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How fear of change, lack of innovation led to Nokia's failure?

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ABSTRACT

The aim of the paper to investigates the reason for business failure using Nokia as a case study. The paper applies the explanatory conclusive research design since there are cause and effect relations that seek to provide a better understanding of the reasons for the market failure. The mobile manufacturing sector is the most interesting and innovative of all in the "Information & Communications Technology" sector (ICT). Nokia was once known as the market's dominant company, leader, and pacesetter until it underwent a tremendous market failure. The aim of this research is to shed light on Nokia's failure in the market due to its complacency & fear of change, lack of innovation moving too slowly in terms of being too late in making decisions & inventing of the iPhone. Paper elaborately discusses and analyses the failure reasons supported by a literature review in addition to the characteristics of this industry and its market structure. Finally provide advice for business makers.

Introduction

Through history many companies were challenged with many factors due to the inability to adjust with the fast changes. A status that foster failure and getting out of the market. This paper digs deeper for the reasons of failure of mobile companies and what re the lessoned learned from this case. It is undeniable that the mobile industry has caused a mind-blowing revolution in the telecommunication business making life easier for individuals. The mobile industry has evolved rapidly outgrowing the needs of people and giving them the ability to experience new aspects of development.

The emergence of cellular networking technology was a huge turning point for the mobile industry easing communication for people and providing them with high levels of expediency and flexibility. The mobile industry driven by technology and innovation, as people are always expecting the mobile industry to exceed their needs and expectations (Al-Debei, M. M., & Avison, D. (2011).). The mobile manufacturing industry is indeed an extremely interesting and innovative one, the creativity and capacity of firms must be tested. In addition, it is actually a great source of income whereas countries with mobile manufacturing companies can have an effect on their country's GDP where they are able to increase it (Sharma, S. (2015).Over all, the shocks can be internally or externally that hit the business sustainability and lead to shut down. There are generally many reasons for a market to fail such as monopolies, externalities or even environmental concern related reasons. However, the mobile industry can have more specific market failure reasons mostly related to lack of innovation and not being up to date enough. In this research paper, we are going to discuss Nokia's market failure case, as it was one of the greatest failure cases in the mobile industry. Nokia evolved in southwest Finland in 1865 to being the Nokia mobile manufacturing company we now know. Whereas Nokia's market failure case -can be taken - as a great lesson to any company competing in this industry, moreover Nokia's failure was actually followed by many new entrants that seized this opportunity (Sharma S., 2015). Recently, Salman D. & Seiam, D. (2020) emphasis on how firms can avoid failure via future planning and avoid high leverage finance.

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The paper divided into a literature review indicating the market type and structure of this industry in addition to explaining what a market failure is and giving general reasons for it, followed by a brief history on Nokia in addition to the main characteristics of the industry. Further, we find the barriers of entry to this industry as well as the reasons for Nokia's market failure in addition to a conclusion and recommendations.

Literature Review

The market success as a competitive market that allocates its resources efficiently and starts to develop in contrast to that markets fail when they are not able to introduce efficiency and then the search for methods to improve begins. He later explains how previously, a minor group of economists have rejected the market failure approach as a whole, which has led other economists to improve market failure analysis even more and research the main reasons for market failure, which referred to monopoly, externalities, common property and public goods, Randall, A. (1983).

Sharma, S. (2015) consider the mobile manufacturing industry to be of an oligopoly structure. He defines an oligopoly market to be one that consists of a few firms dominating the industry, and although each firm has a high share of the market but it cannot influence or set the prices alone, as the firm alone has no authority to do so. In addition, he also states that in an oligopoly, structured market each firm is aware of the other firms' actions which applies to the mobile manufacturing industry whereas there are a few numbers of firms with mainly Apple and Samsung dominating the market. The mobile manufacturing industry characterized by an oligopoly market, which depend on the nature of barriers to entry and pricing are in such an industry. As for the barriers to entry, he describes them as very high and difficult for any new firm to enter because there are many barriers including very strong customer loyalty for the existing brands and existing patents (we will go through more barriers in details further in this research paper).

