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Multiple Case study: Apple and Samsung in war of the smartphone market

Author

Paal Dybsjord

Supervisor

Dr. Malcolm Clews

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Abstract

One year ago, Samsung was rising high, and Apple and Samsung had more than 100% of the market value as the other manufacture companies were losing profit. However, Apple was facing a reassessment from Wall Street as the company's growth slowed and gross margins slipped compared to pervious years. Additionally, after the release of Apple's new phones iPhone 5c and iPhone 5s, the company was criticised and many felt the company's smartphone innovation had come to an end, as Apple had only focused on incremental up-grades. Today, the story is different and a new phase in the smartphone war is unfolding. Samsung is risking being stuck-in-the-middle between low-cost Android smartphones starting to flood the market, and Apple at the high-end of the market. For now, Apple's strategy betting on the profitable part of the market is paying off and profit margin has bounced back in Q1 2014, also Wall Street has warmed to the willingness of paying back shareholders (Waters, 2014).

By using a dynamic capability perspective, and combining existing theories in the field, this question will be answered by a qualitative method, based on secondary data in a multiple-case design. As long as Apple avoids getting complacent, they most likely will be the once in the lead because their premium price and ecosystem. However, both literature and the cases indicated that innovation is the most crucial aspect for the future and both Apple and Samsung must stay innovative, in order to stay competitive against the Chinese new entrants.

Table of Contents

Abstract.....	i
Chapter 1: Introduction.....	1
1.1 Historical background.....	1
1.1.1 Apple Inc.	1
1.1.2 Samsung Electronics Co., Ltd.	2
1.2 Research question and objectives.....	3
Chapter 2: Literature Review	4
2.1 Introduction.....	4
2.2 Evolution of the concept “strategy”	5
2.2.1 Theoretical approaches to distinctive competences	6
2.2.1.1 The Resource Based View	6
2.2.1.3 Dynamic Capabilities: Integrated approach	8
2.3 The sources of competitive advantage	10
2.3.1 Innovation as a source of competitive advantage.....	10
2.3.1.1 Schumpeter and the historical focus of innovation	10
2.3.2 Disruptive technologies	11
2.3.3 Innovation and its relevance for the future	12
2.3.3.1 Value innovation	14
2.3.4 Technology and R&D as sources of competitive advantage	15
2.3.4.1 From the competence perspective	15
2.3.4.2 From the economical perspective.....	17
2.4 Is it a competitive advantage to be first in the market?.....	18
2.5 Brand as a source of competitive advantage	19
2.5.1 Brand Equity	20
2.6 Conclusion	21
Chapter 3 – Conceptual Framework.....	24
Chapter 4: Research methodology.....	26
4.1 Introduction.....	26
4.2 Research design and rationale	26
4.2.1 Quantitative vs. Qualitative method	26
4.2.1.1 Why Case Study Method?	27
4.2.3 Case selection.....	28

4.2.3.1 Selection of Cases	28
4.3 Data Collection	29
4.3.1 Characteristics of the secondary data	30
4.3.2 Data Sources	30
4.4 Data Analysis Framework	31
4.5 Limitations	31
4.6 Summary	32
Chapter 5: Industry analysis	33
5.1 Introduction	33
5.2 PESTEL Analysis of the smartphone environment	33
5.3 Five Forces analysis	34
5.4 Market Trend	34
Chapter 6: Case of Apple	38
6.1 Market data – Apple	38
6.2 Apple’s strategy	38
6.3 Competences and sources of competitive advantage	40
6.3.1 Strong brand	40
6.3.2 Combination of the strategic alliance and outsourcing strategies	42
6.3.3 The change in the R&D and innovation strategy	44
6.3.4 Apple’s secret weapon	46
6.4 The threats for the future strategy	47
6.4.1 Has Apple lost its edge of innovation?	48
Chapter 7: Case of Samsung	50
7.1 Market data – Samsung	50
7.2 Samsung’s strategy	50
7.3 Competences and sources of competitive advantage	51
7.3.1 Strong brand	51
7.3.2 Vertical integration and strategic alliances	53
7.3.3 R&D and innovation	54
7.3.4 Samsung’s secret weapons	56
7.4 Implications for future strategy	56
Chapter 8: Discussion	58
8.1 Introduction	58
8.2 Strategic differences between Apple and Samsung	58

8.3 Future competition.....	61
8.4 Innovation leading to the future.....	62
8.4.1 The innovation curve: future existence of smartphones.....	62
Chapter 9: Conclusion	64
Chapter 10: Recommendation	66
References	a
Appendices	I
Appendix 1.1 The research objectives for this dissertation:.....	I
Appendix 1.2a: Apple Inc. Stock Exchange History	II
Appendix 1.2b: Detailed historical background Apple	II
Appendix 1.3: iPhone and mobile operation software releases	IV
Appendix 1.4: Strategic alliances formed by Samsung	V
Appendix 1.5: Structure outline.....	VI
Appendix 2.1: Definitions of strategy.....	VII
Appendix 2.2: Barney’s VRIN- criteria with explanation.....	VII
Appendix 2.3: Frameworks illustrating sources of competitive advantage	VIII
Appendix 2.4: Definitions of innovation in historical order	IX
Appendix 2.5: Brand equity factors.....	X
Appendix 2.6: Benefits of strong brand equity.....	X
Appendix 4.1: Relevant Situations for Different Qualitative Research Methods	XI
Appendix 4.2: Summarized profile of the two cases.....	XI
Appendix 4.3: Secondary data characteristics necessary to be fulfilled	XII
Table 4.4: Secondary data types and databases used for this research	XIII
Appendix 4.5: The path you might take in NVivo.....	XIV
Table 5.1: PESTEL analysis for the smartphone environment	XV
Appendix 5.2: Five Forces	XVI
Appendix 5.3: Global Mobile Phones Market Value 2009-2013	XVII
Appendix 5.4a: Vale share, market share and operation margin.....	XVII
Appendix 5.4b: Value share biggest smartphone companies	XVII
Appendix 5.5: Market share by shipment.....	XVIII
Appendix 6.1: Apple’s unit sales by product FY2013.....	XIX
Appendix 6.2: Apple’s key financials	XIX
Appendix 7.1: Key financials for Samsung.....	XIX
Appendix 7.2: Sample of Samsung’s subsidiaries	XX

Appendix 7.3: Samsung's alliance network (2008-2009)	XX
Appendix 8.1a: Evaluation of Apple's CA, using VRIN-criteria	XXI
Appendix 8.1b: Evaluation of Samsung's CA, using VRIN-criteria.....	XXII
Appendix 8.2: Worldwide Smartphone Vendor Market Share.....	XXIII
Appendix 8.3a: projector phone	XXIII
Appendix 8.3b: Wrist phone.....	XXIII
Appendix 8.4: Global Trillion Million Industries	XXIV

Chapter 1: Introduction

This chapter will give a short overview of the dissertation, starting by setting the research topic with research the historical background of the companies (section 1.1), followed by an introduction of the objectives and question (section 1.2). The methodology will be discussed in more detail in chapter 4. Additionally, Appendix 1.5 provides a structure outline.

1.1 Historical background

This section is used for setting the research question by introducing some history aspects from the two companies: Apple and Samsung and to give an overview of the industry.

1.1.1 Apple Inc.

The history of Apple and Steve Jobs is by now according to Fortune “one of the most remarkable stories in business” (Elkind & Burke, 2008, p. 88). However, this section will focus on technology and innovation, strategic changes, and synergies regarding competitive advantages in the smartphone industry. To visualise this, Appendix 1.2a illustrates Apple’s stock history, which will be used to highlight some key events for the company over the years, which arguably has led them to the smartphone industry (for full overview, see Appendix 1.2b). This historical perspective is important for several reasons: First, innovation and knowledge are accumulated over time. Second, firms are path-dependant and current strategies and technological change will normally be determined by past strategic decisions. This section will quickly look at Apple from 2005-2010 based on Appendix 1.2a:

During the period between 2005-2007, Apple doubled the shares roughly 13 times the value, from 6 USD to sky-high 80 USD. This trend has proved positive to date, with the exception of the financial crisis where most companies lost significant value in their shares. Especially important from this period is the company’s strategic change in 2007, when they changed the name to Apple Inc. This name-change represented a change in strategy to an increased focus on consumer electronics market (MarketLine, 2014). 2007, is the year Apple released its revolutionary product, iPhone: a smartphone combining phone, music player and internet device in one single handheld product,

based on Apple's iOS Multi-Touch operating system. It uses Apple's iTunes Store, App Store and iBooks Store to purchase and organize the content and is compatible both for Mac and Windows PC (Elkind & Burke, 2008). Additionally, iPhone allows customers to access a variety of digital content and applications (Apple Inc, 2013). Moreover, Appendix 1.2a, shows a steady increase from 2007 till 2014, indicating a significant importance of iPhone for Apple. Additionally, Appendix 1.3 illustrates how the iPhone has been upgraded during the years together with the software release for the operation system used in the device, indicating Apple's incremental innovations after its radical innovation when first introducing the iPhone (this will be further addressed in analysis, section 6.4).

1.1.2 Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. (from now on referred to as Samsung), is part of Samsung Group, and a global information technology company engaged in the manufacture and distribution of consumer products. In addition, the company is one of the leading consumer electronic brands in the world. Compared to Apple, Samsung is more diversified as their products range from TVs, smartphones, and tablets to refrigerators and washing machines. Additionally, the company operates through more than 200 subsidiaries around the world (MarketLine, 2014a). Today, Samsung operates through three business units: IT and mobile communication (IM), consumer electronics (CE), and device solutions (DS). The IM segment includes the company's mobile communications, networks, and digital imaging business. The segment specialises in manufacture and sale of mobile phones, such as smartphones.

Samsung began its operation as a manufacturing company of black and white TV's, in 1969 in Korea, however, the history reveals significant strategic changes during the years, much as a consequence of forming new strategic alliances. Appendix 1.4 summarises Samsung's alliance history, only taken alliances interlinked with smartphone into consideration.

These alliances have made Samsung a giant in the smartphone industry and illustrate the importance of synergies from other research departments (e.g. Samsung launched an environmentally friendly mobile phone, Samsung Blue Earth, in 2009, the same year they collaborated with Microsoft on efficient energy usage in computers). In addition,

Samsung has synergies¹ from companies within the Samsung Group, such as the merger between Samsung and Samsung Digital Imaging in 2009. This again can have been useful in the introduction of Galaxy K Zoom, a new camera specialized smartphone. As Appendix 1.4 shows, Samsung has increasingly globalised its activities and electronics. In particular, Samsung has been very successful in the mobile phone industry, as this has become its most important source of income (Samsung Electronics, 2014).

1.2 Research question and objectives

Based on the historical background, the research question will consider *“how did Samsung become the market leader of the smartphone industry, taken the throne from Apple, and how can this be prevented in the future?”* To answer this research question, the literature review laid the foundation for the objectives that needs to be answered (See Appendix 1.1). Furthermore, based on the analysis and literature review, the dissertation will provide recommendations to Samsung and Apple to remain the leaders of the smartphone industry.

The objectives will be addressed by conducting a multiple case study, comparing Apple and Samsung, in terms of identifying drivers of competitive advantages they have developed and then consider which of these will be most valuable in the future based on new competition arising fast (for more details see chapter 3 and 4). Appendix 1.5 presents a structure outline.

¹ Here synergies include both complementary resources and knowledge sharing as well as the joint R&D centre, even though the latter is divided into separate divisions where Samsung Electronics is in command of the smartphone market.

Chapter 2: Literature Review

“The literature review is not meant to determine the answers about what is known on a topic; in contrast review of previous research is meant to develop sharper and more insightful questions about the topic” (Yin, 2014)

2.1 Introduction

The aim of this chapter is to justify the research question, demonstrate its importance and justify the assertion that it is a novel question that has not been addressed before. Additionally, the theoretical context for the present research will be presented and used to create a conceptual framework (chapter 3). The literature will discuss the market-based view (MBV) versus the resource-based view (RBV). Furthermore, sources of competitive advantage (CA) will be discussed (section 2.3). Moreover, section 2.5 will discuss brand equity and customer satisfaction, which is seen from a MBV, thereby linking the literature review to a dynamic perspective (section 2.2.1.3). This perspective will be critical to the analysis and the uniqueness of the dissertation.

Additionally, the chapter is dedicated to identifying gaps in this literature, which are insufficiently covered by existing academic publications, and will particularly examine the theoretical gaps and lack of empirical evidence for the following lines of the research argument: (i) how a company can achieve *sustainable competitive advantage*, (ii) which strategic perspective, RBV or MBV, provides a more complete rationale for the firm’s strategic actions, and (iii) whether a strong brand gives an edge over its competitors and if this can lead to a competitive advantage.

2.2 Evolution of the concept “strategy”

There is a general agreement in the literature that every company needs a strategy to be successful, however, there is little agreement as to what strategy really is (Markides C., 2001). Afuah (2009) suggests that one reason for the multiple definitions is that strategy is about winning, “and since what it takes to win in business has evolved over the years, the definition of strategy has also evolved” (Afuah, 2009, p. 28). Appendix 2.1 illustrates the definitions of strategy suggested by admired researchers in the field.

In the late 1970’s to early 1980’s the main focus was on strategy as position, much because of Porter’s influential work on the forces that determine the competition level within an industry, hence the attractiveness of the market (Porter, 1980). In his seminal work, Porter argued that firm’s profitability was determined by the characteristics of the industry and the firms positioned within it, hence, these should determine the strategy. In recent times, the core focus on strategy shifted towards the capabilities and core competences, mostly following Prahalad and Hamel’s (1990) work on the core competences of the firm and the contribution of the widespread resource-based perspective (Barney, 1991).

Porter’s (1996) more recent contribution incorporated the novel insights from the competence and RBV and discusses whether or not positioning remains the heart of strategy, even for today’s dynamic markets and rapidly changing technologies. Porter’s arguments are critically addressed to the new belief that rivals can quickly copy any market position, and that competitive advantage is only temporary (ibid.), which is in contrast to the RBV and will be further addressed in section 2.2.1.

Furthermore, Porter’s three generic strategies are a useful tool to characterise strategic positions at a simple level (Porter, 1985; Porter, 1996). According to him, there are two basic types of competitive advantage within strategy that a firm can possess: *low cost* or *differentiation* (Porter, 1985). Each of the generic strategies (cost leadership, differentiation and focus) involves a different route to competitive advantage, depending on the scope of the strategic target in the industry that competitive advantage is to be and the competitive advantage sought (ibid.).

Additionally, Porter points out that a firm must avoid getting *stuck in the middle* as this possesses no competitive advantage, and happens most often where companies are

unwilling to make choices of how to compete, or compromise their generic strategy for growth or prestige (Porter, 1985).

Nevertheless, the bottom line of strategy is that firms have to generate income if they want to stay in business over a longer period, that is “...inside a business there are no profit centers. Profit comes only from the outside.” (Drucker, 2007, p. 34). Drucker (2007) sees the customer as the only source of income and argues that a company does not earn profit before a customer pays. This is in line with Afuah’s (2009) definition of strategy and will be used in this dissertation as revenues come from customers who pay for what they perceive as valuable to them, and if these customers are to keep going to one firm instead of its competitors, the firm has to create unique value for the customer. Afuah (2009) argues that winning or making money in business is about creating appropriate value, and because he sees the essential definition of strategy as winning, Afuah defines business strategy as “the set of activities that a firm performs to create and appropriate value” (Afuah, 2009, p. 29), and this definition fits well with the aim of this dissertation’s investigation looked from a dynamic view (next sections).

2.2.1 Theoretical approaches to distinctive competences

In more recent times, the field of strategy has changed the focus towards strategic management. According to Teece et.al. (1997), “the fundamental question in the field of strategic management is how firms achieve and sustain competitive advantage” (Teece, Pisano, & Shuen, 1997, p. 509).

This section will contrast the RBV and the MBV, as the literature review of strategic management indicates these two perspectives as the most commonly used to explain why some firms perform in a superior manner (Makhija, 2003; Costanzo, Keasey, & Short, 2003).

2.2.1.1 The Resource Based View

Wernerfelt (1984) is one of the first to influence the RBV and apart from some exceptions, the subject has been given relatively little attention. Wernerfelt’s (1984) study explores the usefulness of analysing firms from the RBV rather than product side and argues that for the firm, resources and products are two sides of the same coin (Wernerfelt, 1984). This contradicts the more traditional concept of strategy in terms of the resource positioning: strengths and weaknesses of the firm (ibid.). Wernerfelt

(1984) looks specifically at the relationship between profitability and resources and ways to manage the firm's resource position over time, and defines firm's resources as "anything that could be a strength or weakness for the organisation" (Wernerfelt, 1984, p. 172), such as: brand names, in-house knowledge of technology, skilled personnel, and capital (ibid.).

The RBV of the firm in later years has advanced the Wernerfelt's notion, assuming that relatively immobile, firm-specific resources and capabilities provide the basis of competitive advantage and superior firm performance (Barney, 1991; Peteraf, 1993; Conner, 1991). The resource-based approach to strategic management focuses on difficult-to-imitate attributes of the firm as sources of economic rents and therefore the drivers of performance and competitive advantage (Conner, 1991).

Barney (1991) developed a theoretical model in order to understand sources of sustained competitive advantage, where he contradicts the traditional attempt to describe the environmental conditions, such as Porter's (1980) five forces model. Barney's contribution substitutes two assumptions from the more conventional thinking in analysing sources of competitive advantage: first, the RBV model assumes that firms within an industry might be heterogeneous when it comes to the strategic resources they control. Second, heterogeneity can be long lasting, because of the assumption that these resources may be mobile across firms (Barney, 1991). Both assumptions justify alliance cooperation between other firms, which seems to be a basis for both Apple and Samsung's success in manufacture of smartphones, as different firms have different resources and these resources can be mobile and exchanged.

"A firm is said to have sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any other current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy" (Barney, 1991, p. 102).

Barney's (1991) definition is not only assumed to include all of a company's current competitors, but also potential competition ready to enter an industry in the future. In Barney's theoretical model built to understand sources of sustained competitive advantage, often referred to as the "VRIN-criteria model", Barney identifies four attributes necessary for a firm to possess in order to have the potential of sustained

competitive advantage (Appendix 2.3). All of the attributes must be present, starting with being valuable in order to be considered a resource. Additionally, firm attributes need to have other characteristics such as rareness, inimitability and non-sustainability, from the resource-based model. The foundation of the RBV lies on the assumption that competitive advantage originates at the firm as opposed to the industry level (Barney, 1991). According to the RBV theory, firms with superior capabilities that are valuable and rare should take advantage of these capabilities in as many areas as possible to maximise returns (e.g. Conner 1991, Peteraf 1993, Wernerfelt 1984).

It is important to note that the concept of *sustained* in Barney's sense, does not refer to the period of calendar time suggested by researchers like Porter (1985). By contrast, it depends upon the possibility of competitive duplication: the inability of current and potential competitors to duplicate that strategy is what makes a competitive advantage sustained (Barney, 1991). Hence, it does not imply that a sustained competitive advantage will last forever.

2.2.1.3 Dynamic Capabilities: Integrated approach

Barney (1991) admits that external shocks such as innovation, marketing, brand and change in economic environment, are an important reason explaining why it is difficult to keep the source valuable and thereby have the potential of being a competitive advantage. Thus indicating that the market is an important factor, which should not be left unfocused. Teece et al. (1997) confronts the question of sustainable competitive advantage (SCA), by developing the dynamic capabilities approach used to analyse the sources of wealth creation and capture by firms, an approach suggested to be especially relevant in a "Schumpeterian world" where there is innovation-based competition, price/performance rivalry, increasing returns, and the "creative destruction" of existing competences (addressed in section 2.3.1.1) (Teece, Pisano, & Shuen, 1997). This is absolutely the case for the smartphone industry as innovation clearly has a huge impact on the competition and creative destruction is, as already mentioned, what happened to Apple when they first introduced the iPhone.

Teece et al. (1997) suggest that the source of competitive advantage originates from three main theories, or paradigms: competitive forces, strategic conflict, and RBV (illustrated in table 2.3). Based on these, they developed a fourth paradigm for the global competitive battles in high-technological industries. Additionally, Teece et al.

(1997) stress that complex problems are likely to benefit from insights obtained from all of the paradigms in Appendix 2.3, and that an appropriate framework should be chosen for the problem at hand (Teece, Pisano, & Shuen, 1997).

This dynamic approach is seen by many as a contrast to the RBV, and especially Barney's VRIN-framework (Barney, Wright, & Ketchen, 2001). Many argue that competitive advantages can only exist in dynamic markets because of firms' ability to change, learn, innovate, and create a good brand reputation and that SCA are not possible in these markets because they evolve too quickly (Fiol, 2001). Ten years after the 1991-article, Barney et al. (2001) argues that the logic from that article applies to rapidly changing markets and dynamic capabilities as it does to stable markets, resources and capabilities. Furthermore, there is an agreement that some firms are more able to change quickly and more alert to changing conditions, thus they will be able to adapt to changing market conditions such as new technology and product innovation, fiercer competitiveness, and economic change more rapidly than competitors, and gain competitive advantage, which will last as long as the competitive environment continues to change rapidly (Barney, Wright, & Ketchen, 2001). More broadly, the value of a particular set of capabilities must be evaluated in the market context in which the firm is operating, and is consistent with the traditional RBV logic (ibid.).

