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The Impact of Innovation Strategy on Organizational Success: A Study of Samsung

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ABSTRACT

The purpose of this study is to examine the impact of Samsung's innovative strategy on organizational success. Today, the smartphone market has been fast evolving and it becomes a necessity to mankind. Samsung, one of the giant players which dominates the global smartphone market, has carried out innovative strategies, such as releasing smartphones with new features that cater the needs of customers, and achieves higher sales compared to its competitors in the smartphone market. This study emphasizes the innovative strategies that lead to Samsung's success. Besides, this study also looks at Samsung's opportunity and creativity to gain smartphones innovative leadership based on the 5G emerging technology. The finding of this study indicates that innovative strategy is positively related to the success of the organization.

Keywords: Creativity, Innovative Strategy, Samsung, Smartphone, Success

INTRODUCTION

In South Korea, Samsung is known as an electronics company selling high technology of mobile device, televisions, and household appliances to fulfil the market demand. Figure 1 shows that Samsung remained as the leader and the largest vendor in the worldwide smartphone market with a 21.8 percent market share in 2019 (Chau, 2018). It also retained its organization's annual growth with 8.3% and supplies 78.2 million smartphones to the smartphone market. Samsung is the best option for consumers opting for low-priced replacement option. Last year, it came out with a new idea, with Samsung's A-series devices, which consumers' acceptance strengthened its position in the market demand (Chacon & Rajawat, 2019). Similar to Oppo, Vivo, and Huawei, Samsung devices also run on the Android operating system. In the high-end smartphone manufacturing industry, it is the main competitor to Apple. Samsung is also enlarging its sales and growth all over the world (Oputa & Ahmad, 2019).

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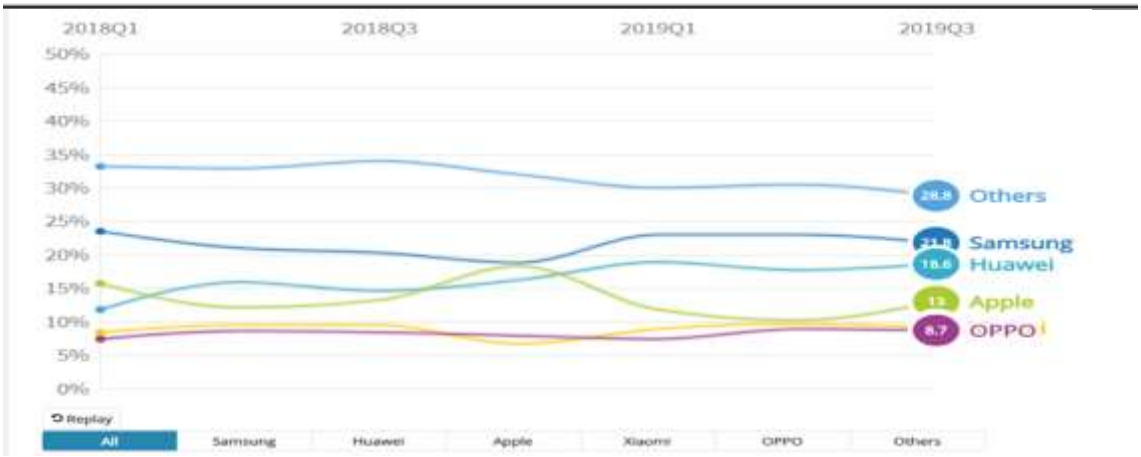

Figure 1: Worldwide Top 5 Smartphone Company Unit Market Share (%)

In 1938, the founder, Lee-Byung-Chull, established a business known as mini export firm in Korea and was initially known as Samsung Sanhoe prior to Samsung starting its firm in the mobile phone industry. After that, it decided to join the electronic industry in the late 1960s. It has become an explorer in the growing digital era and offered affordable prices and competitive products with the emergence of technology. In this new globalization era, Samsung not only runs its business in electronics but also expands into information, healthcare and biotech, environment energy, convenience, and comfort. It goes on a mission to "inspire the world with our innovative technologies, product, and design to enrich people's lives and contribute to social prosperity by creating a new future". This mission is related to their vision that is “Inspired the World, Create the Future.”

To produce an energetic community within the organization, firm culture is essential regarding innovation drivers. Business culture is one of the strengths of the firm as it helps to produce a behaviour structure inside the firms. To become an innovative firm, Samsung needs a strong culture in its organization. Employees also play vital role in the firm as they are required having identical perception of the business.