However, externalities is a much broader term with types and explanations than to just mean being inefficient. Moreover, Rashid, M., & Antonioni, P. (2015) simplify more reasons of market failure as that market failure can also occur if the firms are producing something the society does not want, or even not providing the society with what they want. In addition to Randall's reasons, the two writers also add asymmetric information; which is neither consumers nor producers have complete information, and too few or too many property rights; which can both cause failure problems. Moreover, the two writers also give simple definitions for the term "public goods", because public goods are not excludable from people it's hard to price them, and externalities; which is the cost or benefit a third party pays or gains from someone else's actions. Finally, the market failure whereas it describes it as a state of disequilibrium that occurs in the market caused by distortion in the market; in other words, it is when the quantities of goods or services supplied are not equal to the ones demanded. The CFI also lists some reasons for market failure such as externalities, public goods, market control and imperfect information in the market. Market control is further explained to occur when one party (the consumer or the supplier) has power and is in more control of the prices that they do not allow prices to be set according forces of the market. Further, explained that this situation can occur mainly in oligopolies, just like our case here, or monopolies.

Methodology

The research applies an explanatory approach. It starts with investigating the characteristics of the mobile industry, barriers in the market, products specification and contracts and the behaviors of the management decision.

Characteristics of the Industry and Brief History on Nokia

In order to visualize the mobile industry and get some hints on its characteristics we will first give a glimpse upon Nokia's history, from how it started lead by its success then finally its fall in the market. As mentioned previously, Nokia evolved from just a wood pulp mill in southwest Finland in 1865 to being "Nordic Mobile Telephone" service. Which was the first international cellular network in the world alongside the first to provide international roaming services. In 1981, from which later on it started introducing its first mobile phones starting with the first car phone "The Mobira Senator' in 1982, "The Mobira Talkman" (a portable car phone) in 1984, then finally "The Mobira Cityman" which was the first handheld mobile phone weighing 800 grams with a price tag that said "24,000 Finnish Marks" in 1987. In 1991, the then prime minister made what the world knows as the first "global system for mobile communications" call with a Nokia. Along the coming years, Nokia starting launching more mobile series and including new features which in return grabbed people's attention (and money) to the extent that in in 1994, after the launch of the 2100 series which included the "Nokia Tune Ringtone Feature", Nokia's target was to sell 400,000 phones meanwhile they actually sold 20 million worldwide. Finally, in 1998 Nokia has become the world's number one leader in the mobile phone market which in close years (from 1996 to 2001) its turnover increases from 6.5 billion euros to 31 billion euros, however in 2001 it initiated a profit warning and stated it would be cutting off a number of 1,000 jobs . Nokia continued to add new features and grab buyers; however, in 2004 although the company was still a market leader, it stated that it has been losing shares to its rivals. In 2007, Nokia faces one of the world's biggest product recalls after admitting that 45 millions of its products may be concerned with battery faults. However, as it was dealing with this "short-term" problem, another "long-term" problem enters the market, Megerle, K. (2019).

The iPhone by Apple from which in 2008, Nokia reported a fall of 30% in its 3rd quarter profits, and fall of 3.1% in its smartphone sales meanwhile Apple's iPhone grew 327.5% the same year. In 2009, Nokia continued to cut off another 1,700 jobs worldwide as the global recession hit the mobile phones' sales. Nokia then starts a plan to fight back phones like the iPhone after it admits it had a slow reaction because it was already too late since they had their first loss. In 2010, Nokia is facing serious challenges due to its new threats (iPhone and now Android based mobiles) and cuts off another 1,800 jobs but on the other hand has a rise in profits. In 2011, there was an announcement for a strategic partnership for Nokia with Microsoft in order to compete with Apple, Google's Android that was ignore. However, Nokia cuts off another 4,000 jobs and overtaken by its competitors as its sales, and profits heavily decrease. Moreover, in the same year Nokia finally launches new smartphones. In 2012, things started to fall even more as Nokia cut down 4,000 more jobs, its shares fall heavily, they state a profit warning and encounter a loss of 1.3 billion euros, then it cut 10,000 more jobs and an announcement of its last factory in Finland closing comes out. In 2013, the company finally gains some profit after it has been encountering losses for somewhat 18 months, however Microsoft buys Nokia's handset business for 5.44 billion euros. The previous timeline shows Nokia's market share over the time summarizing. This market share reach peak in the fourth quarter of 2007 but gradually falling afterwards. The graph also illustrates the main decisions taken by Nokia over the years, Megerle, K. (2019).