The recent literature recognises the need for more balance between the two extreme positions of MBV and RBV theories (Mintzberg, Ahlstrand, & Lampel, 1998). Costanzo et al. (2003) identify two different reasons for this need: on one hand, the economic environment has become unstable, and it is arguable that the traditional process used for strategy formulation is not flexible enough to handle rapidly changing economic environment driven by technological change. On the other hand, the excessive focus on the internal resources of the firm seems to be insufficient in the unstable and changing environment. It is a one-side approach, which is in danger of over-emphasising internal analysis to the extent of abandoning the consequences that the rapidly changing environment poses for the organisation (ibid.). Nevertheless, organisations need to continually develop their core competences in order to adapt to change, but it is evident that the analysis of the environment is of vital importance for the organisation to know how to adapt (ibid.).

Thus, new perspectives on strategic management suggest that negative aspects of the RBV can be compensated, by implementing market-based theories (Costanzo, Keasey, & Short, 2003). Focusing only on the core capabilities can leave the company unfocussed on the future, and too much focus on the competitors can result in a lack of focus on current capabilities (Hamilton, Eskin, & Michaels, 1998). Research conducted by Rich (1999) underlines that successful innovative companies are those able to shape a new market situation by changing the rules of their own industry, and the way that a new market space can be created and the rules of an industry rewritten depends on the strategic approach to innovation (Costanzo, Keasey, & Short, 2003). These arguments point to the need of the dynamic capabilities view, as well as need of innovation as a way to compete in this dynamic world where a company must consider both the market perspective and its own resources and capabilities.

2.3 The sources of competitive advantage

2.3.1 Innovation as a source of competitive advantage

The smartphone industry is definitely based on product improvement, radical changes due to innovation within firms and the adaption of this innovation to other firms. Abundant research has emerged over the last three decades in the area of strategy and innovation (Mintzberg et al., 1998; Schlegelmilch et al., 2003) and they have both been acknowledged as crucial factors to create and maintain tangible and intangible assets leading to sustainable competitive advantage (Hamel, 1996; Christensen, 1997; Markides C., 1997; Markides C., 1998; Markides C., 1999). The field of innovation is not new, but is seen as a modern term due to the increase of its use in modern times arising with the rapidly moving high-tech firms. This has resulted in many different views on innovation, with an increasing number of scientists doing research on the topic (see Appendix 2.4 for definitions). However, process and product innovation are widely regarded as a critical source of competitive advantage in an increasingly changing environment (Tushman & O'Reilly III, 1996; Dess & Picken, 2000; Mone, McKinley, & Barker III, 1998), and are arguably the only source of SCA (Morris, 2013).

2.3.1.1 Schumpeter and the historical focus of innovation

Schumpeter was one of the first to provide awareness to the subject of innovation and has leaded the way. Schumpeter (1934) claims that economic growth is run by

innovation through a dynamic process, referred to as "creative disruption", where new combinations substitutes old.

Moreover, Schumpeter (1942) sees technical knowledge as an important aspect and as highly specific to individual firms, as innovation comes from in-house technological competencies in *heterogeneous* firms. Another point Schumpeter includes in the new book was that *radical innovation* often consists of several *incremental innovations* (Malerba, Orsenigo, & Peretto, 1997). Nevertheless, Schumpeter did not explain how innovation occurs, nor did he study the factors that lead to innovation (Godin, 2006). Appendix 2.4 illustrates the historical change of how innovation is defined.

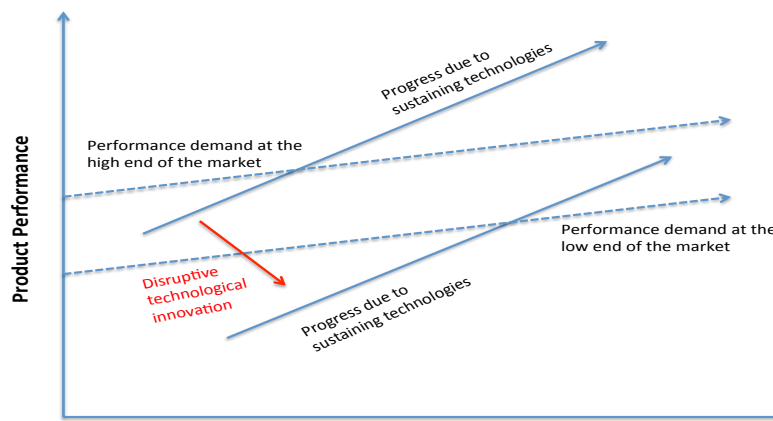
The changes in these definitions are certainly influenced by the effect of new focus in the environment, which is a result of increased competition, changes in market environment, and the dynamic change in technology. Innovation was, in the beginning, clearly focused on the implementation of ideas to commercial use in the innovation process; it has changed to be more success oriented and corporate survival, radical innovations, and competitive advantage have become the new focus of innovation, indicating a switch towards a focus on product innovation.

2.3.2 Disruptive technologies

Christensen's (1997) theory is in contrast to radical and incremental innovation, as he argues that most new technologies encourage improved product performance - referred to as *sustaining technologies*. These technologies can be radical or incremental, however, occasionally *disruptive technologies* emerge: technology resulting in worse product performance, at least in short-term. Disruptive technology predicated the leading firm's failure in every example of Christensen's book (1997)². Generally, disruptive technologies underperform established products in mainstream markets, but are typically cheaper, simpler and smaller, thus often more convenient to use. According to Christensen (1997), a second element of failure is that technologies can progress faster than market demand by giving customers more than they are willing to pay, as shown in figure 2.2.

² The research emerged from interviews with more than 80 managers within the disk drive industry.

Figure 2.2: Performance of Disruptive Innovations



Source: Created by author, based on the Figure 1.1 (Christensen, 1997, p. xvi)

In a more recent book, Christensen and Raynor (2003) extend the concept of disruptive technology and explain *new-market disruption* as a competition with “nonconsumption” because new-market disruptive products enable a whole new population of people to start owning and using the product. Because these disruptions compete against nonconsumption, the current leaders feel little threat until the disruption is in its final stage (Christensen & Raynor, 2003). Trott (2005) criticises other studies of innovation that treat it as an artefact, detached from knowledge and skills, and indicates that innovation needs to be viewed in an organizational context. Like the RBV perspective, he also identifies individuals as a key component of the innovation process (ibid.). Moreover, he points out that firms do not operate in a vacuum, but work together in some areas and compete in others, in order to get an advantage over competitors (ibid.), further discussed in section 2.3.4.

2.3.3 Innovation and its relevance for the future

Strategy and innovation have been given much attention in terms of CA. However, the focus within this field has been aimed either at innovation (including new product development) or strategy, and has therefore been developed as two separate groups of thought (Adler, McDonald, & MacDonald, 1992; Englund & Graham, 1999). It is only in recent years that researchers have begun to challenge the traditional thought and combined innovation and corporate strategy (Krinsky & Jenkins, 1997), much because of the new dynamic environment with fierce competition and rapidly changing technology, resulting in more focus on innovation. The most common name for this combination is “*strategic innovation*” (Afuah, 2009; Schlegelmilch, Diamantopoulos, &

Kreuz, 2003; Geroski, 1998). However, as discussed below, Kim and Mauborgne (1997) refer to a strategic innovation called “*value innovation*”.

The literature shows a trend towards an increasing importance of innovation in the future (e.g. Keupp et al. 2012, Morris 2013, Kim & Mauborgne 2004). The common argument of these authors is the relation between future changes and innovation, because they see the ability to innovate as the solution to overcome and triumph over future fundamental changes. Trott (2005) supports this view and suggests that firm’s ability to change and adapt is essential to the corporation’s survival, since “businesses operate with the knowledge that their competitors will inevitably come to the market with a product that changes the basis of competition.” (Trott, 2005, p. 5).

These fundamental changes affect companies settled in the past with growing markets and stable conditions; these companies end up in a dynamic, unpredictable, and complex business environment (Bader, 2006). In other words, today’s advantage might not be lasting forever and changes in the market make it difficult to be in advance. According to Morris (2013), innovation is the only solution to this problem, as it is the only source of SCA. However, to achieve this, companies must break out of the competitive trap: as companies try to outdo each other, they end up competing on the basis of minor incremental improvements (Kim & Mauborgne, 1999). Kim and Mauborgne (1997) examined why some companies achieve sustained high performance in both revenues and profit while others do not. After a five-year study of successful companies and their less successful competitors³, they found that the answer was in the way each group approached strategy: “the less successful companies took a conventional approach; their strategic thinking was dominated by the idea of staying ahead of the competition. In stark contrast, the high-growth companies paid little attention to matching or beating their rivals.” (Kim & Mauborgne, 1997, p. 103). This idea of making competitors irrelevant through strategic logic is what Kim and Mauborgne (1997) call “*value innovation*”⁴.

³ The study was based on more than 30 companies in over 30 industries and interviews of hundreds of managers, analysts, and researchers (Kim & Mauborgne, 1997)

⁴ Regardless of size, years of operation, industry conditions, and country of origin the strategy the high-growth companies pursued was “*value innovation*” (Kim & Mauborgne, 1999)

2.3.3.1 Value innovation

As the environment has been more dynamic with more competition, given rise to innovation, it is likely that the future will continue to focus on innovation, and in the smartphone industry, it seems like product innovation will continue to be an essential factor for achieving competitive advantage. As the literature pointed out the importance of radical innovation and creating value, this will be the goal for all the companies within the smartphone sector.

Value innovation pursues innovation outside a conventional context, as it is not about pursuing innovation as technology, but as value (Kim & Mauborgne, 1999). The theory is consistent with much of Barney's (1991) VRIN criteria, when it comes to intangible capabilities, and Kim and Mauborgne (1999) emphasise knowledge as a wealth creating potential. However, this "knowledge economy" has two consequences: it creates the potential for increasing return, but also for *free-riding*, meaning that once ideas are "out there", knowledge naturally spills over to other firms. This is a lack of excludability, which can be decreased in some sense by patents and formal legal protection, but is not possible for capabilities (ibid.). Value innovation also challenges Porter's (1980) idea about generic strategies and that to be successful the company must follow either low-cost or differentiation strategy in a broad or niche scope, as value innovation does not differentiate between the two and argues that innovation can be a sustainable strategy and often the best strategy pursue a low-cost and differentiation simultaneously.

This is in line with the new strategic management perspective discussed in the previous sub-chapter, as value innovation arguably include both RBV and MBV: from a point of view, value innovation has its starting point in the RBV, as it focuses on the ability of the company to look internally and develop new ideas over the analysis of the industry structure. However, it goes beyond this view, as the company needs to find new market positioning across the traditional dimensions of strategies. This balance between inside-out aspects of strategic focus results in "quantum leap in buyer value" (Kim & Mauborgne, 1997, p. 107).

2.3.4 Technology and R&D as sources of competitive advantage

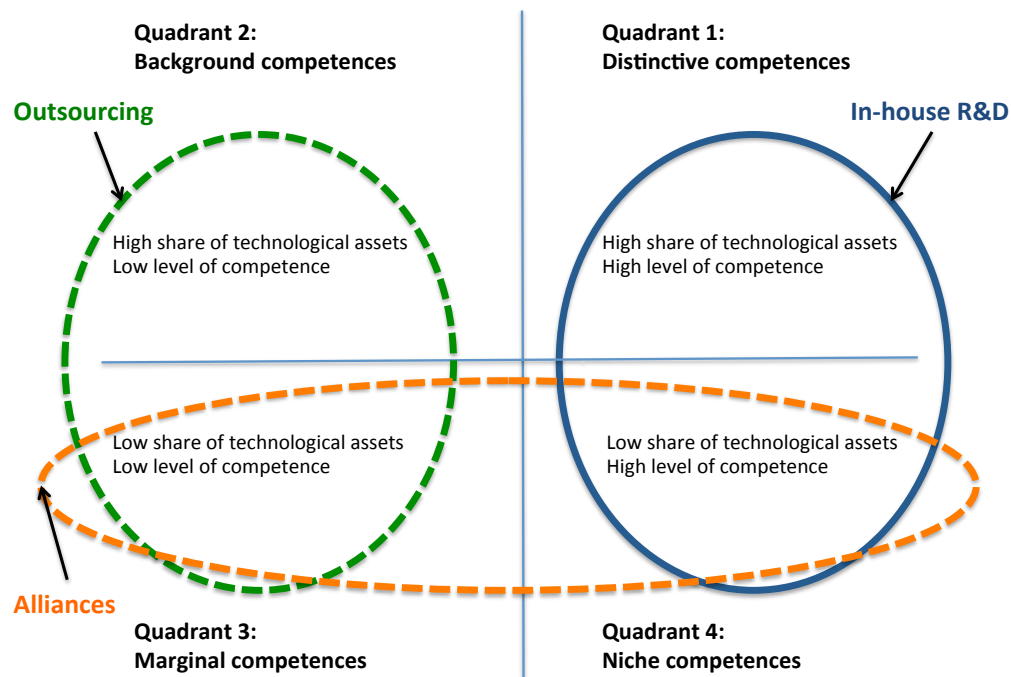
The decision between internal and external R&D for international businesses is related to the choice between performing a value creation activity within the firm (vertical integration) and purchasing from suppliers (outsourcing). This decision can be seen from an economical perspective, or competences. The economic view started with Coase (1937), who argued that the company's boundaries also depend on the costs of transacting business and that the internal or external R&D decision depends on the relative costs of internal versus external exchange. Furthermore, the transaction cost (TC) theory (Williamson, 1985) considers the key roles of incomplete contracts, *hold-up problem*, and *asset specificity* in make-or-buy decision (section 2.3.4.2).

2.3.4.1 From the competence perspective

From competences perspective, in-house R&D is an advantage because the business is the sole owner of the created know-how. However, over the last decade, much evidence suggests that firms no longer rely exclusively on their internal R&D activities to maintain their technological competitiveness, much due to the tacit nature of innovation and the risks associated with loss of technological competitiveness (Narula, 2001). Hence, technology is an important factor in firm's internal or external R&D activity (Alla & Van Biesebroeck, 2008).

In technology intensive industries, such as the smartphones', there is a growing need for firms to have multiple technological competences (Narula, 2001).

Figure 2.3: The relationship between distributed competences and internal/external R&D



Source: Created by author, based on Figure 1 and 2 from (Narula, 2001, pp. 370-371)

Not all activities are equally crucial to the competitiveness of the firm; hence, figure 2.3 proposes four types of core and complementary technology competences. The *distinctive* competences of the firm command a high share of technical resources and thus form the core of the firm. Furthermore, a company possesses technologies at some level of expertise, which are small in terms of resources they command, referred to as *niche* competences, and are generally complementary to their distinctive competencies. *Marginal* competences are technologies that were important to the firm in the past, or expected to become important in the future. Limited resources are invested in these technologies, and the firm does not have any distinct technological advantage. Finally, *background* competences enable the firm to benefit from technological change and are essential to its competitiveness. Moreover, these competences are important for the firm's ability to efficiently make use of its other, more crucial, competences (Narula, 2001). Additionally, the choice between in-house R&D, alliance and outsourcing relates to these four technology competences (Figure 2.3).

All things being equal, companies will prefer to undertake innovation activities in their distinctive competences (quadrant 1) through in-house R&D, especially if they have niche competences. Outsourcing is primarily used in the area of background

competences (quadrant 2). Nonetheless, the strategic importance of marginal and niche competences determines whether they can be externalized, which depends on the extent to which the technology is tacit, to what extent collaboration is required in order to use it and to whether the partners' activities need to be monitored (Narula, 2001).

2.3.4.2 From the economical perspective

Making a product in-house can lower costs if the firm is more efficient at the production than other companies. Production costs savings can also increase, since vertical integration makes planning, coordination and scheduling easier (Chandler, 1977). The impact of these costs (e.g. search costs, coordination costs, and exchange costs) will vary with location and degree of control involved, but many of these costs will increase with outsourcing.

Asset specificity and reducing TCs (Williamson, 1985) are another reason to produce in-house, caused by the lack of trust between a manufacturer and supplier and a potential hold-up problem: protection of product technology. If a firm can produce a product with superior features, like innovative technology, this can give the firm a competitive advantage. If the production is outsourced it creates a risk that the suppliers will make use of the technology for their own firm or sell it to a competitor. Hence, as technological innovation, for the use in product development, is asset specificity, which is best accomplished by producing in-house supported by empirical evidence (e.g. Williamson, 1985; Poppo & Zenger, 1998; Carter & Hodgson, 2006).

On the other hand, a company can benefit from outsourcing some parts of the required technology (e.g. Alla & Van Biesebroeck, 2008; Mol, 2005). At the moment, with rapidly changing technology, outsourcing is said to be the best alternative, as the risk and cost associated with the normally high investments, will then no longer be sunk costs for the company. Outsourcing enables the firm to contract out or buy whole technological components from supplying firms using the latest technology. Additionally, the company avoids investing more money in new in-house technology that may expire before the product is ready to be launched.

However, several scholars have contributed to the reasoning of inter organisational collaboration of firms and highlight the need of firms to access tangible and intangible resources (Pfeffer & Nowak, 1976; Oliver, 1990; Barney, 1991). In today's society even

the largest companies cannot rely solely on in-house R&D; they need knowledge exceeding their own division when developing product innovations (Arora & Cambardella, 1990; Cockburn & Henderson, 1998; Rigby & Zook, 2002).

Furthermore, empirical research suggests that in-house R&D and external know-how are complementary (e.g. Arora & Cambardella, 1990; Freeman, 1991; Veugelers, 1997; Dyer and Singh, 1998; Rigby & Zook, 2002). Moreover, Rigby and Zook's (2002) case studies indicate that the ability to combine internal and external knowledge sourcing is a critical new source of competitive advantage, explaining why both Apple and Samsung are eager to form strategic alliances.

The benefits of making technology in-house seem to be greatest when highly asset specificity is involved, when vertical integration is necessary for protecting proprietary technology and preventing hold-up problem, or when the firm is more efficient than external suppliers. Therefore, it can be argued that, in the smartphone market where technology and innovation involve highly asset specificity, but where technology change rapidly, both buy and make are the best alternative.

2.4 Is it a competitive advantage to be first in the market?

Many studies point to the direction of first-movers achieving long-term competitive advantage (Kerin, Varadarajan, & Peterson, 1992). Barney (1991) also discussed the first-mover advantage, and suggested that in order for there to be a first-mover advantage, "firms in an industry must be heterogeneous in terms of resources they control" (Barney, 1991, p. 104). From a RBV, Wernerfelt (1984) argues that being first to get hold of resources negatively affects the cost or revenue of a later competitor. The first-mover enjoys the protection of a resource position barrier, and "What a firm wants is to create a situation where its own resource position directly or indirectly makes it more difficult for others to catch up." (Wernerfelt, 1984, p. 173). Kerin et.al (1992) demonstrate, with theoretical and empirical evidence that a head start alone does not give cost and differentiation advantages over later rivals. However, Von Hippel (1984) indicates that the first-mover can benefit in two ways: (1) being the only one (monopolist) gives the opportunity to gain higher profits or increase the total market share. (2) When competitors are in the market, the first-mover has established market position and *learning curve* economies, which give a higher probability of remaining a dominant market share and higher margins (Kerin, Varadarajan, &

Peterson, 1992). In contrast, Markides and Geroski (2004) argue for being a fast second, especially for radical innovations. They classify mobile phones in the category of new markets created through radical innovation: because of the major effect on consumer habits and behaviour, in addition to, that the market they create undermine the competences and complementary assets on which existing competitors have built their success (Markides & Geroski, 2004). They emphasises, that in these markets, the "first movers" are not first in the market, but first to the market that counts: the mass market. Additionally they point out that "first mover advantage" is an inaccurate term, that they refer to as consolidators' activities: entering at the right time, standardising the product, cutting prices, creating distribution networks, segmenting and investing in the market– are the activities that create buyer loyalty, go down the learning curve, create brands and reputation and enjoy economies of scale benefits – all of which give them advantages that potential new entrants do not have (Markides & Geroski, 2004).

2.5 Brand as a source of competitive advantage

Brands have a central position in today's society because of stronger competition as a result of the increasing globalization. Hence, the importance of creating something special that can differentiate the company has increased, and is necessary for achieving a good position in the market. To create a brand takes time, as relations in the customers mind must be linked to the brand in order to achieve loyalty. In recent years, there has been a change in marketing, essentially due to the fact that loyalty creates profitability. Aaker (1991) argues that brands are a name, term, sign, symbol, design, or a combination of these used to (1) identify the goods and services offered by a company or group of companies, and (2) to differentiate them from goods and services provided by others. The brand signals to customers the origination of the product, and protects both the customer and the manufacturer against competitors who would like to produce identical products.