The business cultures that represent Samsung success are:

- Samsung owns an institution, Changjo Kwan, which used to build employees' understanding of their business nature
- Only the CEO can manage the firm’s management and no one else
- Starting from the supplier before beginning business
- Trying everything to produce a great product by manufacturing at diverse sizes, specifications, and models and selling at different prices

These not only shape Samsung success but also teach them to compete in the market. In 1997, Samsung suffered financial crisis and this incident affected many of the Korean businesses. Fortunately, it managed to endure as Samsung had well management in technologies and a good master plan (Wulff et al., 2019). The best experience that Samsung learnt is after the firm’s world tour, Lee-Byung-Chull recognized that their sales had not satisfied their requirement as the salesperson neglected their brand. Furthermore, the founder made a conference and called all Samsung's executives in Germany. The principal book of the New Management had

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arisen in the conference, which was “The Frankfurt Declaration of 1993”. This shows that the conference becomes the most important event in the Samsung business.

The founder travelled around the world to give talk to his employees, which had trademarks, "Fostering the individual "and "Change begins with me" after establishing Samsung's New Management book (Almutairi et al., 2019). Besides, Quality Management is the most essential idea for Samsung’s manufacturing part as one of the rumours showing that Samsung’s executives will burn all phones if they thought the phones were unsatisfactory to commercialize.

Samsung has introduced an extensive program of its management transformation in 2012. On top of that, Samsung has purified their organizational forms in each business area to improve the power in the firm. The new management forms showed that Samsung highlights three key business sectors including Consumer Electronics (CE), IT & Mobile Communications (IM), and Device Solutions (DS) (Electronics, 2019).

This study concerns more on IT & Mobile Communication (IM) as it is an essential division rapidly developing with numerous innovations in the past decade. One success factor that makes Samsung a market leader is the IM division produces huge revenue.

On the other hand, the factor that makes IM division extra exciting is Samsung's success developed on a 'fast follower' strategy to design and production. This plan leads Samsung to get ready with any changes in the market demands.

Being the market leader for smartphones, it started learning the business from others before competing in the business area. In addition, to protect their business, it built huge barriers to avoid the power of other competitors to monopolize the market. The best part of Samsung is that it always learns from the competitors to enhance its products and technologies. Furthermore, Samsung will manufacture their product fast with various products, such as design, features, and prices, to get the market attention. As a result, this could lead to rapid market demand and show that Samsung is one step ahead than its competitors.

Samsung followed the inexpensive market leader, Nokia, to penetrate beginning market demand. For Samsung, to stay long in the market demand, they must follow the structure by changing its products with design, function, and features. While Nokia suffered losses to convert its portfolio to the smartphone market, Samsung has become the market leader. Not only came after the market leader, but Samsung also studied the market environment and other competitors in the market.

Literature Review

There are several studies publishing about how Samsung manages their innovation strategy. According to Aslan (2019), Samsung has established a New Concept Development (NCD) process that all business units can apply while renewing and innovating new products and services. Samsung uses PIT as its innovation strategy.

There are four PIT’s main stages which are in first stage is understanding, which means recognizing what trends are being popular in the world. In order to bring off, PIT manages field research, and collects data and information to obtain opinion into the user’s view. Next, the second stage is indicating further step of NCD. Founders and designers generalize and dispute the opinions by analysing and evaluating the data

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gathered in such a way that ideas can supply innovation or solution for existing tasks. The third stage is concept development. The employees apply all knowledges that have been covered. It takes up a treasure of knowledge and makes it a single concept that defines it. Then, the concept became a solid business case for business units. Finally, the last stage is the concept of finalization where PIT employees with business units finish and end the product concepts depending on the market and consumer requirements.

According to Jean (2017), how firms'capacity for innovation effects rivalry and success the proxy measures of net income and market share are utilized to evaluate the existence of interrelationship among innovation capacity and net income of smartphone manufacturers, and the interrelationship with Samsung market share. Furthermore, Jean focuses to find how the rivalry of smartphone manufacturers affects net income, and Samsung market share as well.