Characteristics of the Mobile Manufacturing Industry

As we have previously mentioned, the mobile manufacturing industry is of an oligopoly structure whereas few firms dominate the market and control prices together making it hard for any new entrants. However, there are also some features or characteristics that shape up the mobile manufacturing industry differentiating it from other industries. One of the first means of communication ever have been fixed land lines whereas people installed them at their homes as a way of facilitating communication with others, however due to the lack of advancement, innovation and creativity in fixed land lines mobile phones/portables/handhelds were invented. One of the main characteristics of the mobile manufacturing industry is the manufacturing firm's constant need for a huge amount of investment in order to develop better yet cheaper phones in order to be able to compete in the market. For example, in the years 2009 till 2013 $1.8 trillion were invested in research & development as well as infrastructure by mobile manufacturing companies whereas the mobile manufacturing industry's value chain generated about $3.3 trillion and had created 11 million jobs in 2014 (Sharma, S. (2015). More characteristics of the mobile manufacturing industry include the huge customer loyalty that a firm may share with its customers, which can sometimes lead to the existence of both old and new technologies in the market when loyal customers are still not sure about new technologies and have not adapted to them yet.

Furthermore, firms in this industry tend to have the ability of constantly reinventing themselves whenever new technologies produced whereas product innovation is such a main and very important feature of the industry. Moreover, in order for firms to be able to attain a great market share in this industry they must be able to provide such a great product value in addition to product differentiation in order to push customers into buying their product. So, the uniqueness of the product such as a new size, technology, or even feature in addition to its scope, which is basically the span of different services or features the product offers are very important characteristics for the mobile manufacturing industry (Gressgard, L. J., & Stensaker, I. (2006). Furthermore, innovation in the mobile manufacturing industry can be divided into two parts; first innovating the same product (like creating newer versions of it). Second innovating in order to create more different products, which leads us to the concept of diversification, which is an essential characteristic in this industry whereas some firms work on diversification in terms of creating various products for each segment of the society.

Finally, the last characteristic in this industry is the idea of a dominant design in the market that is able to lead it. The concept of a dominant design is simply explained as the emergence of a totally new product or idea in the market by one firm making it the dominant design where the other competing firms follow this new "trend" in order to acquire part of the market share as well (Cecere, G., Corrocher, N., & Battaglia, R. D. (2015).). A great example on the concept of a dominant design is how Huawei. It was the first to introduce the new trend/feature/option of having a mobile with a triple-camera setup in its Huawei P20 Pro mobile, and ever since then almost all other competing firms have introduced their newest phones with the same feature as well starting from the iPhone 11 or Samsung Galaxy S10 (Mullis, A. (2019). On the other hand, even as simple as how Apple was the first to introduce the concept of a smartphone in 2007 and urged all firms to switch their production from normal mobile phones into the production of smartphones with a software.

Barriers of Entering the Mobile Manufacturing Industry

As the mobile manufacturing industry is one of the most prominent oligopolies and is highly successful, it also has many hard barriers to entry due to also the power of the competing firms inside. The nature of the structure of the market usually stresses a number of barriers depending on the structure, for example, the nature of an oligopoly market stresses the existence of high or many barriers to enter the market. Due to that, the industry is full of many barriers, which is why I grouped and summarized those under five main points: first; economies of scale simply mean that as one firm's production increases, its cost per unit of the product decreases. It is usually associated with industries that maintain high levels of production just like mobile manufacturing companies, which simply makes it difficult for any new entrant. As they will have to keep up with the level of production forcing them to produce at high levels (or low levels in other cases) forcing them to have a cost disadvantage. In addition, technology related business is usually of very high costs because primarily cash is required. In order to invent a new technology or even buy an already invented technology. For example, in the mobile manufacturing industry the main costly technology required is initiating and implementing an operating system (mobile software) for in order to be able to manufacture a smartphone that is able to compete with the already existing technologies in the market. Moreover, costs incurred for entering the mobile manufacturing industry do not only have to do with adopting a new technology but also now smartphones are much more complicated. Then just an old normal mobile phone so in order to compete the entrant needs to pay money for highly skilled and trained engineers.

Also, a cloud service, an application store with at least hundreds of different applications, Also, developers and optimizing device drivers, not to mention that a new entrant will need an access into supply chains with the best components (Case, A. (2015). Finally, other high costs in this industry are the ones for research & development or advertising and marketing campaigns, because especially in this industry with competitors of such high power the need for an efficient research & development team as well advertising and marketing campaigns is an investment a new entrant must make. In addition to high "switch costs" which are simply the costs experienced by consumers when wanting to switch suppliers. In order for a new entrant to actually enter the market there are a couple of essential things the firm needs in order to succeed, but with the already existing firms being in control of almost everything in the industry in addition to having access to everything as well resulting with nothing actually left for a new entrant. Already existing firms in the market, like Apple and Samsung, have control of everything like essential raw materials in addition to their loyal customers who already have trust in the company they buy from, making it hard to switch to a new company. Furthermore, new entrants in this market will need to gain access to a number of things such as access to distribution channels/distributors, data networks. which is basically that now there are many data updates (3G, 4G...) meaning that carriers are now more involved into the development process of a smartphone and what carriers do is that they request certain features in a smartphone, change specs in terms of their technology (Case, A. (2015).