The field of consumer behaviour has been given huge focus by researchers and Kotler and Keller (2012) suggest that accepting consumer behaviour has a direct impact on the overall performance of the business. A brand's reputation has been shown to influence consumer behavioural intentions (Oh, 2000), consumer loyalty (Selnes, 1993) and consumer decision making process in general (Dubé & Renaghan, 2000). The appearance of the RBV provides the rational for linking brands and brand management

to developing a sustained competitive advantage. Brand definitely has a potential, within the RBV, to enable the achievement and provisions of superior performance, and strong brands are consistent with the VRIN-criteria suggested by Barney (1991) for identifying rent-generating resources and capabilities.

2.5.1 Brand Equity

Even though the literature is inconclusive on the field of brand equity, there seems to be mainly two perspectives. Some scholars focus on the financial part of brand equity (Farquhar, Han, & Yuji, 1991), while others focus on the customer based perspective (e.g. Aaker 1991, Keller 1993). Most of the theory belongs in the latter group, assuming that the power of brands lies with the customers. Keller and Aaker, are often credited the founders of consumer-based brand equity research, however their brand equity definitions are slightly different:

“the differential effect of brand knowledge on consumer response to the marketing of the brand” (Keller , 1993, p. 2)

“a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm’s customers.” (Aaker, 1991, p. 15)

Keller (1993) argues that consumer-based brand equity occurs when the consumer has an exceptional brand association in memory, which leads the customer to select a product of a particular brand rather than a similar product of another, or no, brand. Hence, Keller (1993) views brand equity in terms of the uniqueness of brand associations. However, it is not enough that a brand has many strong and positive associations, as the customer has several competitive brands to choose from. Thus, it is important that associations are perceived as unique to each brand, in order to differentiate itself from other similar brands. For the companies Apple and Samsung in the smartphone industry, they both have an unique position, and part of their marketing to achieve high brand association in this market results from the names they give their products. Apple consistently calls all products with the letter "i" including their iPhone, whereas Samsung classifies its products on the basis of features and gives all the versions in the same group the same name (e.g. Galaxy,S, Zoom, Active). These names are by most, automatically associated with the brands Apple and Samsung, giving their mobile brands strong brand association.

Aaker (1991) identifies four main assets that add value to the firm's consumers, which have been widely accepted and used by numerous academics (e.g. Yoo et al., 2000; Kim et al., 2003; Pappu et al., 2005; Kim and Hyun, 2011), illustrated in Appendix 2.5.

Brand equity is also argued to reflect customers' willingness to pay a premium price for a brand compared to another brand (Lassar, Mittal, & Sharma, 1995). Furthermore, it makes consumers less sensitive to price increases (Hoeffler & Keller, 2003). Moreover, researchers are now indicating that the assets identified by Aaker (1991) are interlinked and that loyalty is an outcome of brand equity itself and is likely to influence customers' willingness to repurchase, and stay loyal to one brand. As a result, (Yoo, Donthu, & Lee, 2000) conclude that brand loyalty is the main component of brand's value, and that strong association leads to higher brand loyalty. Hence, this is an important aspect with a potential of competitive advantage in the smartphone industry. Appendix 2.6 summarises some of the benefits associated with strong brand equity.

2.6 Conclusion

The literature review above identifies key drivers to be used in the further analysis, in order to answer the stated research question, pointing out product innovation, strategic capabilities, strategic alliances, and brand equity as the most important drivers for a company to sustain competitive advantage. Having identified the drivers linked to objective 1, the research question has evolved into another objective that must be discussed; *will the smartphone even exit in the future?* Looking back on the history of the phone industry, the last 30 years have shown many radical changes, which lead to the argument that this might continue over the next 10 years, especially now in the rapidly changing technological environment.

Johnson et. al., (2011) suggest that "*strategic capabilities* is the capabilities of an organisation that contributes to its long-term survival or competitive advantage." (Johnson, Whittington, & Scholes, 2011, p. 84). Porter (1985) supports this view of long-term sustainable advantage. There is however a debate, and a gap in the literature, whether it is in principle possible to sustain competitive advantage over the long-term. For instance, Grant (1991) argues that over the long-term, competitive advantages are diminished not only through the depreciation of the firm's advantage and capabilities but also through imitation by rivals. Other factors, such as entry,

technological change, and introduction of substitutes, will weaken almost all competitive advantages (Wiggins, 1997). However, Teece et. al. (1997) confronted the question of how companies can achieve and sustain competitive advantage with the *dynamic capabilities approach*. This approach is a technique to take advantage of existing internal and external firm-specific capabilities to address changing environments, by using research on areas such as R&D management, technological transfer, and human resources, and is therefore an integrated view that also includes the two contradicting theories; RBV and MBV. Additionally, they see dynamic capabilities as a reflection of an organisation's ability to achieve new and innovative forms of competitive advantage (Teece, Pisano, & Shuen, 1997). By looking at CA from a dynamic perspective, it is arguably possible to achieve SCA by making the CA into a brand, and thus building something extraordinary in customers' heads.

Additionally, the dynamic capabilities approach addresses changing environments, and is the only theoretical evidence that links the advent of new technological paradigms to the evolution of firm knowledge basis, and includes some sort of future insight because of the dynamic focus and the combination of the different aspects: competitive forces (MBV), strategic conflict, and RBV.

Moreover, Johnson et al., (2011) explain the importance of distinguishing between *threshold-* and *distinctive capabilities*, where distinctive capabilities are required to achieve competitive advantage, and is similar to radical innovation and breakthrough innovation (Malerba, Orsenigo, & Peretto, 1997; Christensen, 1997; Markides & Geroski, 2004). Kim and Mauborgne (1997) relate this to value innovation. Additionally, it has been discovered that companies should try to switch their strategic focus from incremental innovations to strategic and value innovation (e.g. Costanzo et al. 2003; Markides and Geroski, 2004).

Furthermore, Porter's generic strategy is questionable in the way that it sees everything from within the company. The MBV emphasises that strategy should be looked from what customers want. The theory of brand equity has a gap as it is pictured as a purely beneficial concept, mostly because the authors in the field fail to discuss potential disadvantages. This gap will not be considered in this dissertation, but might be an interesting topic for further research. However, brand is consistent with RBV perspective, and the VRIN-criteria framework can help find, which capabilities in

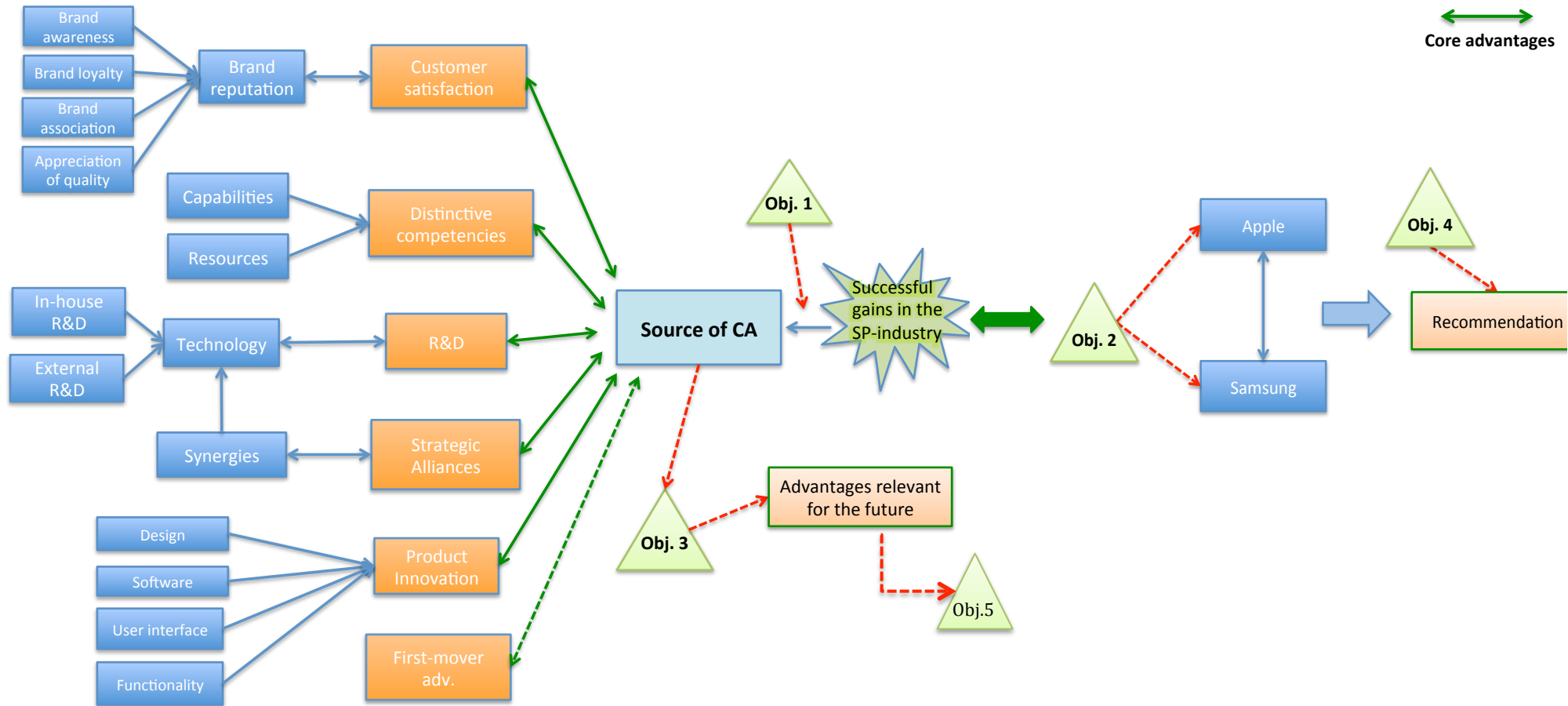
the firm that increase the chance for SCA; the capabilities that satisfy all four criteria's - value, rarity, inimitability and non-substitutability (Barney, 1991).

The literature review has identified several gaps in the literature and is illustrating that all drivers addressed influence one company's edge over its competitors, thus a potential source for competitive advantage. More importantly, the main contribution of this dissertation will be the insight of how strategic change, strategic alliances, product innovation, complementarity, and a company's brand together build a bridge that discover the gains Apple and Samsung must have developed to become the two leading companies in the smartphone industry. The industry points to a clear importance of especially one CA: the technological innovation, however, this industry has not been part of many academic studies. As a in-depth research in this field has not been conducted before, this dissertation is novel and interesting, not only from the perspective of the big and successful companies, but will also offer implications for the small "underdog" companies that aim to gain the competitive advantage. Hence, this research will try to fill the gaps by looking at two of the currently biggest phone producers in the world, looking from a dynamic perspective, capturing both RBV and MBV in a rapid changing technological environment.

Chapter 3 – Conceptual Framework

The objectives (Appendix 1.1) form the basis for this dissertation, and are represented as triangles in the conceptual framework (figure 3.1). These objectives will be further addressed in chapter 4. Objective one has been investigated through the literature review, which identified five core advantages for the smartphone industry (customer satisfaction, distinctive competences, R&D, strategic alliances, and product innovation). In addition to these main sources of CA, another advantage that could be part of both Apple and Samsung's success is the first-mover advantage and the advantage of being fast second in the market. These drivers are illustrated in figure 3.1 as orange boxes with green arrows form the sources of CA, as these will form the foundation for the structure of the analysis and are the core competences that will be critical to answer objective two, about the two firms' competitive advantages. Objective three will be part of the analysis by examining the key drivers for the two companies in the future, and thereby also considering objective five, as well as form the underlying support for the strategic recommendation (objective four).

Figure 3.1: Conceptual framework – Successful value in the smartphone industry



Source: Created by author, based on the objectives and the literature review

Chapter 4: Research methodology

"It is necessary for the researcher to know not only the research methods/techniques but also the methodology." (Kothari, 2004, p. 8)

4.1 Introduction

According to Kothari research methodology is "a way to systematically solve the research problem." (Kothari, 2004, p. 8). This chapter is concerned with the methodological aspects of the research and will connect the literature review and conceptual framework with the chosen design. Firstly, the research design will be outlined and the rationale for why the chosen method is applicable for this particular research will be provided. In the subsequent section 4.3, the data collection and analysis framework will be presented. Furthermore, advantages and limitations for the research method will be discussed in section 4.5.

4.2 Research design and rationale

4.2.1 Quantitative vs. Qualitative method

Business research methods often differentiate between two types of method: *quantitative* and *qualitative* research (Bryman & Bell, 2011; Kothari, 2004; Denzin & Lincoln, 2000). The most obvious difference between these two methods is that qualitative research tends to be concerned with words rather than numbers, however, it is important to notice that the distinctiveness of qualitative research does not reside solely in the absence of numbers (Bryman & Bell, 2011). In other words, qualitative approach to research is concerned with subjective assessment and the qualities of entities and on processes, thus this approach generates results that are not experimentally examined or measured (Kothari, 2004; Denzin & Lincoln, 2000).

4.2.1.1 Why Case Study Method?

According to Yin (2014) the research question is the most important factor to determine the right research design, thus this section will discuss why case study design was chosen, starting the rationale based on the research question *“how did Samsung become the market leader of the smartphone industry, taken the throne from Apple, and how can this be prevented in the future?”*

Yin (2014) argues that each method (Appendix 4.1) has its benefits and drawbacks, depending on four important components to consider when determining the right research question: (1) type of research question; (2) units of analysis; (3) control a researcher has over the event investigated; and (4) focus on contemporary as opposed to historical phenomena.

Given the exploratory nature of this dissertation, which includes “how” and “why” components, the case study method was selected as research strategy (Yin, 2014). Furthermore, questions regarding firm’s competitive advantage and technology often involve dynamic changes. An evident advantage of case studies is that it can be used to trace events over a period of time, hence capturing some dynamic aspects that other research methods fail to notice (ibid.), such as the costumers’ perspective in terms of brand equity. Furthermore, sources of competitive advantage are difficult to measure and consists of relatively new studies, thus, statistics can be inadequate in many aspects. The organizational structure of leading smartphone companies reduces the statistic validity even more, as the majority is organized as business groups with numerous subsidiaries and alliances (Chapter 1). An advantage of case study is also “face validity”, which is that the research represents a real story (Myers, 2009; Yin, 2014). Moreover, contemporary events are arguably an advantage of case study, as it means that one or more firms attempt to deal with issues of current importance to other firms, many of which are likely to be in the same boat, hence, strengthens the generalisation of the study (Myers, 2009).

In addition, the conceptual framework model (Chapter 3) illustrates many variables of interests that rely on multiple sources of evidence. Given this and the rationale above, the case study method is the most appropriate research strategy for this dissertation.

4.2.3 Case selection

Yin (2014) distinguishes between *single* case design and *multiple-case* design. As each of the companies addressed in the research question could be the subject of an individual case study, but the study as a whole covers two companies, the multiple-case design is more suitable.

The use of multiple-case studies will benefit the research, since the findings will be from different sources, thus the result will be based on more than one opinion. Hence, Yin (2014) argues that the more cases, the stronger the findings and result will be, as it gives the opportunity to look at the question from different perspectives. However, thinking that more than one case will increase the validity of the findings is an argument Myers (2009) disagree with, arguing that researchers who have this opinion make the mistake of using sampling logic to judge the validity of the case method. He emphasises that case study research does not use sampling logic, as this is based on statistics where the larger the sample, the more sure you can be that the result truly reflects the population as a whole. For this reason, Yin (2014) argues that any use of multiple-case study should follow a replication, not a sampling, logic. The purpose of this dissertation is not to claim that the findings are universal to all manufacturing companies in the smartphone industry but to compare the findings of the two cases to the conceptual framework further addressed above (chapter 3).

4.2.3.1 Selection of Cases

Selecting the cases is an important aspect of the multiple-case study, as the characteristics and number of cases influence the research (Yin, 2014). The multiple-case study allows for replication logic to support the analysis, and Yin (2014) distinguishes between two kinds of replication: the *literal* and *theoretical* replication. Literal replication predicts similar results and requires prior knowledge of the outcome, hoping for literal (or direct) replications from case to case, whereas theoretical replication expects contrasting conditions, but for predictable reasons, and should be foretold explicitly at the outset of the investigation (ibid.).

The dissertation is based on the findings of two case studies: Apple Inc., and Samsung Electronics. The reason for limiting the sample size to two cases is mainly due to the

complexity of the data collection process (see Appendix 4.2 for a short company profile).

As most case study research, the selection of cases has to do with access to the company as well as the availability of secondary data. Moreover, the researcher concentrated on selecting firms whose information was also available publicly for the purpose that the data gathered could be compared to a variety of sources, hence using a triangulation procedure (Denzin & Lincoln, 2000). Listed companies are beneficial, as they are required to regularly supply information on their activities in different forms, such as quarterly reports, annual reports, and other additional reports.

These two cases were selected for the following reason. Firstly, Apple was a natural choice because the company represented the pioneering force of introducing the first smartphone, quickly followed by Samsung. Moreover, they both have significant capabilities in the smartphone market in terms of innovation, R&D, product development, brand equity, and alliances. Additionally, they both excel with a dominant role in the market, however on different aspects: Apple by profit and Samsung on market share.

4.3 Data Collection

When undertaking research, a key decision with regard to the data source is whether to obtain primary or secondary data. Secondary data is the use of data that has already been collected, including collection by an existing researcher for their own purpose (Kothari, 2004). Primary data is potentially more reliable as it is normally more up to date, and eliminates the drawbacks associated with using someone else's research.

Though the standard practice in the strategy management field is to employ observations or interviews in the case design (Bryman & Bell, 2011), this dissertation aims to conduct the two case studies for the two leaders in the industry with headquarters located in USA and Korea. The collection of the first-hand data will be constrained by the geographical distances among the firms' decision-making and information centres. Nevertheless, the available secondary data will provide in-depth insights for addressing the research questions and draw on reliable conclusions. Furthermore, by collecting data as close to the research period as possible, some of the normal disadvantages with secondary data can be reduced (Kothari, 2004). Moreover,

the rich information on sources of CA and future plans for these companies was compiled and made available through reliable sources.

4.3.1 Characteristics of the secondary data

The two case studies will rely on published secondary data, because unpublished data is beyond what the researcher have access to (Kothari, 2004).

By using secondary data, there is a chance that the data may be unsuitable or inadequate in the context of the problem for this research question; hence, before using these data, the researcher must ensure that the collected data for both case studies possess the characteristics outlined in the Appendix 4.3.

Based on this it is clear that it is a risk to use already available data, and that this risk is reduced only when the data is found reliable, suitable, and adequate. For this dissertation the researcher could not blindly discard the use of secondary data as such data is available from authentic sources identified by critically analysing the three characteristics in Appendix 4.3, making sure all data used has been suitable and adequate. Hence, in this case it has been illogical to spend time and energy in collecting information first-hand (Kothari, 2004).

4.3.2 Data Sources

Case study research opens for almost any data gathering methods, and can also be a combination of qualitative and qualitative method. However, this dissertation uses qualitative research based on published secondary data from various types of formats (academic journals, books, magazine, newspapers, reports) and databases (Appendix 4.4) accessible via Aston University's library.

The different full text journal databases subscribed by Aston University will naturally be limited in scope as they provide the content of a predefined set of journals that may or may not include articles relevant for the research topic. Hence, any one database does not contain all the articles in the area of interest and therefore, different databases have been used to complement the content (Jesson, Matheson, & Lacey, 2011). Simultaneously, throughout the data collection, the researcher has gained experience on the papers and journals that provide good information on the particular topic.

In addition to library databases, this research has used official websites to search for relevant articles. The biggest disadvantage of using Internet, as searching tool, is to critically evaluate the material found (Jesson, Matheson, & Lacey, 2011). For this reason, carefully academic search engine, as well as annual report and documents available on the companies homepage, have been used (Appendix 4.4).

4.4 Data Analysis Framework

One of the most problematic issues with conducting qualitative research is to analyse the large quantities of rich data sets. To help coping with this problem, many authors suggest using tools for gathering and structuring the material and thoughts while collecting data. In this study a common and helpful tool called *codes* or coding has been used (Miles & Huberman, 1994; Corbin & Strauss, 2008) to make the analysis less troubling, by structuring and dissecting the data collected meaningfully, while keeping the relations between the parts intact. Codes are normally attached to words, phrases, sentences, or whole paragraphs, connected or unconnected to a specific setting. However, it is important to notice that it is the meaning that matters and not the words themselves.

The coding process has been continual over the whole period of the research study, and was conducted using NVivo 10 data program This tool helps coding and organising of the whole analysis (Appendix 4.5), and keeps track of the coding process. Additionally, it enables the researcher to change codes and structure over the whole period of study. The data program has been used mostly as a tool to systematically structure and keep track of the material as well as a coding program in itself.