The path in innovation of Galaxy of Samsung and iPhone of Apple has been found by Ross (2019). Ross estimated the level of products innovation and services. Ross also found iPhone's path of innovation is steeper than Samsung Galaxy. This proves that innovativeness of iPhone and Samsung Galaxy are identical and their product innovation is successful as service innovation. In addition, Ross (2019) claimed that Samsung obtained 'marketing innovation' strategy while Apple gained 'technology innovation' strategy. This shows that Samsung provides various of prices and descriptions in various smart phones while Apple produces iPhone and uses its own operating systems.

According to Kaylynn C (2019), Samsung used powerful adverts and innovative strategies to become the leading producer of quality devices and services. Moreover, brand rearrangement was undertaken to inform more people about the firm's superior products. This method has become a long-term investment at the company. It is currently attracting many potential buyers across Asia.

In another research, Newsroom (2018) stated that a method Samsung Electronics run with was Samsung NEXT, its technology start up group. Samsung NEXT is defined by an innovation arm that scouts, assists, and develops in forward-thinking new program and services businesses. Samsung always find out how technology and society will reform together with the frontline of program innovation, as well as utilize the opinions of its homegrown experts.

RESEARCH METHOD

Author (year)	Main Findings
Almutairi et al. (2019)	The study finds that Samsung use the main industrial components such as semiconductors, compressors, LED optical fibers and ODD. This shows that Samsung is a major in the technology market.
Aslan (2019)	The study shows to identify on how Samsung changes their innovation strategy from 'fast follower' to 'leadership' for 5G technology. This study uses simple model of innovation strategy.
D.Patel & R.	The study finds that movement on 5G networks verifies

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Kathiriya (2018)	merging from claiming networks, technologies, and provisions also benefitial.
Gnanakumar (2017)	The study shows that multiple cross-licensing business models are indispensable to get rid of tangible losses in transnational risk management.
Jean (2017)	The study shows that the stronger innovation for smartphone manufacturers, the more they become competitive in terms of numbers of customers, net income, and market share.
Kaylynn C (2019)	Samsung uses powerful adverts and innovative strategies in order to become the leading producer of quality devices and services. This study uses simple model of innovation strategy.
Newsroom (2016)	This study shows that Samsung as a top brand in Asia, sets a new standard of viewing experience, intelligent digital appliances that transform the home and breaks barriers in mobile productivity and wearable technology.
Newsroom (2018)	This study states that Samsung has faster, more transparent machine learning, new augmented reality (AR) and virtual reality (VR) form factors and viewing models, and blockchain to look beyond cryptocurrencies.
Ross (2019)	This study estimates the level of innovation of products and services. Ross also found that innovation path of iPhone is steeper than Samsung Galaxy.
Wedellsborg & Miller (2014)	This study shows that Samsung negotiates the expectations up front, builds trust with low-risk ideas, presents a portfolio of options, manages the choice of evaluation methodology and considers going under the radar.

Based on the table above, we have reviewed 10 papers and search each paper main findings. As Aslan (2019) and Kaylynn C (2019) stated that they used simple model of the innovation strategy, we decided to propose the same method because it is the most suitable method to find the innovation strategy of Samsung.

The simple model of innovation strategy contains four components including strategy, resources, capabilities, and processes. The first is a strategy to achieve goals, existing innovation efforts and the environment. The second is resources as it is mentioned to all obtainable preferential and fixed assets of a company to be innovative. The third is capabilities which manages and enables the resources to be evaluated, configured and reconfigured. The fourth is processes where all innovation processes are utilized to produces the outputs.

Innovation strategy shows how a firm grows and utilizes its resources, capabilities, and processes to achieve corporate purposes. In following parts, the gap analyses are attained for strategy, resources, capabilities, and processes to see how Samsung innovation strategy transform from 'fast follower' to 'leadership' in 5G technology era.