Product Differentiation and Innovation

One of the most essential characteristics of this industry is that its different firms each differentiate their products with certain features or qualities. In order to succeed or compete in this industry the firm needs to have a strong product differentiation and always add up new technologies or features due to the fact that this industry is very fast and always changing that it's sometimes very hard to keep up with. In addition, to its constant need for innovation. For example, in this industry many competing operating systems whereas the leading system and most significant and successful is Apple's IOS.

Contracts, Patents & Licensing

The contracts, patents and licensing encrypted with this industry make it very difficult for new entrants to enter the markets because they give already give protection to the already existing firms in the market which have already won contracts, own license or even hold the patent. For instance, just like how contracts between certain suppliers with retailers are able to exclude other retailers from entering the market. Nokia's failure as a smartphone company was of great shock to the world especially that it was known to dominate the market and was a pace-setting mobile maker (Surowiecki J., 2013) Nokia was actually the first to create cellular network and has been a market leader for mobile phones in the late 1990s and early 2000s (Aaslaid K, 2018). There are indeed many reasons for Nokia's market failure however, they grouped into three main points, which are complacency and fear of change, lack of innovation, moving too slowly and inventing of the iPhone.

Complacency and Fear of Change

Complacency simply means a feeling of satisfaction that is uncritical with yourself or your own achievements; self-satisfaction in other words. The feeling of complacency that Nokia had of itself was actually one of the main reasons to its market failure. For instance, when Apple launched the iPhone in 2007, which was the first touch screen phone that overwhelmed everyone, Nokia was still taking pride in its E-series ignoring how a new concept has actually changed the way a smartphone should be. The iPhone's success did not actually have any impact on Nokia in comparison to for example Samsung that quickly transitioned to smartphones. Therefore, Nokia failed to understand and adapt itself to a new change. Moreover, Nokia overestimated itself as a brand and the strength of what it can achieve. It believed it can just pop in late in the smartphone market and actually succeed because it had this much trust in its brands and customers when it decided to compete with Android in 2008; however, it was too late for Nokia (Aaslaid, K. 2019). Nokia imprisoned by its own past success they insisted that their hardware was superior and would still win its people over; they ignored the importance of transitioning and changing. Nokia was the brand that used its marketing to change the idea of mobile phones from just ordinary handsets into accessories worn by huge celebrities on red carpets (Surowiecki J, 2013). The main reason Nokia feared change was because it feared losing its current customers if it changed too much in terms of adding new software or experiences.

Lack of Innovation

Nokia's lack of innovation was probably the most important reason on why it had a tremendous market failure, the fact that Nokia just did not grasp the new concept of having a software with endless applications and new experiences and that hardware did not actually matter as much as it did before brought Nokia to failure (Aaslaid, K. (2019). Nokia was always known to have invested more in its hardware, to the company producing durable hardware was their main goal, they didn't understand Apple's concept of 50% on hardware and 50% on software because simply it was a hardware-oriented company. All along, the hardware engineers always dominated Nokia's development processes while software engineers marginalized. Apple and Android simply crushed Nokia, while Nokia underestimated the power of a software. Surprisingly, Nokia actually came up with its first smartphone earlier in 1996 it even built a prototype that had a touch-screen and was internet-enabled it even spent tons of money on research & development, however Nokia was simply unable to convert all this research & development work into products that people can actually buy (Surowiecki, J. (2013)

In contrast, Samsung for example invents new phones almost every year that are at least slightly modified from the previous ones, on the other hand Nokia's Windows phone (which was in collaboration with Windows) was introduced to the market as late as 2011 and was missing some of the basic technology important features that could have driven Nokia's sales. In addition, Nokia didn't create those trendy shiny attractive designs like that of Apple or Samsung and besides from the looks, Nokia didn't even install a front camera in the device whereas front cameras enable the phone into 3G which was simply disappointing to the people. Most of the reasons mentioned above could have been overcame if only Nokia had not been moving too slowly. Nokia has moved too slowly and took actions much later that it got slow responses in return, Willard, W. (2014). The fact that Nokia was too slow to understand that the new change and generation has occurred (by Apple basically) and it mainly focuses on data and not voice as the future of communication has put Nokia so much far behind in the market. For instance, Nokia depended on "Symbian" (its device operator) for far too long until it finally decided to enter a partnership with Microsoft in 2011. However even this huge shift in Nokia hadn't really succeeded as expected due to the fact that it was simply too late whereas Apple and Samsung were already dominating their market and relatively their operating systems ,iOS and Android, just did not leave any much role for Windows