4.5 Limitations

The limitations of using secondary data (section 3.3.1), and the three characteristics (reliability, suitability, and adequacy) have been considered when collecting data. Furthermore, as the study is also to draw on conclusion and recommendation about the future, the data has been collected as recent as possible.

Like any other research method, a case study design is not without its critics and limitation. According to Myers (2009) one of the main disadvantages of doing case study research, particularly in business settings, is that it can be difficult to gain access to the companies that will be studied. However, for this study, the chosen companies

are big, hence it is more convenient to access reliable information from secondary data. Another disadvantage can be the difficulty, particularly for inexperienced researchers, to focus on the most important issues. Thus, ending up with a huge amount of data. This has been an issue for this work; however, the learning curve has been developed and helped to deal with this problem.

4.6 Summary

Given the exploratory nature of this dissertation, combined with the dynamic changes, the full variety of evidence traced over time, and face validity, the author found it most suitable with a case study design. The two companies have qualities, which fits the research question, as they are leaders in the market, thus justifies the sample size. However, the main limitations of the study are that it is based solely on secondary data, thus, it is important that the sources are critically assessed before being used. Additionally, the sources need to be up-to-date, in order to fulfil the future aspect of the study.

Therefore, this study will follow a multiple case study design focusing on two cases, based on qualitative research employing the data published in secondary sources. The collected data was organised and coded with the NVivo 10 software to assist the data organisation in the qualitative analysis.

Chapter 5: Industry analysis

5.1 Introduction

This chapter will develop an analysis of the factors influencing the smartphone industry and its success, such as the competition within the industry making the technology cheaper and social trends in the global world making cross country communication more important, as well as the customer behaviour to stay connected through social media. To pursue this, the PESTEL-framework will be incorporated, which identifies the five factors in the macroeconomic environment of the industry (Section 5.2). Further, the in-depth analysis with the structure of Five Forces will follow (Section 5.3), in order to summarise the competitive rivalry in the smartphone industry. Thereafter a few important statistics will be outlined to give a further insight into the market trend (Section 5.4). Those frameworks are employed as a tool for providing a background for strategic analysis of the two firms in the subsequent sections.

5.2 PESTEL Analysis of the smartphone environment

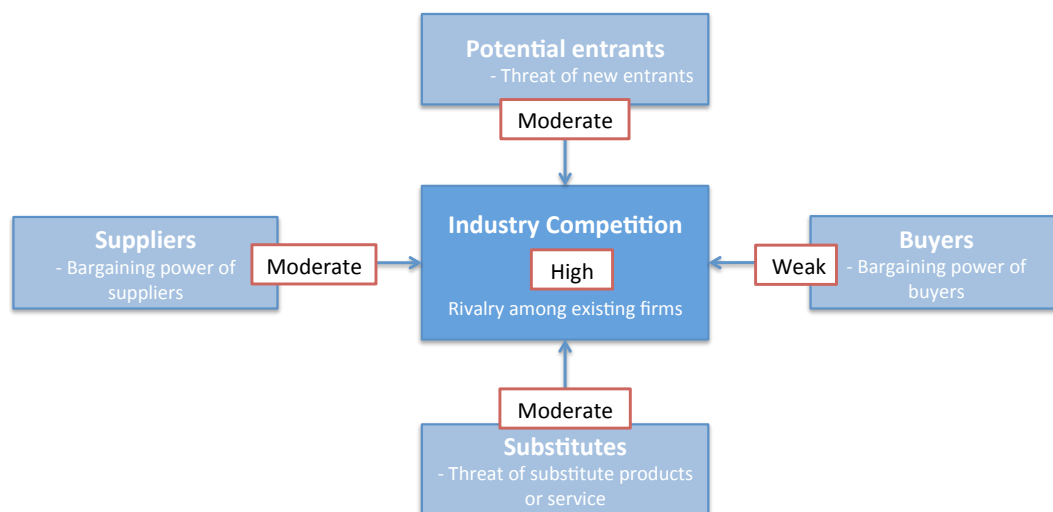
This section defines political, economic, social, technological, environmental, and legal factors within the macroeconomic environment, by using PESTEL-framework (Appendix 5.1).

The most important factors for this dissertation is the technological aspect from the PESTEL-framework, which will form the empirical grounds for the two case studies. Additionally, the economic and legal factors are assumed to exert influence on the strategy formation and change of the two leaders in the smartphone industry, i.e., Apple and Samsung. For instance, the two companies differ in prices; therefore have different strategies to influence the customers making Samsung more capable to compete in the growing emerging markets compared to Apple (chapter 6 and 7).

5.3 Five Forces analysis

For the global phone industry the forces suppliers, buyers and entrants are seen as moderate and substitutes weak, based on the analysis of MarketLine (2014). However, the forces are different than for the general mobile phone industry, with higher competition in the smartphone industry. These differences are highlighted in Appendix 5.2, and the forces for the smartphone industry are illustrated in figure 5.2.

Figure 1: Porter's Five Forces for the phone industry



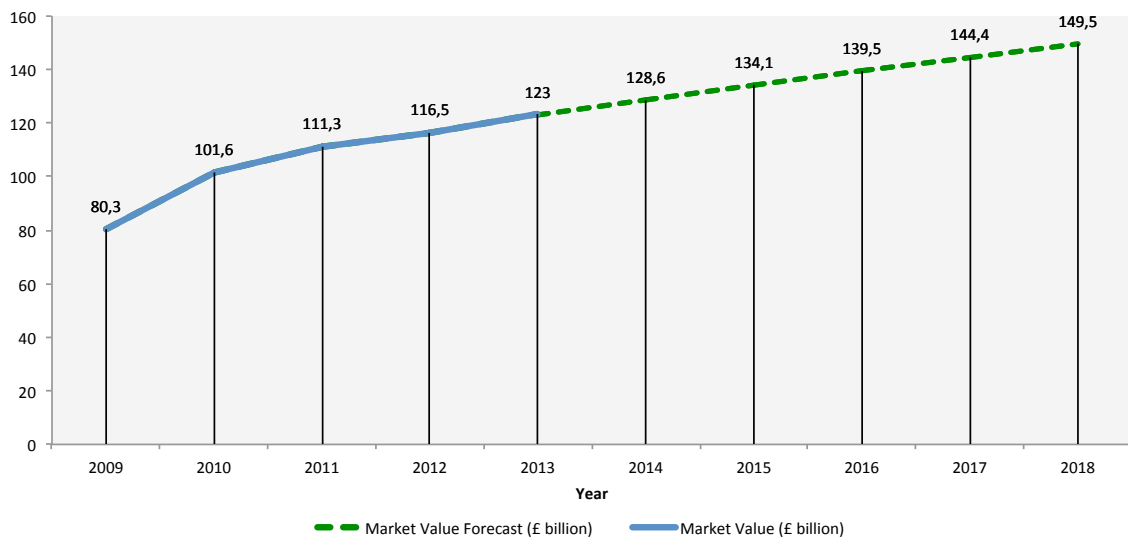
Source: Created by author, based on Porters Five Forces (1980)

5.4 Market Trend

To enable the analysis of the future strategies followed by Apple and Samsung, the actual trends and prediction of the next five years (2014-2018) should be depicted. As becomes evident from figure 5.1, the global mobile phones market has grown noticeably in volume over the recent years and this trend is forecast to continue. In Western Europe, the Us and Asia-Pacific, smartphones sales have now overtaken feature phones, resulting in a prediction that smartphone will reach over 50 per cent of global mobile phones within 2014 (MarketLine, 2014).

The raise of the global mobile phone market value during 2009-2013 (Figure 5.1), has been defined by numerous factors, most influential of which are prices in of the smartphones due to cheaper technology and the influence of social networking (Appendix 5.1) explaining Samsung's market growth in the emerging markets as opposed to the effect of a premium price by Apple that has decreased market share, however makes higher profit (chapter 6).

Figure 5. 1: Global phone market value 2009-2013

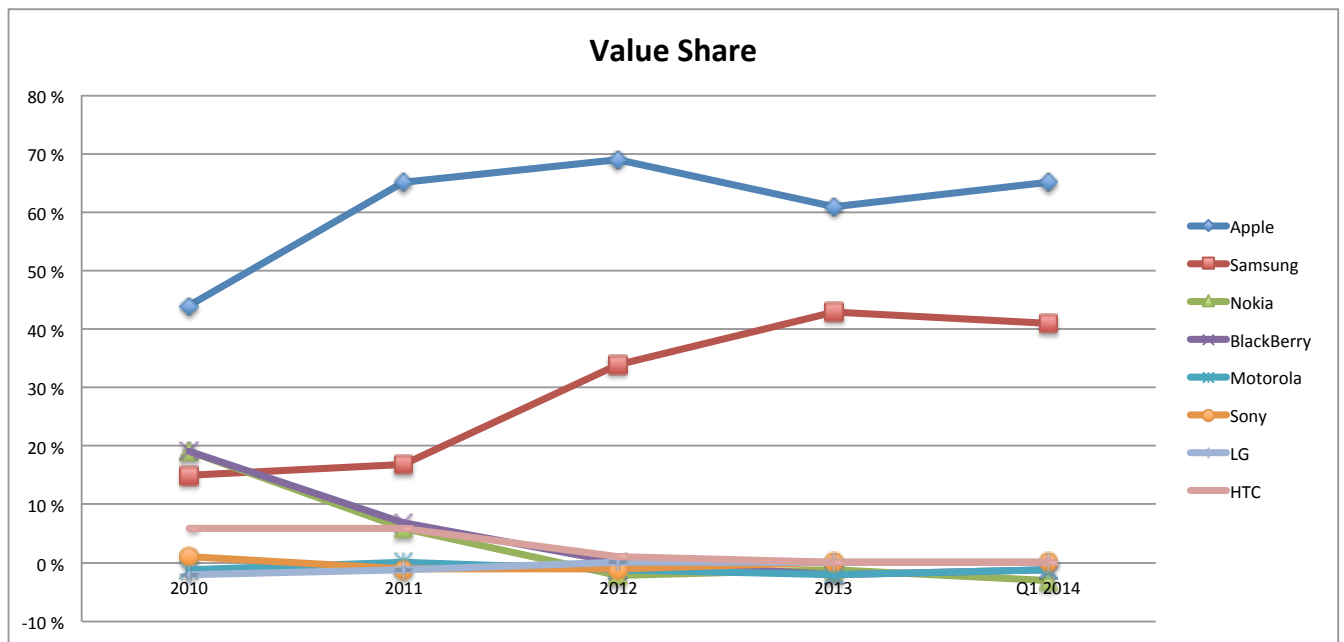


Source: Created by author, based on (MarketLine, 2014). The evidence for absolute values is provided in Appendix 5.3

In 2013 alone, the global mobile phone market grew by 5.6% and, drawing on the current innovativeness in the industry and improving purchasing power in the emerging market countries, it is expected to increase by further 18,3% from 2013 to end of 2018, indicating a market volume of 1,663.3 million units by 2018. It opens new avenues for the strategic experimentation in the industry.

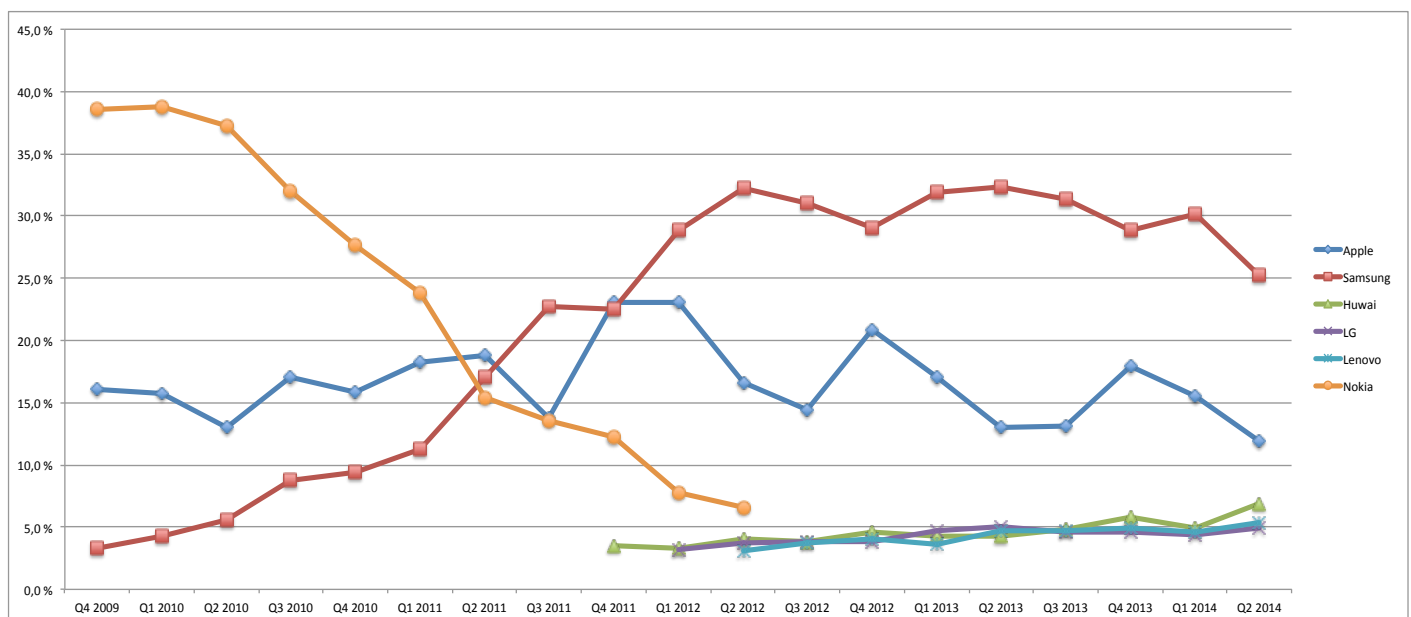
Appendix 5.4a gives a comparison of Apple and Samsung's market share in terms of sales, operation margin and value share. These statistics do not include the emerging markets, and are therefore not conclusive, however as Appendix 5.4b illustrate, Apple and Samsung are the only companies in the smartphone industry that gain profit. Thus, these two companies are clear market leaders both in terms of market share and profit where they excel in one aspect each (Yarow, 2014).

Figure 5.2: Operation value profit share in the mobile industry



Source: Created by author, based on Appendix 5.4b

Figure 5.3: Smartphone market share (shipments)



Source: Created by author, based on numbers from (IDC, 2014), Appendix 5.5

Furthermore, Figure 5.3 illustrates Nokia's fall in the smartphone industry from being the clear leader from 2009-beginning of 2011. Moreover, it shows the accelerating growth of Samsung and their takeover of the industry, as the company has been the market leader followed by Apple since the end of 2011. Additionally, the figure points out the entrants of LG, Huawei, and Lenovo as new competition taking more market

share from Apple and Samsung, thus a decline for the leaders in last quarters. The reason for Apple and Samsung's success is their CA's and technology development, and the different strategies the two companies have employed (chapter 8).

Chapter 6: Case of Apple

“Now Steve has left us, but his memory and his legacy live on, and they will continue to drive and shape the world we live in for years to come.” (Arthur, 2011).

This chapter will focus on answering the research question on the current strategy deployed by Apple, starting with the outline of the market position of the firm (section 6.1), followed by identifying their CA's (objective 2) in section 6.3. The company's current strategy will be considered in section 6.2, and section 6.4 will investigate the future strategy of Apple.

6.1 Market data – Apple

Looking at Apple's product sales, it is clear that iPhone sells significantly more than any other of the company's product line (Appendix 6.1). From 2011 to 2013 iPhone's sales have gone from 42 per cent to 53 per cent of Apple's total sales, making it the company's most important product in terms of sales (Apple Inc., 2013). Additionally, Appendix 6.2 shows key financials and will be used in the next sections.

6.2 Apple's strategy

Apple was the first to introduce the smartphone, as we know it. The company decided to differentiate itself by creating a hand-held Internet device, also used to make calls. The biggest difference between Apple's iPhone and older “smart” phones was the usefulness for customers. Previous smartphones were mostly used by enterprises, while the iPhone was built with the customer in focus (Magid, 2013). Steve Jobs instinctively knew that customers needed to feel a certain way when they picked up an Apple product (Montgomery, 2012). In this way Apple revolutionised the phone industry, but was quickly copied by other phone manufacturers.

Additionally, they are different from their competitors because they use their own operation system (iOS), the first system to open up for third-party developers willing to provide applications and services, allowing the company to significantly increase proportion of value by avoiding the direct cost of software development (Bergvall-Kåreborn et al., 2013).

By selling one high-quality product for good margins, pursuing design and user functionality in their smartphones, there is no doubt that Apple has a differentiation

strategy. Inspired by the company's founder, Steve Jobs, Apple has released many breakthrough products in the market and is seen as a creative company focusing on innovation to add customer value. However, it can be argued that they are focusing on a narrow luxury part of the market.

Apple's strategy has been both praised and criticised. Supporters of their strategy argue that Apple is the most profitable smartphone producer in the world, and was until recent the market leader also in terms of market share. Additionally, Apple is seen, also from inside the company, as the "original" smartphone manufacturer, hence, iPhone is a different product on its own (section 6.3.1). Apple tries to differentiate itself from other competitors in the smartphone to justify a premium price (section 6.3).

On the other hand, critics argue that times have changed and the justified premium price Apple could charge was due to the quality, functionality and features linked to the first generation of iPhone, which was unique at this time. However, in the current market, competitors sell phones with at least the same functionality and iPhone is no longer the clear choice of the best smartphone in the market (Blodget, 2013). Blodget (2013) emphasises that the reason why Apple has been able to enjoy high profit is because they created the advantage of economic of scale, hence, could sell iPhones at the same price as competitors combined with best product resulted in outstanding profits. Furthermore, he stresses that the strategy of super-high profit margins is the same risky premium strategy that almost bankrupted the company in the PC market (Appendix 1.1b). Moreover, Android has taken over the smartphone platform world, making iOS a niche platform in many markets, thus Apple is risking to end up like BlackBerry: once upon a time, a wildly profitable phone company, now fighting for its survival (ibid.).

Finally, Steve Jobs has built a company whose legacy is ideas combined with an ecosystem of related devices (section 6.3.4). This ecosystem was incomplete until the iCloud was introduced, however, now this online service combine all of Apple's products together, making it even easier for people to access software across the company's devices (Helft, 2011).

6.3 Competences and sources of competitive advantage

The first iPhone released in 2007 gave Apple a competitive edge over its competitors, and by help from its founder, Steve Jobs, the company realised that the key to success was to gain expertise in software and focus their thoughts on product innovation (Sherr & Ramstad, 2013).

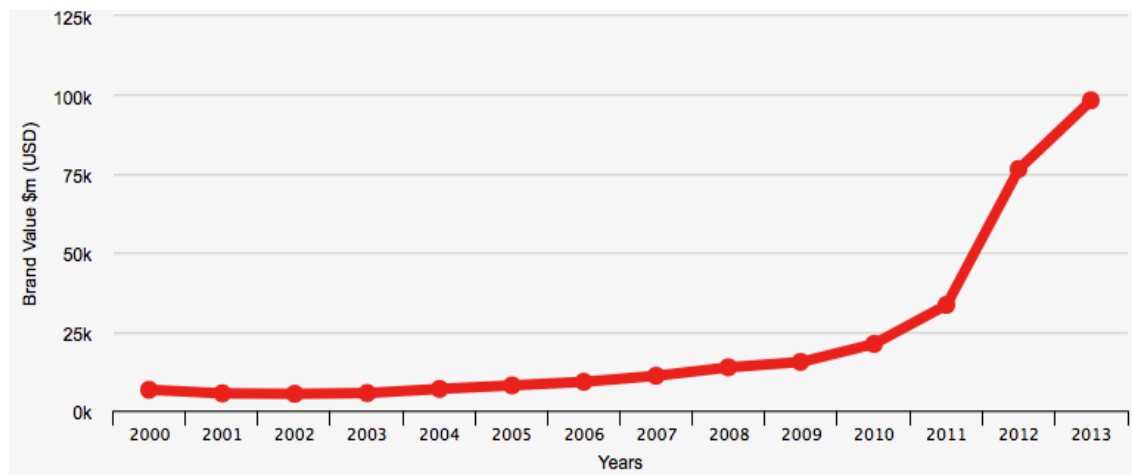
As the world's most profitable smartphone maker, Apple has many advantages over the competitor (Epstein, 2013). For instance, Apple designs its own devices and some of the technologies used, however, they rely on other companies, including their rival Samsung to help build their iPhones (Sherr & Ramstad, 2013). External technological alliances and outsourcing of production is part of Apple's strategy (section 6.3.2).

6.3.1 Strong brand

No doubt, Apple has changed the life of customers in the smartphone and technology market. Apple has, through the focus on brand-design, made it easier for customers to identify the brand. Offering excellent product features and an appealing design has given Apple a lasting CA over other brands, and made Interbrand change the leader of the Best Global Brands for the first time in 13 years, now that Apple has taken the thrown from Coca Cola. Apple has revolutionised the way people communicate through its iPhone, and set the bar high for simplicity and ease-of-use functionality, creating a new benchmark other phone manufacturers now have to match (Interbrand, 2014).