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RESULTS AND DISCUSSION

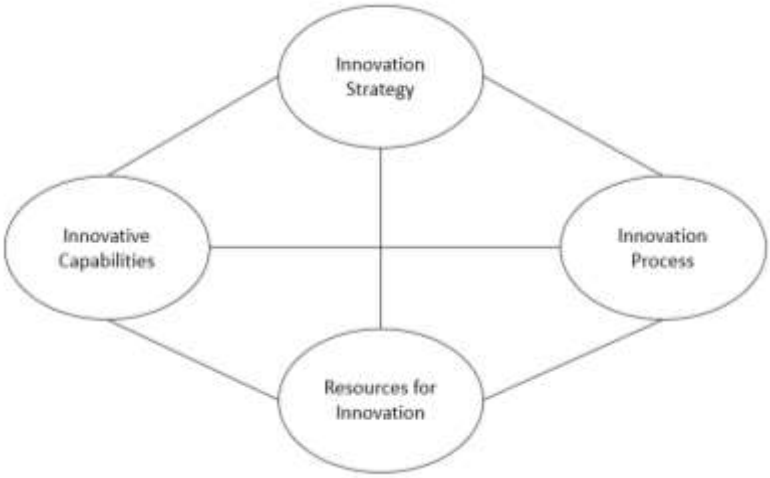

Figure 2: Model of Innovation Strategy
Figure 2 shows that the model of innovation strategy based on open innovation of Samsung semiconductor global website

Innovative Strategy

Samsung's divisions are divided into digital imaging business (digital camera), network business (3G, LTE network infrastructure system) and mobile communication business (smartphone, tablet pc, and computer). The products include the 3G phone and smartphone, telecommunications systems, printers, and computers (Electronics, 2019). It is often to see Samsung's need to continually innovate in the IM division by launching new and different innovative products. For example, the phablet Galaxy Note was launched as a mutation between a smartphone and a tablet. It was sold more than 10 million units when it was launched. Therefore, this indicated that this phablet is one of the most successful smartphones launched by Samsung in its history (Walgrove, 2015). After the phablet, the launching of the Galaxy Note II was a huge success. Samsung's strategic management revolves around creativity, partnership, and talent and is applied throughout the whole division. Samsung diversifies its portfolio to ensure that it can keep innovating and creating products in order to meet customers' satisfaction and needs.

Besides, Samsung decides to put more efforts and concentrated on the specific smartphone which is Galaxy S in order to compete with other companies likes Oppo and Apple. Great global shipbuilder as a major presence in construction will be under Samsung responsibility as Samsung not only liable for mobile technology. Samsung switches its innovation strategy from 'fast follower' to 'leadership' (Walgrove, 2015) because of the new 5G technology communications systems. Samsung waited until the market to be established and let the market to lead the company. It shows that Samsung is a huge risk-taker. Samsung created two new product categories and launched some products such as Galaxy camera and Galaxy Note which are the connected camera and the phablet (Stefan, 2013).

Furthermore, competent people who have a passion for excellence and are committed to developing the best products and services to consumers are also employed based

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on the company's strategic vision, by hiring the best talent available. Samsung allies itself with the best partners in the market because it believes that it can secure the smartphone patent.

Innovative Capabilities

In order to keep renewing and find some creative and innovative ideas to produce new products and services, Samsung decided to develop a New Concept Development (NCD). It is a concept to process all business units which can perform while renewing new products. In addition, Samsung established an innovation process team because Samsung believe that it can provide more market insight and achieve the goal more easily by having a special team to study and work with every business unit.

An order received from the top management to Samsung in March 2010 is to develop the smartphone able to compete with the iPhone. Samsung put their efforts and used all available resources in producing new smartphone. They also hired some experts and invested on R&D in such a way that they can release Galaxy S respectively on the same day with Apple released iPhone 4.

Samsung has its competitive supply chain that uses its own hardware components in the production of handsets rather than getting supplies from the third parties because it believes it has enough resources to achieve this. The main components come from in-house production which is about 70% used in Samsung Electronics smartphones. Samsung is a conglomerate, manufacturer, and the world's largest chipmaker. This shows that Samsung is so much more than a smartphone-maker. This allows Samsung to be more flexible in terms of what and when to produce and adaptable to the changing market environment quickly. Moreover, it brings cost advantage to Samsung as well. The valuable components in handsets which are application processors, DRAM, NAND flash and displays are designs and manufactures by Samsung. The components together constitute about two-thirds of a phone's bill of materials (Events, 2020). Samsung had a good relationship with the wireless carriers, and this allows it to get the products from outside easily. Furthermore, Samsung is quick reactive to market changes through vertical integration because it is easier to communicate with each other.

Innovation Processes

Samsung chooses to adopt some marketing strategy such as low pricing and multiple devices to carry out some innovation process. It produces the smartphones in a very short period of time and also comes out with a variety of devices and sees market's response (Richter, 2012).Samsung has an integrated feature known as Samsung PIT (Partition Information Table) for its smartphones which accommodates a map including all the system's parts with different internal phone memory portions. The purpose of the PIT is to develop production and solution concepts by using the consumers' opinion and perspective, market-driven technologies, and innovation for commercialization. Besides, there are four stages that PIT's specifically concentrated on.

