderabad R&D center, which is largest outside China.

7.2 FUTURE PROSPECTUS OF HTC

HTC intends to return to the premium flagship space, acknowledging that the firm didn't innovate in recent years. This premium flagship will likely be the 5G phone the CEO is talking about, but the days of the HTC One M8 and even the HTC U11 are long behind it. The firm is facing a distinctly different smartphone landscape in 2020.

This is in large part due to the rise of Chinese brands such as Huawei, OnePlus, Realme, Vivo, Oppo, and Xiaomi. These brands have managed to usurp the former Android heavyweight at a variety of price points. More importantly, they've also managed to expand to Europe, the Middle East, other countries in Asia, and even North America in the case of OnePlus. Meanwhile, HTC has retreated from several countries in the last few years.

All these rival companies have released 5G smartphones already and are gearing up for more 5G devices. The likes of Motorola, Asus, LG, and even Sony are also there to pick up the scraps, leaving HTC with virtually nothing ahead of its first 5G phone.

That's not to say HTC couldn't surprise us with a great 5G flagship smartphone worth buying, but between consumer apathy, competition, and the loss of numerous employees to Google, the firm has a gargantuan task ahead of it. We hope the company succeeds though. Its flagship phones delivered interesting designs, great camera quality, and some innovative features.

HTC research aims to develop cutting-edge technologies to enhance user experience on Mobile Internet. HTC Research partners with universities and research institutions to conduct research and develop products. The team consists of 200 scientists and engineers working at several focus areas:

- Big-Data
- Cloud Computing
- Computational Photography
- Energy Harvesting
- Health Care
- Materials
- Multimedia
- Sensors & Sensing

7.3 FUTURE PROSPECTUS OF LENOVO

Lenovo India targets 15% revenue growth in FY 2020-21.On the back of its strength in managing complex supply chains, Lenovo India is aiming to double its PC shipment volume in the financial year 2020-21 and log 15 per cent year-over-year revenue growth during that period despite the challenges brought about by the new coronavirus (COVID-19) pandemic.

According to the International Data Corporation (IDC), although Lenovo emerged as the leader in the India traditional PC market in the calendar year 2019, HP Inc. regained the top position in the fourth quarter of last year as its shipments grew 8.6 per cent from the same time a year ago. While HP Inc.'s 4Q 2019 market share rose to 31.2 per cent, Lenovo came second with 22.5 per cent share in the traditional India PC market. FY 2019-20 was one of the best years for Lenovo India. Our PC volume is likely to double this year (FY 2020-21). We will mostly be the #1 PC company in India in FY 2019-20, with a likely share of approximately 32 per cent (i.e., +10.5 points year-over-year).

We plan to grow our revenues by 15 per cent YoY (in FY 2020-21) and continue our share gain trajectory with 3-4 points share gain

It was still too early to assess the impact of the novel coronavirus on Lenovo's sales and supplies in India.

We are focusing on things we can control and influence. Our business priority continues to be ensuring the health and welfare of the Lenovo workforce, continuity of manufacturing and rebuilding capacity, and assisting those working to contain the outbreak.

Lenovo is leveraging its geographical balance, operational excellence and strength in managing complex supply chains across a global manufacturing footprint, and solid strategy execution in order to weather the challenges," he noted.

In the India tablet market, Lenovo retained its dominance for the 10th consecutive quarter, grabbing 37 per cent market share in 2019, said a report from Cyber Media Research (CMR).

On the Android tablets front, the company continues on the path of undisputed leadership and plan to hit 50 per cent+ share in the next year (our likely exit share in Android tablets for FY 2019-20 is 47.5 per cent).

Propelled by the government-driven education projects and upgrade purchases for Windows 10, the India traditional PC market inclusive of desktops, notebooks, and workstations ended 2019 with 18.1 per cent year-over-year (YoY) growth, shipping 11 million units during the year, according to data from the IDC.

Lenovo India is equally dedicated to both the market segments - consumer as well as commercial adding that as a leader in PC and smart devices industry, the company is attempting to better equip its customers in their end-to-end technology needs.

Lenovo is winning in new form factors like "ultra slim" and "gaming" with its new range of Yoga and Legion series respectively.

Lenovo is also the fastest growing brand in offline gaming in the country and we expect to continue that momentum. We focus on listening to the gaming community and shaping our Lenovo Legion portfolio and engagement based on their feedback. This is a strong evidence of our commitment to growing the gaming ecosystem. To increase its market share in India in financial year 2020-21, Lenovo is focusing on "further strengthening" its technical solution capability and partnership with commercial customers in education, finance and government sectors.

Lenovo India is also aiming to grow its service centre network by 10 times in FY 2020-21.

CHAPTER 08

CONCLUSION

A study on smartphone industry is an attempt to understand the industry, influencing factors, key players, SWOT analysis, BCG matrix, five force analysis, future prospectus etc.

Smartphones overall are a helpful invention. They allow users to access the web and document information easily. Apps on the phone allow the user to do many things in the palm of their hands. Music, pictures, and files can be carried in a pocket. Along with communicating through basic phone calls, voice mail, and text messages users can send emails directly from their phones. Social networking is made easier with applications and websites always available. Smartphones act as a camera, notepad, calendar, alarm clock, and computer. The majority of concerns for smartphones have solutions making them more of a help than a hazard. While smart phones have some security and social issues overall they are devices of great utility that many people find necessary in their daily and professional lives.

In a nutshell, smartphones industry has a market structure of oligopoly. Smartphones also have several factors of demand that we should not overlook like the ease of use factor, availability of applications, and the display quality of smartphones, not to mention other factor such as trend, age group, allowance and so on. Furthermore, conclude that smartphone have elastic demand.

The future looks very promising for the Smartphone. In just a few years, Smartphones have become very popular, and it is almost unheard of for someone to not own one. As major developers create new ways in which we can use our Smartphone, the opportunities are endless.

It will only take time to see which of these innovations will be a part of our everyday lives.

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