Looking at Apple's brand value (figure 6.1) it is clear that Apple has had a steady growth the last years, starting around the time iPhone got really popular.

Figure 6.1: Apple's brand value



Source: (Interbrand, 2014)

Moreover, Apple has a unique customer loyalty, including their smartphone customers. In a study by WDS of 3000 smartphone customers in the U.S, U.K and Australia, as much as 76% of iPhone owners said they were sticking with Apple (Elmer-DeWitt, 2014). Additionally, earlier consumer study by Consumer Research Intelligence Partners found that among customers who switched smartphone brands, Apple was able to capture three times as many Samsung customers as Samsung was able to steal from Apple, respectively 33% and 11% (ibid.).

As the brand captures customers appreciation of quality, many argues that now that Steve Jobs is no longer with us, Apple has lost some of its creativity and more importantly a way of understanding the customers wants and needs (e.g. Helft, 2011; Badenhausen, 2013; Lashinsky, 2013a).

Apple's high brand value, combined with a solid team aligned around the company's vision, has allowed Apple to deliver and surprise time and time again. Furthermore, Apple achieved a financial peak in 2012, when it became the most valuable company of all time (Interbrand, 2014). This was achieved thanks to the company's high profit on each sold smartphone; however, customers buy their phone at a premium price for a reason. This is the value added, which is directly linked to the brand of the company. So what makes Apple so special in the eye of the customer? The already mentioned functionality and design are important, and illustrate that Apple's strong brand is a result of many aspects, including product innovation and distinctive competences. However, the fact that Apple was the pioneer in the smartphone industry has given

them the advantage of being the first and original brand, making them the “cool” alternative, hence a phenomenon customers want to be associated with in order to get social status, thus part of the justification of charging a premium price.

Additionally, customers pay extra to have a phone that is easy to use, and design is one of the most important contributors to Apple’s strong brand: “design is how a product works, how it looks, how it feels. It’s functional and aesthetic. Apple has embraced that in the fullest sense possible in terms of making products simple, but also good looking and attractive” (Badenhausen, 2013).

6.3.2 Combination of the strategic alliance and outsourcing strategies

Apple has been deploying differing strategies for its core functions, namely the software development and hardware production. CEO Tim Cook states “Apple is not a hardware company” (Owen, 2013). Apple’s main focus is on design and software with an advantage in the field of innovation and are mainly developed in-house. However, most recently (15th July 2014), Apple and IBM formed an alliance aimed at creating applications for business customers and deliver services from cloud storage to the iPhone (Cohen, 2014). This alliance underlines the extent to which devices developed for customers have caught on in the corporate world, and allows Apple to focus on the consumer market while ensuring corporate sales are not neglected (M.G., 2014). “In '84, we were competitors. In 2014, I don't think you can find two more complementary companies”, says Cook (Wakabayashi, 2014a). This illustrates how Apple uses their alliances to gain advantages they do not possess inside the company as well as a new strategy that Apple have started: “Apple is not an enterprise company, that's not their DNA. It is IBM's DNA and IBM has had those relationships forever.” (Wakabayashi, 2014a).

Moreover, Apple has revolutionised the software market, when it opened for third-party developers to create apps for the iPhone. The company’s software works seamlessly with the company's product line, and makes Apple's platform attractive for developers, giving Apple an advantage for the long-term success as it improves the communication between users and the smartphone company, “you can't really separate the two: software and services.” (Cheng, 2014).

Furthermore, Apple outsources most of its hardware and is arguable one of the reasons Apple’s products seem superior compared to competitors. When new technologies are

released they are a huge expense to the company, and the factories used in the process are often more expensive (Gobry, 2011). Apple uses a strategy that allows them to get a head start in these technologies. By paying parts of the construction costs of the factory, Apple gets the exclusive rights to the output production of the factory for 3-36 months and a discounted rate afterwards. Firstly, this gives the company the advantage of exclusive access of new component technology months before its rivals, thus provides Apple to release breakthrough products that are “impossible” to duplicate, like for the iPhone’s touchscreen. Secondly, when competitors catch up in the production, Apple still has the advantage of sourcing the technology at lower costs, due to the discount rate. As Apple now can compete with premium price, much because of their brand (6.3.1), with products produced cheaper, they gain higher profit and are able to continue the cycle (ibid.).

Apple has outsourced numerous functions in the manufacturing of iPhone. All iPhones contains hundreds of parts in which as much as 90% is estimated to be manufactured abroad (Duhigg & Bradsher, 2012). Naturally, the labour and semiskilled workers are cheaper in China, but this was not Apple’s main reason, as for technology companies the cost of labour is minimal compared to the costs of parts and managing supply chains. China has something the U.S and European countries cannot compete with, they have the whole supply chain next door. “You need a million screws? The factory is a block away. You need that screw made a little bit different? It will take three hours” (Duhigg & Bradsher, 2012). Additionally, China provided engineers at a scale that U.S could not match. For instance, at Foxconn⁵, it is estimated that about 8,700 industrial engineers were needed to manufacture iPhones. This amount of workers would take as much as nine months to find in the U.S, but were recruited within fifteen days in China (ibid.). Hence, it has been argued that Apple is not a manufacturing company but, as Nike, a design and marketing company (Maynard, 2012).

Furthermore, though Apple and Samsung are big competitors in the smartphone market and have spent many years suing and countersuing each other over the look and features of their phones, Apple is one of Samsung’s biggest costumers for processors and memory chips. This partnership started when the two companies did not compete, however, Apple has now expressed concern that their dependence on

⁵ A Chinese factory that now produce iPhones.

Samsung limits the company's potential to control its destiny as their ability to use different technologies are compressed. Apple no longer buys iPhone screens from Samsung, and has been buying more flash-memory chips from other makers. Nonetheless, they remain critically dependent on Samsung, which still makes iPhone's microprocessor brain (Lessin, Luk, & Osawa, 2013). Samsung is the world's biggest maker of processors, memory and high-resolution screens. For this reason, and the investment in customised chips, it is almost impossible to replicate the process elsewhere. Though, Apple has tried to build its own processors, for instance, the in 2008, they still continue to rely on Samsung (ibid.).

These arguments indicate that Apple includes strategic alliance and outsourcing in their strategy, in order to gain technological advantages from companies and countries that are better in producing the technology needed.

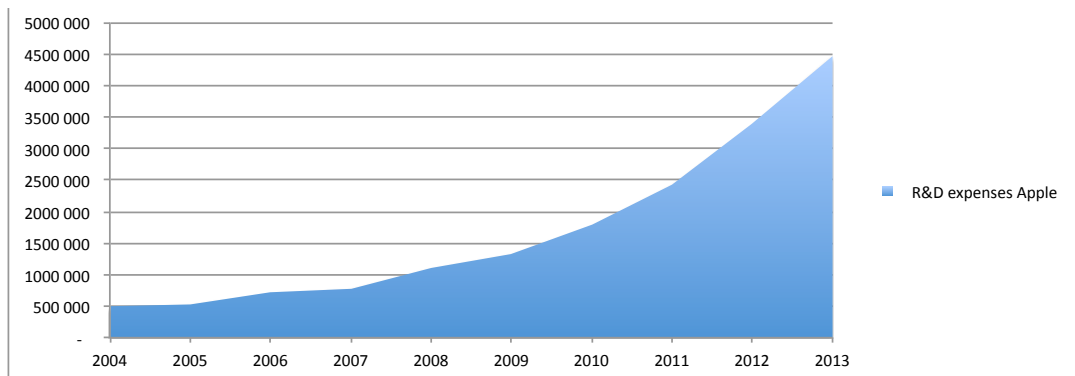
6.3.3 The change in the R&D and innovation strategy

R&D and innovation are a fundamental function of Apple's success. The new smartphones entering the market every year illustrate the need for companies to invest in technical innovation to keep improving their products, adding new features to try to differentiate themselves from the competition (Harriet, 2012). When analysing technology as a competence, it is important to bear in mind that it cannot be reduced to machines, as it has to do with certain parts of knowledge adapting the means to an end. Hence, most of these competences lie in skills of people and in organisational structure and procedures (Ernst & Ganiatsos, 2005). Knowledge about the customer requirements strengthens the interaction between R&D, production and marketing, as it reduces the "trial and error" stage thus contributes to a further reduction of product development and product lifecycle. These competences are the essence of firm-specific competitive advantage, which is non-tradable (ibid.). These advantages are seen in Apple both through R&D expenses as these enhance the technological capabilities and through the company's expertise and knowledge of including the customer in their product development, as seen in the design and easy-to-use functionality.

In the company's annual report, Apple emphasises its superior innovation and the fact that many of the current and potential competitors have substantial resources, however, are unable to provide such products and services at high profit, many even lose profit competing with Apple's offerings (Apple Inc., 2013), also seen in Figure 5.2.

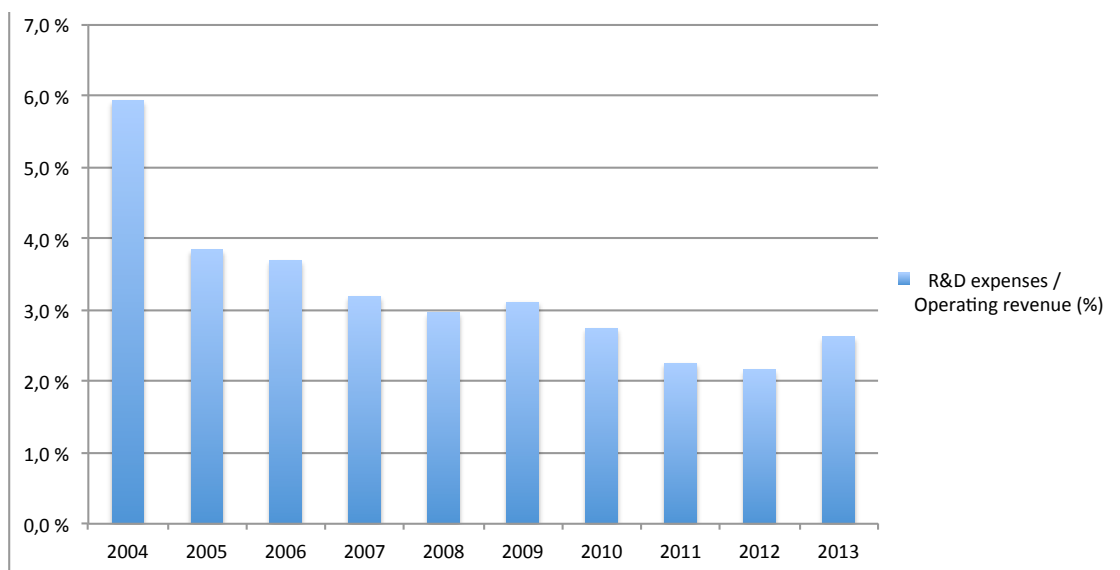
Additionally, the company regularly files patent applications to protect its innovations arising from R&D and design, and is currently pursuing thousands of new patents around the world.

Figure 6.2a: Apple's total R&D expenses (thousand USD)



Source: Created by author, based on numbers from (Apple Inc., 2013).

Figure 6.2b: Apple's R&D expenses in per cent of operating revenue



Source: Created by author, based on numbers from (Apple Inc., 2013)

Apple increased its R&D investments with 32% from 2012, investing \$4,475 billion, which is 3% of total net sales (Lowensohn, 2013). Including the 39% increase from 2011 it is clear that Apple is aware of the importance R&D has as a critical aspect of future growth and competitive position in the marketplace, as it is directly related to timely development of new and enhanced products central to the company's business strategy. As such, Apple expects to make further investments in R&D to remain competitive and keep its position in the smartphone market (Apple Inc., 2013). Moreover, innovation is arguably a key to increase Apple's brand value; by releasing

high quality products based on what the customer wants, Apple, can expect high brand loyalty in return (Badenhausen, 2013). Furthermore, the internal R&D helps Apple come up with patents that the company plans to use in order to release new products, and with more patents the chances are that the release may be a breakthrough. Apple never conducted market research when they developed the iPhone, as the customers did not know what they were missing until Apple gave it to them (Kaplan, 2012). Although other companies offered “smart” phones with access to the web, Apple changed the industry making Internet accessible, with an easy interface at a swipe of a finger, on a touchscreen made of glass. The first iPhone was revolutionary in some aspects but lacked the features in others, thus the iPhone is an example of Apple’s disruptive innovation, and the company has improved their products features to satisfy customers’ needs. This strategy has made speculations and critics of Apple, as they have made incremental improvements and the latest iPhone (5S) has been said to be a catch-up device for leading Android smartphones already in the market (Waters, 2014), see section 6.4.1.

However, Apple’s biggest contribution in the smartphone industry was perhaps the breakthrough innovation referred to as Apps. This innovation was introduced with the first iPhone. In order to save phone-storage space and be able to make the smartphone as thin and light as possible, while keeping a screen that covered the front and the essential hardware inside, Apple came up with a brilliant solution of cookies that made information and software available to access through Internet. Hence, Apple created a new business along with the smartphone.

6.3.4 Apple’s secret weapon

Apple’s competitive advantage is argued by many to diminish in the near future, because of new competitors like Samsung (Magee, 2011). However, by taking one-step back and look at Apple’s overall picture, Apple’s secret weapon reveals. “The reason for Apple’s compounding, growing success is a simple multiplier factor involving customers” (Magee, 2011). This illustrates the power of Apple’s ecosystem, which is not just the perceived quality of the product, but also the integration of other Apple devices, such as iPhone, iPad and Apple TV (Canada, 2012). For instance, once a customer buys an iPad, iPhone is a natural choice, as the company has focused on seamlessly binding its hardware and applications together with an integrated

operating system. “To date, no company has as effectively correlated customers to other seemingly different products by getting them to purchase just one” (Magee, 2011). Because costumers are normalising their lives around the apps and services that run on the smartphone platform, these apps and services are making the smartphone more valuable, and are related to the social part of the PESTEL-framework (Figure 5.1). For this reason, Apple understands that the smartphone market is a platform market, hence emphasising the strength and value of its iOS ecosystem (Blodget, 2013). This is further illustrated by the company’s 800 million iTunes accounts, thus Apple has one of the biggest customer bases ever amassed (Waters, 2014). Hence, in the case of Apple, the growth of hardware sales is interlinked with the provision of software applications and services. Thus, while Apple’s hardware products may be perceived as innovative, their value enhancement lies in the software and digital content, which again is the outcome of negotiations with other actors and arises from Apple’s market position, as strong position attracts large number of developers to Apple (Bergvall-Kåreborn & Howcroft, 2013).

6.4 The threats for the future strategy

Apple with a premium price strategy, is now losing market share to cheaper phones, thus many suggest that Apple needs to introduce a cheaper low-end smartphone (e.g. Worstall, 2013; Blodget, 2013; Interbrand, 2014). This would allow Apple to capture a huge amount of the market, including the emerging market, and still make much money, resulting in more sustainable and higher total profits in the long-term (Blodget, 2013; Interbrand, 2014). An interesting point is the effect this would have on Apple’s ecosystem, as higher market share would increase this value with more customers signing up and buying from AppStore and standardising their lives around Apple’s platform, leading to a customer “lock-in” (Blodget, 2013).

However, Apple stays loyal to its high-end strategy, as they do not want to compete in the low-end of the market (Simpson, 2012), as the company cares more about being the most profitable. Additionally, they care about Apple’s brand reputation, and by selling low-end iPhones, their reputation may weaken and Apple will no longer be seen as a luxury product for customers that want to belong to the “cool” social network of Apple users.

Furthermore, Lashinsky (2013b) emphasises that the crew Jobs left behind should not be underestimated and that Apple's future is still up for greatness and will keep innovating, as Apple focuses on a few initiatives these must be amazing. Additionally, looking from a financial and product perspective, taken away the "Apple" name of the equation, anyone would be enthralled, as "the only problem here, per se, is that Apple is being compared to itself" (Lashinsky, 2013b). Moreover, it went six years from the breakthrough of iPod to iPhone, and another three years from iPhone to iPad. All these products are built on many of the same innovations, and illustrate that innovation does not follow a predictable timeline (ibid.). Many incremental innovations have been done in the meantime, and Apple is the company that is capable of making the next big thing. "If so, it remains Apple. If not, it dies a slow, painful death." (Lashinsky, 2013b).

6.4.1 Has Apple lost its edge of innovation?

No doubt, Apple has set the bar incredibly high and the expectations have raised the question about the lack of breakthrough products during recent launches (Badenhausen, 2013). Speculators wonder if Apple has peaked with well-funded competitors like Samsung challenging Apple in the smartphone industry (Badenhausen, 2013; Lashinsky, 2013a). Apple has, from the beginning, been the cool choice and corporate trendsetter on all aspects in the smartphone market. Recently, Apple suffers as other companies have started to innovate and experiment, while Apple has gone from being insanely great to merely great (Lashinsky, 2013a). The world is waiting for the next Steve Jobs "one more thing" announcement, proving Jobs statement from his resignation letter "I believe Apple's brightest and most innovative days are ahead of it." (Interbrand, 2014; Helft, 2011).

However, Apple can only create breakthrough products if the company continues to invest in R&D, as this is essential for coming up with innovative solutions. Therefore, the trend of downturn in R&D investment the last years is worrying. In the years after Apple went public with IPO (1980), the company was able to generate income under 11% of sales, and simultaneously spending more than 6% of sales on R&D (Lazonick, Mazzucato, & Tulum, 2013).

In April 2013, Apple decided to commit to a program to distribute as much as \$100 billion to shareholders in stock repurchase (60%) and cash dividend (40%) by end of 2015. This is a new business model for Apple, which has been famous for not paying

back shareholders, despite a huge amount of cash and cash equivalent assets (Lazonick, Mazzucato, & Tulum, 2013). It can be argued that Apple sends a signal that they will focus less on R&D and investment in new technologies. Evidence from the study of changing business models of other cash-rich, high-technological companies (like Intel and Microsoft), suggests that when corporate executives “maximize shareholder value” through stock massive repurchases they lose both the incentive and ability to invest in innovation: “you can’t run a business to try to run the stock up every day” (Lazonick, Mazzucato, & Tulum, 2013).

On the other hand, Apple’s iCloud could be a fundamental piece of Apple’s future. This argument has roots in Apple’s investment of \$1 billion in one of the world’s largest data centres. When the iCloud was unveiled, Steve Jobs said: “We are going to move the digital hub, the centre of your digital life, into the iCloud” (Helft, 2011). The iCloud has already been said to be the final piece missing in Apple’s ecosystem, now connecting all of Apple’s devices together and making it easier to share content between the products. Perhaps is this part of Apple’s future plan for smartphones: to change the market once again.

Chapter 7: Case of Samsung

This chapter will follow the same structure as the previous case study, however, based on the in-depth analysis of Samsung's strategies.

7.1 Market data – Samsung

Samsung is the leading mobile company, surpassing Apple in smartphone sales with 25 per cent market share of smartphone shipments in last quarter 2014 (Appendix 5.5), and is the main product of Samsung (Samsung Electronics, 2014). Additionally, the Android operation system had a smartphone market share of almost 70% in 2013. Appendix 7.1 points out the key financials of Samsung and will be used in the next sections.

7.2 Samsung's strategy

Samsung is following a cost-leader strategy, as they in general sell their phones at lower prices for a scope as broad as possible. However, the company has been employing a differentiation strategy for their flagship phones, by selling the best and latest technology to a broad market.

Samsung's strategy has long seemed to be benchmarking Apple on price and technological features, and is a strong argument for why Samsung probably will never really surpass Apple in innovation. By benchmarking Apple, the company play catch-up on all Apple's innovations, whilst adding some minor innovations themselves. The company has a history for ignoring competitor's patents, and the Californian jury awarded Apple \$1 billion in damages from Samsung after two juries found that Samsung did steel the iPhone's appearance and technology (Eichenwald, 2014). Samsung has been in similar situations, suspected and proven guilty of stealing technology, and then continued to battle in court while taking market share in the industry by introducing less expensive versions of the same product, eventually resulting in a settlement, seen for instance in the battle between Samsung, Sharp and Pioneer (ibid.).

This analysis will not go deeper into the patent war of Samsung and Apple, however, this view indicates that benchmarking and copying of technology is in line with Samsung's playbook, and part of the case for how Samsung entered the smartphone industry, together with being Apple's supplier of processors (section 7.3.2).

However, a change in strategy has made Samsung focus on matching Apple's brand and use their own competitive advantages to set the new standards in the market. Now even people who have worked with Apple say the Korean company is a strong competitor on the technology and not just a copycat anymore (Eichenwald, 2014). The advantages Samsung now have established in the smartphone industry would not have been possible, if not for the earlier strategy built on external sources from Apple.