The first stage that PIT concentrated is to understand the latest trends exploding around the world. PIT will then conduct the research and collects data and users' opinion. At the second stage, PIT will analyze and evaluate the data that had been collected before and develop them into innovative ideas right after indicating them to founders and designers. At the third stage, PIT will apply all the information collected, business strategies and the ideas generated and make it into a single concept which is

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a solid business case for business units by taking up a treasure of knowledge. For the last stage, the employees in business units will finalize the product concepts depending on the market and consumer requirements.

Resources for Innovation

Samsung is trying to get resources for innovation processes. Samsung cooperates with various R&D, Research Centers, and partnerships labs from overseas in producing new smartphones and introducing them to the market in a fast and effective way. Besides, Samsung also participates in global consortiums partnered with automotive companies to drive "global innovation for in-vehicle connectivity". This allows the people to use their smartphones in their cars by doing the vehicle connectivity partnership. Apart from that, Samsung has held on to its dominance in the number of patents and the company will remain as near the top even with the growth of patents outputs coming out of China competitor because it knew that the patents are used for competitive advantage in the smartphone market.

Samsung's Innovation with 5G technology

In May 2013, with new wireless technology, Samsung manufactured a prototype. This allows Samsung to communicate the data faster due to the emerge of the 5G technology. This technology can deliver error-free data at 256 megabits per second, reaching a rate of 512 megabits per second with minor errors. The 4G LTE technology can also supply the maximum of about 75 megabits per second (Kim & Seong, 2010). Samsung technology depends on 28-gigahertz frequencies and known as "millimeter wave", which are about an order of magnitude higher than the cellular frequencies used today and thus can carry commensurately more data (Talbot, 2014).

Samsung has been the front-runner in releasing 5G-capable mobile devices, shipping more than 6.7 million 5G devices in 2019 (Stone, 2020). In April 2019, Samsung introduced the Galaxy S10 5G which is the first 5G-capable smartphone to the market. On the other hand, Samsung introduced the Galaxy Note10+ 5G to market in August 2019. While in 11th February 2020, Samsung introduced Galaxy S20 and announced to move its entire flagship line to 5G including the S20, S20+ and S20 Ultra. 5G connectivity is not only limited to phones, but also, Samsung has informed the launch of a 5G variant of its 10.5-in, Galaxy Tab S6 in Korea. 5G devices in cars, AR headsets, and many more devices make us more connected than ever before (Stone, 2020).

Businesses will be able to hold CR meetings or even deploy AI-enabled tools via cloud-based apps by using the 5G technology. Besides, the flexibility of employees in working environment had increased because they can move around with reliance on mobile devices such as Samsung DeX which is a combination of 5G with a platform so that the employees can work efficiently at anywhere and anytime. As a result, the productivity of the employees will directly increase.

It is not easy to bring 5G from the lab to the real world, Samsung has partnered with carrier partners, regulatory groups and government agencies to implement the best 5G experience in order to produce the best products to the customers. Industry groups like 3GPP and O-RAN Alliance have been leading contributors and shown responsibility to an open and collaborative approach to networking, which has helped accelerating the delivery of 5G to consumers and businesses (Stone, 2020).

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Strategy Analysis with 5G technology

Since Samsung is a fast follower to Google Android (OS) and application processors (4G) are applied by Qualcomm (AP), Samsung's ideal concept is to be innovator creating World's First 5G mm-Wave Mobile Technology. Therefore, Samsung develops its own operating systems, application processors and decreases the dependency on OS and AP. Moreover, Samsung calculates risk, leverages its patents effectively and efficiently to secure the market leadership in 5G technology (Ge & Zhang, 2019).

Capabilities Analysis with 5G technology

Samsung has its own competitive supply chain and it has not only 70% in-house production of its most valuable handset components, but also a strong relationship with more than 500 carriers. Hence, Samsung is able to secure its access to capital, redirect its assets and reconfigure strategy to achieve 100% customer satisfaction since there are no 5G established carriers.

Samsung received order from top management in March 2010 to develop the smartphone to compete with the iPhone. 5G technology was not available at the market at that moment. Samsung took initiative to create a market and set 5G standards in the market. In addition, Samsung seek for a new market for 5G to differentiate itself from other competitors such as Apple.