Inventing of the iPhone

We can sum up all the past reasons to the inventing of the iPhone whereas the last successful mobile phone that Nokia has launched before the iPhone was the Nokia N95 in 2006, which included the most updated features at the time. The inventing of the iPhone simply changed the whole smartphone concept, kicked companies like Nokia and Blackberry out of the market, and affected the mobile networking companies as well. Five years after the launch of iPhone to the market and the industry is full of thrive and innovation. The previous graph illustrates Nokia's market share slightly before and after the invention of the iPhone, and how the iPhone eaten up Nokia's market shares. Whereas, by June 29, 2007 (which was the day the iPhone was launched) Apple's stock price was \$122.04 and reached \$335.36 less than a week later with a market capital of \$310 billion. In comparison to Nokia's stock price being at \$23.63 of the same, date reaching \$6.11 less than a week after with a market capital of \$22.7 billion, Benton, G. L., & Koch, R. (2014).

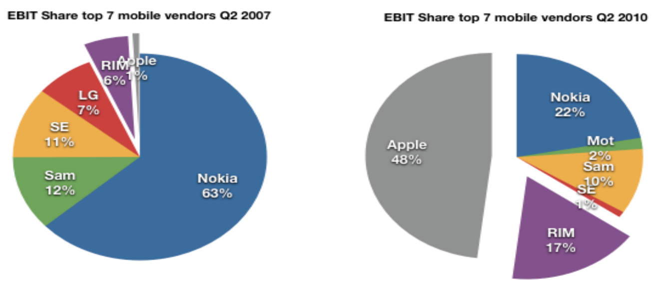

Figure 1: Top 7 Smartphone Companies Market Share 2007 Second Quarter VS 2010 Second Quarter;

Source: Tofel, K. C. (2010)

The previous illustration shows how Apple has dominated the smartphone market share within exactly 3 years of launching its iPhone 1. Apple has introduced a new concept to the market and was able to lead it, and snapped Nokia's position in leading the market. Nokia's profits, non-IFRS profits and sales over three years quarterly (2010-2013) from which we can notice how each of them has been dramatically decreasing over the quarters due to the reasons mentioned which are: complacency and fear of change, lack of innovation, moving too slowly and the inventing of the iPhone. However, we can see a slight raise starting from the second quarter of 2012, which was due to Nokia and Microsoft collaboration. Moreover, Nokia's market capitalization amounted 14.8 billion euros, which was a drastic fall from an amount of 110 billion euros in 2007. Concluding, Nokia's fall from the mobile manufacturing market was a tremendous one, whereas in 2007 Nokia's market share for smartphones was as dominant as 49.4% however it decreased to 43.7% in 2008. Further to 41.1% in 2009, and 34.2% in 2010 whereas in the first quarter of 2013 the market share has tremendously decreased to only 3%, Lee, D. (2013)

Conclusion

In conclusion, Nokia actually had the chance to evolve and reinvent itself however due to its complacency and fear of change, lack of innovation, and being too slow it just missed out on many chances and couldn't see the danger signs. Nokia's market failure is one of the greatest among many failures because it was once one of the greatest dominant pace-setting mobile makers expected to adapt and lead the market rather than fall. Its market failure was also able to make it lose as many employees, customers, and market shares than ever expected. Nokia was successful in introducing new concepts, experiences and technologies (at its time) that people will never forget. However, it was also able to give out a great lesson to all innovators and technology related business. There are indeed many proposed recommendations for Nokia to be able to re- enter the market again, one of which includes changing its operating software into one that is more dominant in the market by initiating a collaboration such as that with Android. Another recommendation for Nokia is to diversify its products a bit meaning that it doesn't have to necessarily depend on manufacturing mobiles only as it can for example start supplying hardware to different mobile manufacturers as well. Nokia has always been good at manufacturing hardware it basically had the knowledge to do so, so maybe if it claims the opportunity of already being in the market and averts to hardware manufacturing as well, it may just succeed in it. Finally, this has been one of the most interesting yet sad case studied conducted simply because Nokia has failed to meet all of our expectations.

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