7.3 Competences and sources of competitive advantage

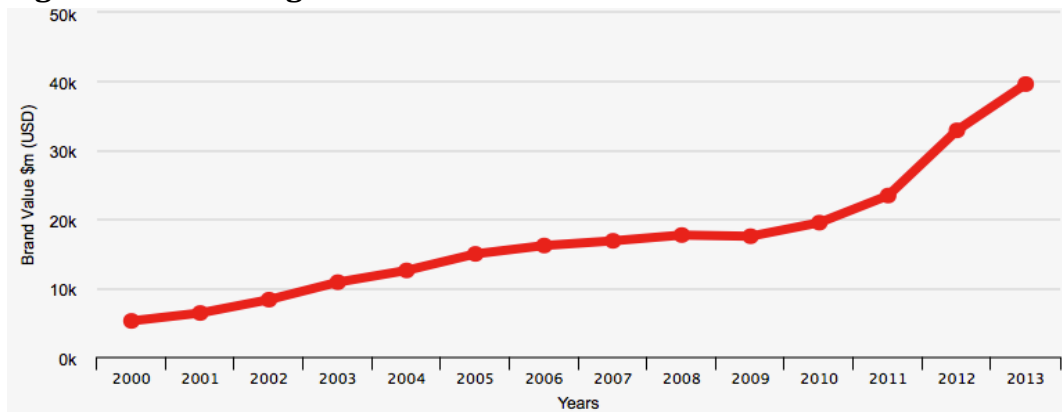
The first quarter of 2012 was the year Samsung unseated Apple as the smartphones' top vendor (Simpson, 2012). Hence, Samsung is currently the market leader in the smartphone industry, in terms of market share. Additionally, it is seen that their profit is rising, as in the fourth-quarter of 2013, profit rose 76% as a result of record high smartphone sales, much because of the company's Galaxy S production line (Sherr & Ramstad, 2013). Furthermore, Samsung Galaxy S4 is considered comparable to Apple's iPhone 5 by many shoppers in both design and technical features. Hence, Sherr and Ramstad (2013) argue that Samsung has succeeded in closing the coolness gap with Apple.

This illustrates that Samsung has many advantages in the smartphone market, thus are able to create smartphones that can rival the iPhone in both sales and appeal (Sherr & Ramstad, 2013; Simpson, 2012).

7.3.1 Strong brand

As seen in previous chapter (section 6.3.1) Apple is a popular brand, however, Samsung has taken a smart approach by attacking Apple's hip image and counteracting its coolness (Sherr & Ramstad, 2013). After increasing the R&D spending (section 7.3.3), Samsung started producing and releasing superior products. However, much of the world did not associate Samsung brand with mobile phones (Lev-Ram, 2013). Samsung decided in 2010 to change their strategy as they realised that so far their approach did not work. The company took action to take control over their message to the customers, instead of relying on partners to tell their story for them (ibid.). Figure 7.1 illustrates how Samsung's brand value has increased the past years.

Figure 7.1: Samsung's brand value



Source: (Interbrand, 2014)

Samsung's brand has become strong due to their competences and use of advantages in the industry the company competes. Without a doubt, Samsung has grown as a result of innovation leading to top-notch products (Badenhausen, 2013). According to Forbes ranking, Samsung's value has skyrocketed 136% over the past three years and Samsung had the strongest one-year gain of any brand in the top 100, up 53% to \$29.5 billion (ibid.). Furthermore, Galaxy S4 has been the flagship for Samsung to compete with Apple, and Samsung spent more than \$4 billion on marketing the product in 2012. This is four times Apple's budget, and has strengthened the brand and the company's position globally (Interbrand, 2014). Samsung evolves its brand to be considered with more than just innovation and try to achieve the ambition of enhancing the lives of its customer (ibid.), in line with the company's vision to "inspire the world, create the future" (Samsung Electronics, 2014, p. 19).

Samsung was the favourite choice of "switchers" in the earlier study by CRIP⁶. Among customers who were switching brand or change from a feature phone, 34% bought Samsung, verses 24% iPhone (Elmer-DeWitt, 2014). Samsung's growth in the industry as a result of good relationships with mobile operators, which has exposed Samsung's portfolio to a large base of potential customers (ibid.). Samsung's brand value has increased further 34% from 2013: "...a faster pace of innovation and wider range of devices are among many factors that have seen its brand value increase" (International Business Times, 2014).

⁶ Consumer Research Intelligence Partners

7.3.2 Vertical integration and strategic alliances

Samsung has been relying on alliances linked with the smartphones they produce and this has been of huge importance for their technological advantage (Appendix 1.2). Most importantly, this has benefited Samsung in the R&D progress (section 7.3.3).

Samsung are excellent in in-house hardware manufacturing and their biggest advantage is perhaps that they own the whole manufacturing facilities, where they build everything from screens to chips. This allows them to cut costs to make smartphones in a way that few other manufacturers can (Sherr & Ramstad, 2013). Appendix 7.2 shows a short sample of Samsung's subsidiaries in manufacturing (blue) and R&D (orange), and Samsung now manufacture around 70% of global smartphones in their Vietnamese facilities. This is where Samsung will make and assemble the next-generation high-definition screens, including curved screens, for electronic devices at a capacity of 48 million items a year (Tuoitrenews, 2014).

By examining the costs of producing Galaxy S4 the company's cost reduction can be exemplified. The estimated material cost for producing Galaxy S4 was around \$236 per unit, excluding manufacturing costs.⁷ However, 63% of Samsung's costs per unit are channelled back to the company (Epstein, 2013). Moreover, this gives Samsung a significant level of control over its devices in terms of better coordination, transfer of tacit knowledge and technologies. Thus, results in a economising of production and organising costs that no other vendor can compete with, increasing the competitive advantage of the vertical integrated company. Additionally, the South Korean company is able to change designs and bring new products to the market at a rapid pace, which has been beneficial in order to quickly meet the rising demand for its devices with almost 314 million shipments in 2013 (Lev-Ram, 2013; Business Wire, 2014).

Nevertheless, Samsung currently contracts out the operating system from Google (Worstell, 2013). The timing of this alliance could not have been better. When Samsung and Google joined forces, the operating system was becoming popular (Sherr & Ramstad, 2013), hence with Samsung's advantage in hardware combined with up-and-coming software, it did not take long before the phone became the new benchmark for Android smartphones (ibid.). From this reasoning, Samsung uses strategic alliances to develop software, as this is not part of their current distinctive competences. This

⁷ The estimates were conducted by the research firm IHS iSuppli (Epstein, 2013).

excludes Samsung from the opportunity to make extra profit by selling software online, like AppStore and Google Play. Nonetheless, they can pick the best from the software world, which endows Samsung with flexibility advantage.

Moreover, having Apple as a client has been helpful for Samsung. For obvious reasons it has helped the company economically, as Apple represents a large portion of Samsung's sales in the memory chip market (Lessin, Luk, & Osawa, 2013). Even more important is that when iPhone hit the market in 2007, its brain and screen were Samsung-made. This has helped Samsung enter the smartphone market as a fast second, and according to Hayase "If you buy screens from your competitor, you will be sharing some key information on your next product" (ibid.).

As a result of Samsung's vertical integration, they can manufacture their products cheaper than competitors, allowing them to charge a lower price and compete in the emerging markets, which is one of Samsung's advantages. Moreover, the alliances provide Samsung with R&D advantages.

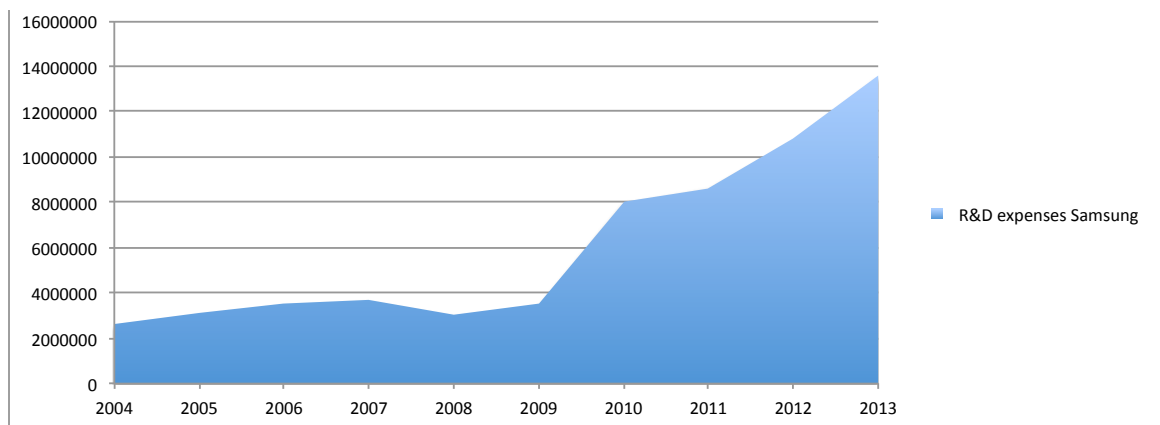
7.3.3 R&D and innovation

Alliances give Samsung "network advantage" allowing the company to improve efficiency and increase innovation by combining resources and knowledge with its partners (Shipilov, 2013). Appendix 7.3 shows Forbes picture of Samsung's alliance network from 2008 to 2009. For instance, Samsung conducts joint R&D with Nanosys in order to develop nanotechnology that improves screens and battery for their smartphones.

Furthermore, Samsung's latest technological alliance has introduced the world's first smartphone with biometric payment authorisation system (FIDO Alliance, 2014). Additionally, the company partnered with PayPal to include fingerprint authentication system using FIDO Ready technology in Samsung's latest smartphone flagship Galaxy S5 (ibid.).

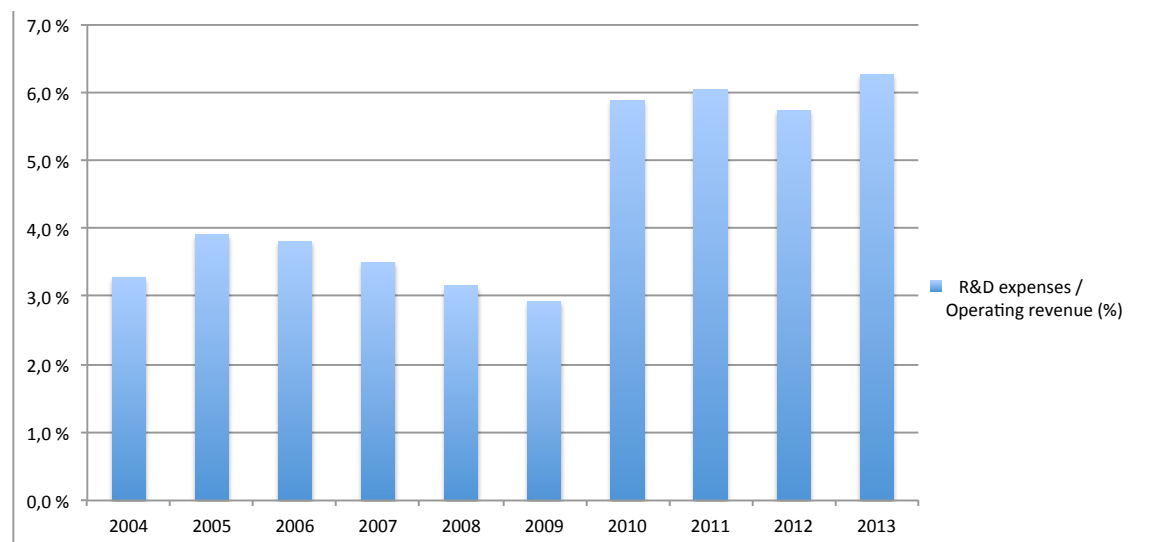
Samsung achieved yet another internal record in 2013 with more than \$13,5 billion invested in R&D (figure 7.2a). This is 6,3% of the company's revenue (figure 7.2b), illustrating a healthy sign on Samsung's further plans. Additionally, the trend from 2004 to 2009 emphasises this even more, as the company increases the R&D investment each year.

Figure 7.2a: Samsung's total R&D expenses



Source: Created by author, based on numbers from ORBIS and (Samsung Electronics, 2014)

Figure 7.2b: Samsung's R&D expenses in per cent of operating revenue



Source: Created by author, based on numbers from ORBIS and the sustainability report (Samsung Electronics, 2014)

As a result of intense focus on R&D investment “at the heart of everything Samsung does” (Samsung, 2014), the company has achieved historic sales of more than 100 million units of the Galaxy S product-line. The newest model Samsung Galaxy S5 has new experiences based on industry-leading technology and innovation that customers care about, including 16 megapixel camera, finger scanner, and built-in heart rate sensor (Samsung, 2013). Additionally, the new phone is dust and water-resistant, making the Galaxy S5 a clear proof of the company's innovation and cutting edge technology (Samsung Electronics, 2014). For this reason, the company has been awarded accomplishments, such as: 2nd Most Innovative Company in the world (The

Boston Consulting Group, 2013) and 3rd ranking Thomson Reuters Top 100 Global Innovators list (Samsung Electronics, 2014).

In the near future, Samsung will continue to reinforce its competitive edge through technology, and is currently working on a new R&D Centre and an R&D campus in Silicon Valley, both scheduled to be finished in 2015. Moreover, the company aims to employ 10,000 researchers in design and software development, as well as continuous investment in R&D (Samsung Electronics, 2014).

7.3.4 Samsung's secret weapons

Samsung has a few secret weapons in the smartphone industry compared to its competitors. First of all, Samsung's products are diversified both in terms of the company in general as they sell a huge variety of products, but also in the smartphone market. Samsung sell many kinds of smartphones, making the customer more flexible to find a phone after their preferences. Additionally, this allows Samsung to charge different prices based on different segments and aspects the phone has (Sherr & Ramstad, 2013). Thus, Samsung can get the better of two worlds: the premium luxury market, and the low-priced smartphone market most attractive in the emerging markets. From this point of view, it is seen that some of Samsung's advantages revolve around simple economic factors, such as price and selection (Simpson, 2012).

Furthermore, Samsung has understood that smartphones has an extra opportunity in the software market, and has invested more and more in software development. This will benefit Samsung as they are a diversified company, and if they get a distinctive competence in the software development, as they have in the hardware, they can potentially combine their products into an ecosystem fully controlled by Samsung.

7.4 Implications for future strategy

Samsung's main concern is how to stop cheaper smartphones from eating their business. The Chinese competition is using Android operation system and Samsung's strategy against them. Who will buy an expensive Android from Samsung, when there is an identical Android system for hundreds of dollars less? (Edwards, 2014). This year, Samsung has tried to come up with a solution by creating a new platform owned and controlled in-house, thus separating the operation system from Google's Android (Gibbs, 2014). The system "Tizen" is Samsung's way of connecting the company's

superior hardware with a new system. This investment, and the soon release of Samsung Z, show that Samsung has vision for Tizen that goes beyond the experimental stage, which makes Google concerned (ibid.).

Samsung has recently lost market share as customers choose cheaper Android phones, thus Samsung is in need of the “lock-in” of costumers, seen at Apple, “apps are the *ecosystem* that customers wants” (Edwards, 2014). For this reason, Tizen has big troubles ahead, as Samsung need to make app-developers switch from Android and iOS. Microsoft has for many years tried this for their Windows phone, without luck, as they only have a tiny fraction of apps available on the other platforms (ibid.).

Samsung’s future strategy involves intense focus on innovation and R&D (Samsung, 2013). Additionally, the company will create a mobile world where innovative technology delivers everyday wonders to consumers (Samsung Electronics, 2014).

Samsung will expand its M&A across different areas to enhance the competitive edge in the smartphone industry. As the company has already established a leadership in hardware development, with slim, light, outstanding camera and powerful battery products, Samsung is now looking for optimization in software capabilities. Hence, the company “has established organizations dedicated to specific areas of software development” (Samsung Electronics, 2014, p. 25). In this change from hardware to software, Samsung established a software centre in 2012.

Chapter 8: Discussion

8.1 Introduction

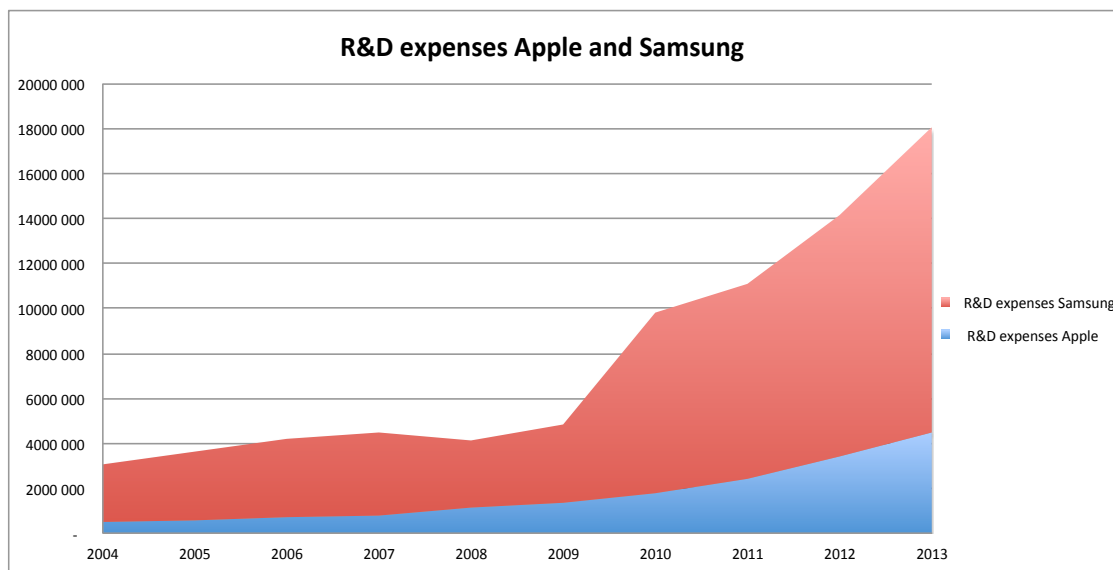
This chapter will discuss and compare the biggest differences between Apple and Samsung's strategies of building and employing capabilities (section 8.2). Furthermore, the future aspect of the dissertation will be discussed, starting with a closer look at how the competition will evolve (section 8.3), followed by a discussion, in section 8.4, on the most important advantages for the future (objective 3) and the future existence of smartphones (8.4.1).

8.2 Strategic differences between Apple and Samsung

Based on the analysis, Apple has core competence in the software and design of the iPhone, while Samsung is better on hardware manufacturing. Thus, Samsung lack the wireless ecosystem that helped the smartphone and Apple become so popular in the first place (Worstell, 2013). Additionally, while Samsung has done a good job of building itself a brand in the smartphone industry, it is still behind Apple as they has the advantage of being the original brand in the industry with high coolness-factor and brand loyalty. Furthermore, the analysis as well as the literature, points out the importance of brand equity, and the cases illustrates a correlation between the brand ranking and position in the smartphone industry.

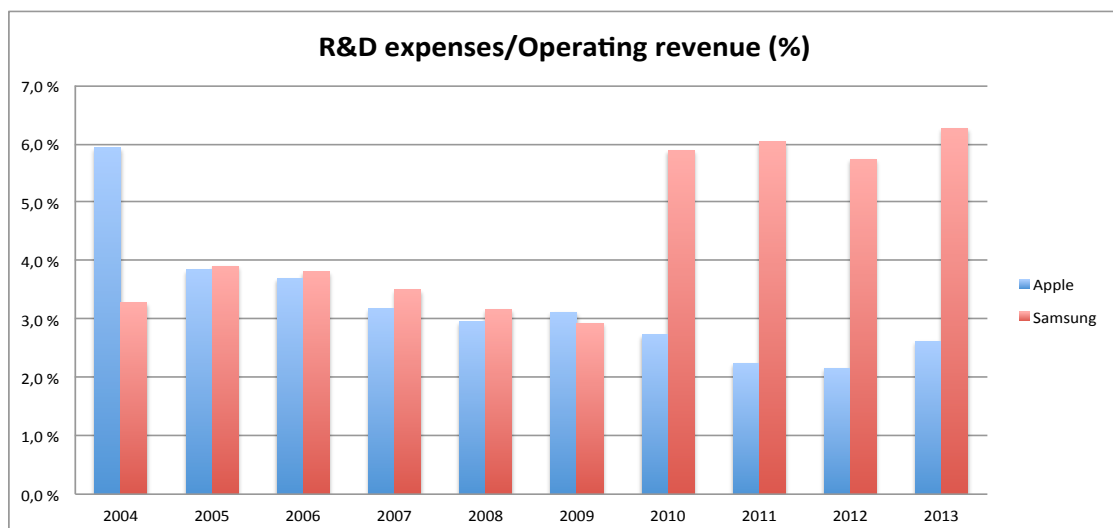
Moreover, some of the same forces that contributed to Samsung's growth leave the phone manufacturer vulnerable to numerous Android-based rivals, including up and coming Chinese manufactures developing cheaper phones, and as such using the same strategy as Samsung did to Apple, with the goal of becoming the new number one (Lev-Ram, 2013). However, Samsung has been able to match competitors' products for a cheaper price (Sherr & Ramstad, 2013). Additionally, comparing the R&D investments, it seems like Samsung is more focused on further developing their innovative advantage as they spend much more (in intensity and amount) than Apple (figures 8.1a and 8.1b). Furthermore, it is clear that while Apple has lower R&D intensity since 2009, Samsung has increased its expenses significantly. This has made Apple meet critics, as some think the company has lost its innovativeness, at the same time as Samsung sees rapid innovation.