Samsung's capability in forecasting markets to maintain a fast follower position while at the same time to be an innovator in the market transformation from forecasting with 5G technology because there are no existing standards for 5G. Taking risk calculation, investing in human and technological talents will lead to market dominance as Samsung be the innovator with both OS and Design.

Samsung 5G Core Vision

NFV and cloud need to be optimized by 5G networks with its implementation of network services as software (D.Patel & R. Kathiriya, 2018). According to Electronics (2019), Samsung 5G Core with its cloud-native core is well designed to take full advantage of the cloud and functions as the key enabler for the rapid realization of 5G innovation. Firstly, is flexibility. Samsung 5G Core increased new services and configures the network on a shared infrastructure flexibly. According to the 5G service profiles, flexibility allows elastic scalability of network functions at CP/UP and micro-service levels (Electronics, 2019). Secondly is agility. Samsung 5G Core lessens the service implementation time from hours to minutes and supplies faster time-to-market (TTM) for new services from months to days (Electronics, 2019). Thirdly is scalability. Rapid and high scalability with telco-grade reliability is Samsung 5G Core. This enhances the performance of the distributed user plane as well as provides a telco-grade cloud-native control plane performance (Electronics, 2019). Besides, tunability not only gives both customized and optimized networks for diverse 5G services, but also gives rapidly adapts and optimizes the network according to operation situations. It also supports cost-efficient migration from 4G to 5G (Electronics, 2019).

Samsung 5G Core Strategy

Samsung 5G core strategies are defined as Cloud Native, Network Slicing, Common Core and Automation. This is to achieve the vision of Samsung 5G Core. First, for the cloud native, Samsung 5G Core is expanded and established in a cloud-native environment. Based on micro-services, containers and stateless architectures, the

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cloud-native environment will boost the productivity of development and verification of 5G Core NF and automate service upgrades and deployments for better operational efficiency (Electronics, 2019). Besides, another 5G core strategy is network slicing features that will provide dedicated resources and networks for each service. This will reduce the impact on the existing services while accelerating the launch of a new service. Through adoption across vertical industries, network slicing allows a flexible response to the changes in service demand and acquisition of new userbase (Electronics, 2019). Furthermore, common core is one of the core strategies that enables the integration of various types of access networks (Electronics, 2019). Lastly, automation is another Samsung 5G core strategy that provides a Network Automation Platform which can respond to any changes in 5G automatically to boost the operational efficiency. The examples of networks are operation, upgrades, and monitoring (Gnanakumar, 2017). The platform can automatically create 5G services, such as network services and network slices (Electronics, 2019).

CONCLUSIONS

In conclusion, the smartphone has already become a necessity in this era of modernization and globalization. Its market is currently saturated with products offerings similar technology and there has been a high demand for smartphone technological advancement whenever they are introduced into the market. There is a need to take some actions and changes to disrupt the current situation. Samsung has become the market leader to a new wave of technological innovation and leads the other companies in the market with 5G technology. Samsung takes some proactive view which can propel the company to be the "first entrant" into the new market and get competitiveness to become the market leader in the emerging 5G technology. Although the "fast follower" approach still serves well the company and might even be part of the company strategy, in innovation, every company holding many important R&D patents that can enable them to become market leaders if they apply an effective innovative strategy. We believe that 5G can provide Samsung the opportunity to achieve success in the future. If the company wants to set the industry standards, Samsung should take the necessary and calculated risks.

Recommendations

Samsung can develop its operating systems and application processors to decrease the dependency on Google android (OS) and Qualcomm (AP), and therefore, Samsung can reduce the risk if the OS and AP have a technical problem. Besides, Samsung can hire and train more related professional researchers to keep sustained and to compete with the popular brand such as Apple and Huawei. Moreover, Samsung should participate more with OS providers and third-party companies to develop and produce smartphones efficiently and in good quality. After that, Samsung should focus more on the 5G core technology and secure its patent to ensure they are still the market leader for smartphones. In addition, Samsung is recommended to expand the market area such as IoT (Internet of Things) so that there is a healthy competition with other brands. Apart from that, Samsung should do some research to understand customers' changing needs nowadays so that the new products introduced into the market are satisfying their needs. Finally, Samsung should keep brand loyalty in high-end products so that the customers will keep buying its products.

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