Figure 8.1a: Comparison R&D expenses Apple and Samsung



Source: Created by author, based on Table 6.2 and Table 7.1

Figure 8.1b: Comparison R&D intensity



Source: Created by author, based on Table 6.2 and Table 7.1

However, Apple is situated in the most creative part of the technological world, Silicon Valley, with several top-notch universities nearby, such as Stanford and Berkley. This is part of Apple's DNA, and it is unlikely that Samsung can match this by building a new centre in this part of the world, which most international companies now have.

Furthermore, Samsung offers more products in different price categories, whereas Apple offers only iPhone. This makes it easier for Apple to promote its brand, as they can relate it to one high quality product, in contrast to Samsung, which has to promote its brand through many. Even though, Samsung's high-end smartphones are priced

similarly to iPhone, Samsung's devices are often discounted (Sherr & Ramstad, 2013; Simpson, 2012).

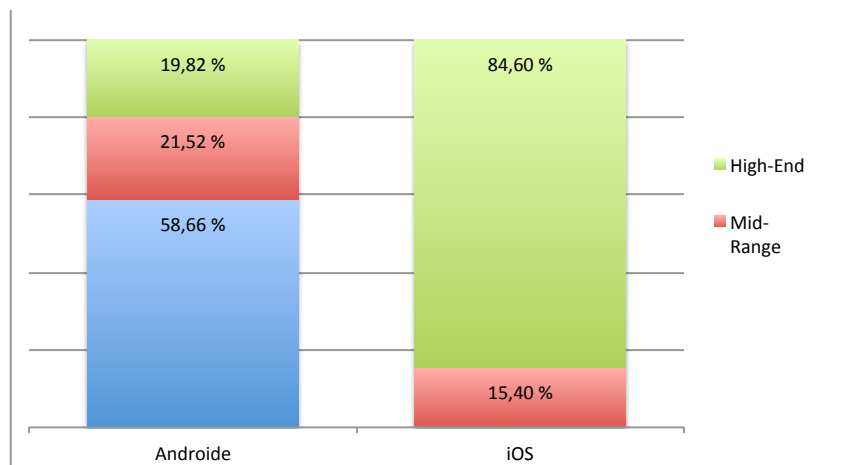
This different price strategy has, as the theory pointed out, caused the company to be stuck-in-the-middle, resulting in lower margins than Apple. On the other hand, Apple stays with its premium price strategy despite the critics, however, there are speculations in whether Apple will release an low-end priced iPhone to be competitive in the emerging markets, and in this case follow the same strategy as Samsung by combining two price-strategies. If this turns out to be true, then Apple too will be in danger of becoming stuck-in-the-middle, and most likely lose some profit in the industry. Thus, the researcher argue that Apple should continue to be true with its distinctive competence and charge a premium price, while the firm keep its reputation as luxury phone intact.

The theory (chapter two) explained the VRIN-criteria framework as a checklist to find sources of CA in the company built on distinctive competences from a RBV. In Appendix 8.1a and Appendix 8.1b the VRIN criteria is used to summarise Apple and Samsung's differences in competences and possible sources of CA based on the analysis. The summary illustrates that Apple and Samsung have CA based on innovation and brand, however, as the theory has illustrated, these factors are impossible to obtain forever, nonetheless they have given both companies an exceptional position in the smartphone industry, and both advantages will take many years for other companies to overcome. Additionally, both the first-mover and fast second to the market has shown to be source of CA in the case of Apple and Samsung. Additionally, Apple focused on value innovation in their disrupted innovation of the first iPhone, and much points to the direction that they may do this again as long as the company continue its path of customer focus, improving customer feeling and continue the high-end strategy.

8.3 Future competition

According to Smith (2014), IDC recently published data breaking down the smartphone market share by price (figure 8.2). It is seen that more than 80% of Apple's devices are in the "high-end" segment, as they cost more than \$400, while almost 60% of all Androids cost less than \$200.

Figure 8.2: How smartphone price differ across platforms



Source: Created by author, based on figure from (Smith, 2014)

Appendix 8.2 shows second quarter market share for smartphone vendors, and the numbers point to a more competitive market. The two dominant brands, Apple and Samsung, are losing share to rivals. Samsung is faced with competition from Apple at the high-end of the market and from Chinese brands like Huawei and Lenovo at the lower-end. Apple's loss of market share is a result of the continued lack of presence in the low-end category, where Apple lose volumes in the fast-growing emerging markets, however, Apple does still have a strong performance in the premium end segment (Lomas, 2014).

Additionally, Appendix 8.2 indicates that Huawei and Lenovo are threatening the market leaders as they continue to increase their global presence. Huawei has gone from 5% market share in Q1 2014 to 6,7% in only one quarter (IDC, 2014; Lomas, 2014). Subsequently, Lenovo is taking over Motorola the coming months, which will eventually create an even stronger competitive force (Lomas, 2014). The Chinese companies have, like Samsung, benefited of being suppliers of bigger established companies in the industry, thereby gaining core competences that they now use to their advantage producing their own smartphones. Following Samsung's strategy, but

with 30 times the population and resource base of South Korea, Chinese competition is something both Apple and Samsung have reasons to fear (May, 2013). Additionally, Lenovo has the advantage of being a familiar brand in the Southeast Asia due to their computers (Osawa, 2014).

8.4 Innovation leading to the future

The competitive market in the smartphone industry has not only made the consumers switch from Apple to Samsung, but additionally led to a change in app-developers platforms, where Apple, in the beginning, had monopoly (Sherr & Ramstad, 2013). Other companies may also want to join this market, when looking at Apple and Samsung where the smartphone industry is the main income for both companies. For this reason and considering their future strategies, it seems unlikely that either of the two companies is willing to drop out of the smartphone war during the next ten years.

However, with these factors and the strong competition in the market, Apple and Samsung will have to continue improving and come up with other, better solutions than their competitors. Thus, they both see R&D and innovation as the most important driver for the future competitiveness of the company in the smartphone industry. Following this reasoning, it is likely that a new type of smartphone will be developed in the future, if smartphones still exists. This is in line with the theory that indicated that innovation is the only way to survive and is the driver that leads to the future.

8.4.1 The innovation curve: future existence of smartphones

The technological history has been through an incredibly change the last decade. This is also true for the phone industry. Back in the 80's no one would believe that small portable phones could be carried in your pocket, and even less likely that it could brows the World Wide Web, which did not even exist before the 1990's. Today, smartphones are just like small computers. For the next then years the technology will possibly change the smartphones to a new generation and many people believe in a hologram phone or a projector phone (Appendix 8.3a). Only looking ten years in the future, it is more reasonable that the future phones will be something in the category of a wristband phone; a bendable phone which can be connected to your wrist and laid out flat when in use, with a incredible light and thin material (Appendix 8.3b).

Smartphones' design has stagnated since Apple released the keyboard-killing iPhone, and the competition has been taken place inside the phone with improved features such as best camera, most apps, and fastest processors (Kelly, 2013). However, recently LG, Apple and Samsung have announced interest in curved screen technology for smartphones (ibid.).

For the next ten years, smartphones is expected to continue evolving and exist. "These things go from being very powerful computers to frankly what we think of today as super computer" (Fitchard, 2012). Moreover, the smartphone has already replaced clocks and cameras and will now focusing on replacing wallets and even ATMs as mobile payments become more developed, especially through Samsung and PayPal's partnership (FIDO Alliance, 2014). Additionally, Apple recently made alliance with VISA and MasterCard to develop software for purchasing via smartphones, making it easier than it is today. Rumours have it that iPhone 6 will become a "wallet", however the new smartphone will not be introduced before 9th of September 2014 (Townsend, 2014). Smartphones will allow customers to bring their identities to any context, and replace keys and interact with your home soon connected to the customers' smartphone. However, there are challenges to achieve this vision, especially in terms of security issues that will protect this increasingly exposed personal data (Fitchard, 2012). As both Samsung and Apple will focus on health care, it seems likely that next generation smartphones may also be developed to participate as doctors and as a tool for keeping customers healthy. "Technology will reinvent healthcare as we know it", and smart software and hardware will replace diagnostic and monitoring reducing doctor visits (Sharma, 2014, p. 22). Furthermore, Sharman (2014) states that the factors discussed in this dissertation are the mobile's forth wave: more companies outside the mobile ecosystem embrace smartphones and shape their own industries. Thus, this wave is the golden age of smartphones. Moreover, Appendix 8.4 illustrates the areas where the smartphone market will affect other industries, underlying the importance of smartphones in the future, hence its existence (Sharma, 2014).

Chapter 9: Conclusion

In order to find the reasons how Samsung managed to become the market leader in the smartphone industry, the company's sources of competitive advantages have been examined. Additionally, since part of the question was to examine how they competed against Apple, Apple's CAs have also been examined. As the results show, Samsung has gone through a process of benchmarking the unique product of Apple, while benefiting from being a supplier of the iPhone's key hardware components. This has given Samsung insights in Apple's processes, and the company, as a fast second, has taken advantage of the up-and-coming open platform Android. Thanks to successful alliances, Samsung has managed to create key advantages on its own and started to create innovative products, increasing brand equity, resulting in being market leader in the industry, since 2012.

More specifically, the literature review pointed out six main sources of CA in the smartphone industry: customer satisfaction through brand equity, distinctive competences, R&D, alliances, product innovation and first-mover advantage. Furthermore, the theory emphasised that the research should be viewed from a dynamic capability perspective, which leads to the observation and importance of Apple's extra quality over its competitors; being the original and cool alternative. However, Samsung improved R&D expenses and, having expertise and competences in hardware technology, upgraded its products and brand.

However, new competitors have entered the market, now expanding outside of Asia, with low-cost smartphones. Thus, made Apple and Samsung rethink their strategy. As the two biggest companies they have the advantage of a recognised brand and customer loyalty, in addition to strong technology development and advantages the newcomers will need time to create. Hence, they both need to remain strongly focused on innovation if they want to keep their place in the market. Furthermore, with a benchmarking strategy, the newcomers will fall behind on innovation, and thus do not change the industry structure, disruptive change (Christensen, 1997).

The rapid dynamic environment illustrates that technology will continue to improve the use of smartphones, thus their existence will continue, as consumers will be more dependent on the smartphone for reasons like staying connected in the social global

world. However, this dynamic environment makes innovation once again crucial for the companies to stay ahead of competitors, hence the smartphone is expected to make a new breakthrough in the future. Additionally, following this dynamic capability rationale that the value is created through customers, then the company with the greatest success will be the one with the most valuable reputation and association (brand equity).

Chapter 10: Recommendation

This chapter will address objective 4, and consider the recommendations of how Apple and Samsung can prevent Chinese competitors from becoming new market leaders. The industry analysis emphasised that new companies without experience in technology or the mobile phone market would not be able to enter, thus newcomers are established high-tech firms, following Samsung's strategy of benchmarking competitors. Moreover, it was clear from the literature that what the established companies want is to take advantage of its own resources to create a situation that makes it more difficult for others to catch up (Wernerfelt, 1984). Thus, the recommendations will be based on the sources of CA that Apple and Samsung possess, as well as the future aspect of the analysis.

Apple and Samsung are the two most successful companies in the industry, and profit is increasingly important as analysts see the smartphone industry plateauing as more than 65% of the advanced markets owns a smartphone (ibid.). Thus, they must be able to dominate the priciest part of the smartphone market as producers with even lower costs will likely dominate the low-end segment.

This is something Samsung's future strategy seems to include, with R&D investments and customer in focus. Furthermore, with their established brand, they are able to compete and continue catching up with Apple, using their advantages to get out of the stuck-in-the-middle price range, and focus more on high-end phones. For Samsung to achieve a better position in the high-end market, the company should create an ecosystem, similar to Apple. Software development is necessary to make the ecosystem possible, thus in-house control of these capabilities is important. Hence, Samsung needs to get control and experience over this capability by focusing on smartphone manufacture not based on Android, for instance by further R&D on Tizen. Moreover, Samsung Group's diversified business allows the company to take their smartphones to a new level, making the smartphone part of the future expectations of smartphones as wallets for customers to use as a paying method, as well as the focus on smartphones in the health business, all in need of a good software foundation. This further implies that Samsung starts looking over its products, and changes strategy to have less products in

the smartphone market, focusing on quality and premium technology for the high-end segment.

Apple will have to reinvent itself with the ecosystem and its services and products. Being situated in the ideal place for such innovation (Silicone Valley), with the cream of talent wanting to work for them, they should have an opportunity to continue their upper hand. However, history is full of companies in similar situations that went bankrupt, because they grew complacent, which could happen to Apple too. Thus, if Apple loses out in the near future, it would be most likely because of its own management problems rather than its competitors. Therefore, Apple's biggest threat is its own success, and they need to illustrate that, even without Steve Jobs, they are still the best company when it comes to creativity and customer satisfaction, especially in this rapidly changing market; Apple cannot afford to hold its breath for too long in regard of innovation.

As the new companies follows Samsung's old strategy, they will benchmark and copy technology from Apple and Samsung, thus stay behind on innovation. Hence, as long as Apple and Samsung continue to innovate and stay aware of what the competitors are doing, the new entrants will never really make a threat to the established well known trendsetters.

By taking advantage of their distinctive capabilities and high brand value, Apple and Samsung will be able to stay ahead of the new competitors, as they have significant longer experience and especially Apple has previously seen competitors come and go, and the company is still standing tall. Wall Street illustrates the company's market value as high, indicating that speculators are confident that Apple will come out of this battle standing with the next thing changing the game of the industry once more.

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Appendices

Appendix 1.1 The research objectives for this dissertation:

- 1: "Identify key drivers for competitive advantage, which have allowed Samsung to improve their position in the smartphone market"
- 2: "Examine if these factors have helped Samsung to take over Apple's position in the industry, by also examine Apple's competitive advantages"
- 3: "Investigate how the drivers will change in the future, what drivers will be most important in the next 10 years?"
- 4: "Formulate a strategic recommendation on how this can be prevented in the future".

Based on the literature review another question to investigate have arisen:

5. "Will the smartphone even exist in the future, or will something new be developed?"

Appendix 1.2a: Apple Inc. Stock Exchange History



Source: (Yahoo Finance, 2014)

Appendix 1.2b: Detailed historical background Apple

Apple Inc. (further referred to as Apple) was co-founded by Steve Jobs and Steve Wozniak and started the business in Steve Wozniak's garage in 1976 (Elkind & Burke, 2008). In 1977 the company was incorporated as Apple Computers Inc. At this time the focus of the company was to sell PC's⁸ (MarketLine, 2014). It is difficult to mention Apple, without Steve Jobs, who was only 21 years when he co-founded the company, was worth \$200 million by the age of 25 and made the cover of Times magazine at 26. Nevertheless, Jobs was not CEO of the company, as this role was given to professional managers in order to run the fast growing business. However, Jobs (board chairman) persuaded Pepsi president John Sculley to work for Apple Computer Inc., the same man who in 1985 got Job's fired from Apple, after a power struggle. In recent years, Sculley has explained in his memoir that he disagreed with Job's vision for the company and states that "Apple was supposed to become a wonderful consumer products company...This was a lunatic plan. High tech could not be designed and sold as a consumer product." (Elkind & Burke, 2008).

Now, Apple has its headquarter in California and operates in six different segments, however, primary in the US, Europa and Asia Pacific (MarketLine, 2014). The company's focus on technology has given them certain innovation capabilities that have allowed Apple to design, manufacture, and market

⁸ Personal Computer (add to a glossary page?)

computers and other consumer electronics, including well-known products such as iPhone, iPod, and Apple TV (MarketLine, 2014).

Looking at Apple's share process changes from 1985 till today one sees important events (from Appendix 1.1a) that will be highlighted:

1985-1990: Apple had a good rise in the stock market and made its mark as a large organization during this period.

1995-1997: Apple went sharply down on the Stock Exchange and in late 1997 they reached the bottom, where they practically stood in risk of being bankrupt. At this time IBM and Microsoft's Windows 95 had entered the market, which can be some of the explanation of Apple's bad results, due to harder competition and cheaper PC clones. However, this is also the year Steve Jobs came back to the organization after 12 years away, and with this he introduced creativity. Right away, Jobs started to replace the board and radically reduced Apple's product line and cut costs in order for the company to diminish back to profitability. This resulted in positive effects and they launched the iMac that gave the company instant success (MarketLine, 2014)

1997-2000: Prosperity for Apple, in March 2000 was a peak in recent times, and in 2001 Apple introduced the iPod that has been a great success with a large market share in the MP3 industry.

2000-2005: During these years, Apple would assert themselves and gain advantage over competitors, thus decided to acquire several smaller companies to develop more professional approach to the software marketed. For instance, Apple, Ericsson and Sun Microsystems formed an alliance aimed at creating a standard format for multimedia delivery to wireless devices, like smartphones, in 2012. This succeeded, and resulted in the introduction of previously mentioned iPod, which over a period of 6 years sold over 100 million units. In addition, iTunes introduced in 2003, which quickly became a market leader in its category of service, and in 2008 iTunes had about 5 billion downloads. This era created a new positive era for Apple.

Appendix 1.3: iPhone and mobile operation software releases

iPhone and software releases	Year	Comments
iPhone	2007	Introduced 1 st generation, and was the worlds most hyped consumer product
iPhone 3G	2008	2 nd generation is launched
iPhone 3GS	2009	3 rd generation iPhone
iPhone 4	2010	Including FaceTime, Retina display and OS 4 software
iOS 4.3	2011	New version of mobile operation system
iCloud	2011	Free cloud service also working on iPhone and other Apple devices
iPhone 4S	2012	Launched its new iPhone product
iOS 6	2012	Introducing over 200 new features to the mobile operating system
iPhone 5	2012	Third quarter the new smartphone was introduced
iPhone 5s iPhone 5c	2013	In Sept. Apple launched both 5s and 5c with iOS 7 (had new user interface)
iOS 8	2014	Update in operation system.
iPhone 6	2014*	Expected release in 2014

Source: Created based on data collected from (Elkind and Burke, 2008; MarketLine, 2014)

Appendix 1.4: Strategic alliances formed by Samsung

Year	Strategic alliances
1988	Expanding its range of products and facilities: merged with Samsung Semiconductor & Telecommunications
1992	Joint venture for manufacturing videocassette recorders (VCRs) in Tianjin, China
2000	Formed strategic alliance with Yahoo and Microsoft to form next generation mobile phone
2001	Signed a multi-year strategic marketing and technology alliance with AOL.
2004	- Joined a strategic semiconductor technology development partnership with IBM. - JV with Sony, a Japanese multinational conglomerate for the manufacture of liquid-crystal display (LCD).
2005	- Extended its collaboration agreement with Sony and signed an exclusive patent cross-licensing agreement. - Entered into a strategic alliance with IMEC (a micro- and nano-electronics research center to develop key technologies for portable communication products)
2010	- Entered into a long-term license arrangement with Intellectual Ventures, gaining access to Intellectual Ventures' extensive patent portfolio. - In 2010, the company launched Samsung Focus, a Windows Phone 7 device with a 4" super active-matrix organic light-emitting diode (AMOLED) screen
2010	- Samsung Electronics and Seagate Technology, a data storage company, entered into an agreement to expand their strategic relationship. - Samsung in partnership with multinational telecoms company, Vodafone Group, launched the Samsung GALAXY Tab 10.1-> Android smart media device. - Subsequently, the company along with prepaid wireless service brand, MetroPCS, introduced the first commercially available fourth generation (4G) LTE enabled Android smartphone, the Samsung Galaxy Indulge.
2011	The company collaborated with the US search company, Google, to launch GALAXY Nexus, the world's first smartphone running Android 4.0 (Ice Cream Sandwich). Subsequently, the company launched its flagship Wave 3 smartphone
2012	- Acquired mSpot, a mobile company based in the US. The acquisition will enable Samsung to extend its cloud and streaming offerings - In September 2012, Samsung began volume production of 128-GB embedded memory for next-generation smartphones and other mobile devices. In the following month, the company launched the GALAXY S III mini, a compact version of the flagship smartphone, GALAXY S III.
2014	- The company and Google furthered their long-term cooperative partnership with a global patent cross-license agreement covering a range of technologies and business areas. The mutually beneficial agreement covers the two companies' existing patents as well as those filed over the next 10 years. - In February, the company introduced a range of light emitting diode (LED) component solutions for use in advanced mobile devices such as smartphones and tablet

Source: Created by author, based on (MarketLine, 2014a)

Appendix 1.5: Structure outline

Chapter	Explanation
1: Introduction	This chapter is made to give the reader a background of the two cases and the importance of competitive advantages as well as the overall research question and objectives.
2: Literature review	The aim of this chapter is to justify the research question, demonstrate its importance and justify the assertion that it is a novel question that has not been addressed before. This chapter will highlight key theories relevant for the further analysis and discuss gaps in the literature.
3: Conceptual framework	The chapter will explain the research objectives based on the literature review, and will provide a conceptual framework, which will be the main structure of the analysis and a visual picture of the dissertation as a whole.
4: Research methodology	This chapter will lead the reader through the adopted research strategy (case study), and consider the benefits and disadvantages by the chosen data collection (secondary data). Additionally, the chapter discuss the framework for coding the data and limitations of the study
5: Industry analysis	The industry analysis gives a market overview as well as the reason for the growth of smartphones. It also considers the future forecast and highlights the macroeconomic perspectives specifically important for the smartphone industry and the attractiveness of the industry in terms if Porter's five forces.
6: Case- Apple	This chapter makes a analysis of the first case, Apple, identifying the current strategy and the sources of competitive advantage in the company, as well as future strategy.
7: Case-Samsung	This chapter is built up as similar as the case of Apple, to easier compare the two cases in the discussion. Thus, it considers Samsung's sources of CA, as well as the current and future strategy
8: Discussion	This chapter consists of different aims. First, it will discuss the differences between the two cases from the analysis. Hence, the reader will have a good understanding of the differences before looking into the future competition, where new cheaper firms are growing threatening Apple and Samsung positions in the industry. Thus, the future will be discussed and make the background for the recommendations. Additionally, some reflections in regard of the cases compared to the theory will be included to see if the theory in chapter 2 is true for the two cases, or not.
9: Conclusion	The conclusion will be used to give the reader the main events that have been discussed and see that the research question and objectives has been answered.
10: Recommendation	In this chapter the recommendations for the second part of the research question will be addressed, speculating in whether there is a way for the two companies to prevent the growing competitors of taking over the smartphone industry, becoming either market leader in terms of market share or profit.

Source: Created by author, based on the structure of the analysis

Appendix 2.1: Definitions of strategy

Author	Definition of strategy	Theoretical view
Alfred D. Chandler (Chandler, 1990, p. 13)	<i>"the determination of the long-run goals and objectives of an enterprise and adoption of courses of action and the allocation of resources necessary for carrying out these goals"</i>	RBV
Michael Porter (Porter, 1996, p. 64)	<i>"Competitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value"</i>	MBV
Allan Afuah (Afuah, 2009, p. 29)	<i>"the set of activities that a firm performs to create and appropriate value"</i>	Dynamic View
Richard Lynch (Lynch, 2009, p. 6)	<i>"finding market opportunities, experimenting and developing competitive advantage over time"</i>	Dynamic View
Johnson et al. (Johnson et al., 2011, p. 3)	<i>"the long-term direction of an organisation"</i>	Dynamic View

Source: Created by author, inspired by definitions in the literature

Appendix 2.2: Barney's VRIN- criteria with explanation

Attributes	Explanation
Valuable	Must be valuable, in the sense that it can exploit opportunities and/or neutralise threats in firm's environment.
Rare	Rare amongst a firm's current and potential competition: Some strategies require a particular mix of physical, human, and organisational capital to be implemented. If this particular bundle of firm resources is not rare, then many firms will be able to ideate and implement the same strategy, making the resource not a source of competitive advantage.
Imperfectly Imitable	Valuable and rare resources can only be sources of SCA if firms that do not possess these resources cannot obtain them. This happens if; a) the ability of a firm to obtain the resource is dependent upon <i>"unique historical conditions"</i> , b) the link between the resources possessed by a firm and a firm's SCA is <i>"causally ambiguous"</i> , or c) the resource generating a firm's advantage is <i>"socially complex"</i> .
Non-Substitutable	There must be no strategically equivalent valuable resources that are themselves either not rare or imitable. That is when two valuable firm resources, each can be exploited separately to implement the same strategies. Substitutability can happen in at least two ways; 1) a firm may be able to substitute another firm's resource with a <i>similar resource</i> , 2) very <i>different</i> firm resources can also be strategic substitutes.

Source: Created by author, based on (Barney, 1991).

Appendix 2.3: Frameworks illustrating sources of competitive advantage

Paradigm	Representative authors addressing strategic management questions	Units of analysis	Main concern	Competitive Advantage
Competitive forces	Porter (1985)	Industries, firms, products	Structural conditions and competitor positioning	Sees the strategic problem in terms of industry structure, competition, and positioning. Hence, the brand equity is part of the CA (see chapter 2.6) as well as the companies generic strategies
Strategic Conflict	Farell & Saloner (1986) Shapiro (1989) Brandenburger and Nalebuff (1995)	Firm, products	Strategic interactions	Game-theoretic models view the strategic problem as one of interaction between rivals with certain expectations about how each other will behave, thus include benchmarking as source of CA
RBV	Wernerfelt (1984) Chandler (1990) Barney (1991)	Resources	Asset fungibility	RBV have focused on the exploitation of firm-specific assets and capabilities , and rests on the firm's distinctive and difficult-to-imitate resources . This also includes technology and R&D .
Integrated perspective: Dynamic capabilities view	Dierickx and Cool (1989) Porter, (1990) Prahalad and Hamel (1990) Teece et al. (1997) Hamilton et al. (1998)	Processes, positions, path	Asset accumulation, replicability and inimitability	A new forms of CA, where firms that can demonstrate flexibility and product innovation , combined with the capability to effectively coordinate and redeploy internal and external competences .

Source: Created by author, inspired by the article and table from (Teece et al., 1997, p. 527).

Appendix 2.4: Definitions of innovation in historical order

Author	Definition of Innovation
Schumpeter, 1939, p. 87	<i>"If, instead of quantities of factors, we vary the form of the production function, then we have an innovation"</i>
Thompson, 1965, p.2	<i>"Innovation is the generation, acceptance and implementation of new ideas, processes products or services"</i>
Becker & Whisler, 1967, p. 463	<i>"We suggest defining innovation as the first or early use of an idea by one set of organizations with similar goals"</i>
Pavitt, 1980, p. 1 book	<i>"Technical innovation in industry is the development, commercialization, adoption and improvement of product and production processes"</i>
Drucker, 1985, p. 67	<i>"Innovation is the effort to create purposeful, focused change in an enterprise's economic or social potential"</i>
Urabe, 1988, p. 3	<i>"Innovation consists of the generation of a new idea and its implementation into a new product, process, or service, leading to the dynamic growth of the national economy and the increase of employment as well as to a creation of pure profit for the innovative business enterprise"</i>
Porter, 1998, p. 45	<i>"Firms create competitive advantage by perceiving or discovering new and better ways to compete in an industry and bringing them to market, which is ultimately an act of innovation."</i>
Damanpour, 1991, p. 556	<i>"Innovation is defined as adoption of an internally generated purchased device, system, policy, program, process, product or service that is new to the adopting organization"</i>
Zahra and Covin, 1994, p. 183	<i>"Innovation is widely considered as the life blood of corporate survival and growth"</i>
Bessant et al., 2005, p. 1366	<i>"Innovation represents the core renewal process in any organization. Unless it changes what it offers the world and the way in which it creates and delivers those offerings it risks its survival and growth prospects".</i>
Plessis, 2007, p. 21	<i>"Innovation as the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market driven products and services. Innovation encompasses both radical and incremental innovation."</i>

Source: Created by author, based on different definitions in the literature

Appendix 2.5: Brand equity factors

Factors	Explanation	Author
Brand awareness	Includes consumer recognition, recall, top-of-mind awareness, knowledge dominance, and recall performance of brands, and brand attitude	(Keller, 1993) (Aaker, 1991)
Brand loyalty	Brand loyalty is the preference of a customer to buy a particular brand name in a product class frequently. It is the measure of attachment that a customer has to a brand, and reflects how likely a customer will be to switch to another brand, especially when that brand makes changes in price or product features.	(Aaker, 1991) (Kim and Kim, 2005)
Brand association	Can be seen as anything linked in memory to a brand and brand image as a set of associations, usually in some meaningful way. The customer's choice of brand depends on how strong, positive, and unique the associations to the brand are, compared with associations to other brands that are perceived to meet the same needs.	(Aaker, 1991) (Pitta & Katsanis, 1995)
Appreciation of quality	The consumer's perceived quality and value of the product compared to the expected value will leave an impression for the band.	(Aaker, 1991)

Source: Created by author, based on literature in the field of brand equity and consumer behaviour

Appendix 2.6: Benefits of strong brand equity

Benefits of strong brand equity	Author
Greater customer loyalty, higher flexibility to deal with crisis situations, higher profit margins, and affects a customer's willingness to pay premium prices.	(Keller, 1993, 2001)
Maintaining and obtain a definite competitive advantage	(Lassar et al., 1995; Kim and Kim, 2005)
Improve sustainable competitive advantage	(Bharadwaj, Varadarajan, and Fahy, 1993)
Success to brand performance and improve on business performance	(Kim and Kim, 2005)

Source: Created by author, based on the literature review.

Appendix 4.1: Relevant Situations for Different Qualitative Research Methods

METHOD	Form of Research Question	Requires Control of Behavioral Events	Focus on Contemporary Events
Experiment	How, why?	Yes	Yes
Survey	Who, what, where, how many, how much?	No	Yes
Archival analysis	Who, what, where, how many, how much?	No	Yes/no
History	How, why?	No	No
Case study	How, why?	No	Yes

Source: Created by author, based on Figure 1.2 (Yin, 2014, p. 9)

Appendix 4.2: Summarized profile of the two cases

	Apple	Samsung
Percentage of total net sales	53%	54%
Shipment volume 2013	153.4 million units	313.9 million units
Smartphone Market Share (2013)	15,3%	31,3%
Profit	29,3%	16,8%
R&D Investment ()	4.457 million USD 3% of sales	14.8 trillion KRW 6,5% of sales
Number of employees (2013)	80,300	286,284
Ranking (brand/innovation)	#1 most innovative company 2013 (BCG)	#2 most innovative company 2013 (BCG)

Source: Created by author, based on information from (The Boston Consulting Group, 2013; Samsung Electronics, 2014; Apple Inc, 2013; Business Wire, 2014)

Appendix 4.3: Secondary data characteristics necessary to be fulfilled

Characteristics	Explanation
1. Reliability of data	The reliability can be tested by finding out: (a) Who collected the data? (b) What were the sources of data? (c) Were they collected by using proper methods (d) At what time were they collected?
2. Suitability of data	The data that are suitable for one enquiry may not necessarily be found suitable in another enquiry. Hence, if the available data are found to be unsuitable, they should not be used by the researcher.
3. Adequacy of data	If the level of accuracy achieved in data is found inadequate for the purpose of the present enquiry, the researcher should not use them. The data will also be considered inadequate, if the data is not specifically relevant in content and amount to the relevant area.

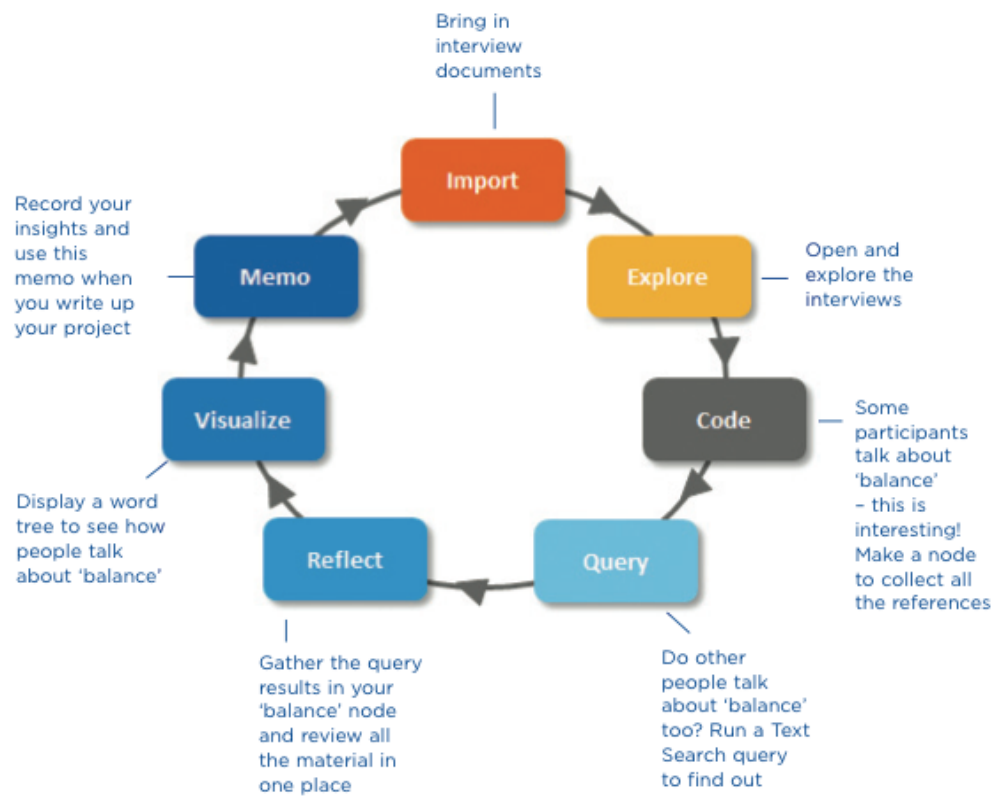
Source: Created by author, based on (Kothari, 2004)

Table 4.4: Secondary data types and databases used for this research

Databases/ Types	Journals & Articles	Magazines & Newspapers	Reports	Financial data
ProQuest	Proquest has been one of the most used databases. Used to find articles, magazines, and news on the smartphone industry, additionally Apple and Samsung, technology and innovation. - Analysis firms like IDC gives deep insight in the smartphone market, however, the researcher has no access to this information. For this reason, ProQuest has been used to search for information through newspapers covering IDC's reports, such as Business Wire			
Business Source Complete (EBSCO)	EBSCO, has with Proquest, been used to gather information about the smartphone sector and the two companies, and provides business related topics. Other than provide information for the analysis, they were both particularly important for the literature review.			
JSTOR Business Collection	JSTOR has been used primarily in the search for literature review as it mostly consists of scholarly journals and scientific articles hosed by Elsevier journals.			
DataMonitor			This has been of great importance for the industry analysis and introduction chapter, as it consists of a wide range of detailed company/industry reports.	
ORBIS			Used for information on financial activity and market, within the electric manufacturing industry.	
Emerald	Emerald provides Emerald journals covering strategy, technology and other science articles. Hence, mostly been used for lit.rev.			
Google Scholars and other databases	Google scholars have been connected to Aston University, thereby providing automatic link to articles accessed through Aston's subscription by using Open Athens. This has provided both Google's academic articles and most of Aston's databases, which has given a more in-depth search. Additionally, other sources has been used, such as company homepage's as well as news and business webpages like bbc, businessinsider, the telegraph etc. Books available online, as well as hard copy from the library has been used			

Source: Created by author, based on research for this dissertation

Appendix 4.5: The path you might take in NVivo



Source: (QSR International Pty Ltd, 2014)

Table 5.1: PESTEL analysis for the smartphone environment

Political	Economic and Environmental	Social	Technological	Legal
- Governmental issues: <i>The majority of electronic manufactures, including smartphone industry, assemble their factories in low-salary countries, such as China. Hence, companies in this industry must consider the political uncertainty in the country they choose to conduct foreign direct investment (FDI), therefore, must governmental issues be carefully investigated.</i>	- The pricing mechanism: <i>The prices in the industry vary much, influencing the customer's decision making. Same goes for manufacturing companies, as the costs of material and resources vary across firms and countries.</i> - Customer PP: <i>The economic factors in this industry also involve economic crises, which effects customer's purchasing power and thereby the smartphone industry. However, the industry is expected to increase within the next years, making it more competitive.</i> - Environmental Issues: <i>Environmental issues involve natural disasters, influencing both manufacturing factories and supply of smartphones.</i> <i>Additionally, environmental legal issues is a big concern in this industry (see Legal)</i>	- Geographical distance: <i>Smartphones are used by many as a tool for connecting with different cultures past geographical distance.</i> - Social networking: <i>Additionally, it has become a excellent tool for social media such as Facebook, influencing the industry to make most of the software available for other platforms and easy-to-use by costumers</i>	- Innovation: <i>The smartphone sector is one of the industries with the most rapid technological change; hence, innovation is essential to survive.</i> - Technological change: <i>Every year the big companies release new phones pack with new technologies. This makes R&D and patents critically important for smartphone manufactures</i>	- Patents: <i>Patents possession is critical in this industry (technological change), e.g. the legal battle between Apple and Samsung</i> - Regulations: <i>Additionally, health and safety regulations (the effect of the use of mobile phones on health is closely monitored) and environmental regulations (more focus on environment and technological waste), are legal issues which must be considered carefully</i>

Source: Created by author, based on information from (MarketLine, 2014; Samsung, 2014).

Appendix 5.2: Five Forces

Buyer	- Made up by two categories: retail outlets and mobile network operators. - Buyers bargaining power is strengthened by the small number of large network operators (making it easier when bidding for contracts). However this advantage can be neutralized by the small size of market players. - The rise of smartphones and rapid technological progress means that buyers have to stock the latest innovative products in order to meet the end-user demand, making their position unsecure. Additionally, market players like Apple are capable of forward integration by conducting their own retail operators, thus weaken buyer power.
Supplier	- The market players are dependent on the quality and efficiency of the software and products provided by the suppliers. - Moreover, the market trend of smartphones has strengthened supplier power as compared to the global mobile phone industry, as more complex components require further investment in the specific assets by suppliers for their production, which in turn locks them up in the strategic relationships with industry leaders. For instance, most widely used operating systems such as Android are essential components for smartphone manufacturers and acquired from external sources or through alliance agreements (as for Google and Samsung partnership), although in a few cases, like Apple these are developed in-house.
New entrants	- The increasing popularity of smartphones has made several newcomers to successfully enter the market, such as HTC. - As the smartphone market is expected to grow in the years to come, it is attractive for potential entrants. - Additionally, as the smartphone is taking over the mobile industry it also moves towards a higher degree of specialization, hence the entry for new entrants will fall. However, entering the market as a completely new entity seems impossible due to capital requirements involving R&D and production facilities, as well as the hard competition with companies like Apple and Samsung. Restrictions in this market must also be considered (Section 5.2).
Substitution	- There are not many substitutes for mobile phones. One possible substitute is fixed line phones, however, this threat is seen as minimal. - On the contrary, smartphones now offer benefits making them substitutes for many other electrical appliances, like laptops, televisions, MP3-players and cameras. - However, for the smartphone market, one possible threat is the tablets. Many of these devices are small and can include sim-card making them similar to smartphones. - The newest trend for smartphones seems to be bigger screens making the size of smartphones more and more comparable to tablets, thus enhance the threat of substitute to tablets.
Rivalry	- The degree of rivalry in the smartphone market is assessed as high. - The market is dominated by a small number of large companies such as Apple, Nokia and Samsung, which escalate rivalry as they can exploit greater resources for research and competition. - Furthermore, the introduction of smartphones has added another competitive dimension, which can be seen as Apple and those using Android operating system (including HTC, LG, Samsung and Sony). - These companies have established themselves as major players, while Nokia has failing to make a lasting impression and consequently been overtaken by Samsung as the world's largest mobile phone manufacturer (illustrated in figure 5.3). - Additionally, fixed costs are high with a need to continually invest in new technology. Mobile network operators offering mobile phones under their own brand finally increase the competition.

Source: Created by author, based on (MarketLine, 2014)

Appendix 5.3: Global Mobile Phones Market Value 2009-2013

Year	\$ billion	£ billion	% Growth
2009	106,6	80,3	
2010	134,9	101,6	26.6%
2011	147,8	111,3	9.6%
2012	154,7	116,5	4.6%
2013	163,4	123	5.6%
2014	170,7	128,6	4,5 %
2015	178,1	134,1	4,3 %
2016	185,2	139,5	4,0 %
2017	191,8	144,4	3,6 %
2018	195,5	149,5	3,5 %

Source: Created by author, based on (MarketLine, 2014)

Appendix 5.4a: Vale share, market share and operation margin

(2010 - Q1 2014)

	2010	2011	2012	2013	Q1 2014
Apple:					
Sales market share	20%	31%	37%	35%	40%
Mobile operation margin	35%	44%	41%	35%	37%
Value share	44%	65%	69%	61%	65%
Samsung:					
Sales market share	22%	24%	36%	44%	42%
Mobile operation margin	10%	15%	21%	20%	22%
Value share	15%	17%	34%	43%	41%

Source: Created by author based on (Yarow, 2014)

Appendix 5.4b: Value share biggest smartphone companies

Value share	2010	2011	2012	2013	Q1 2014
Nokia	19%	6%	-2%	-1%	-3%
BlackBerry	19%	7%	0%	-2%	-1%
Motorola	-1%	0%	-1%	-2%	-1%
Sony	1%	-1%	-1%	0%	0%
LG	-2%	-1%	0%	0%	0%
HTC	6%	6%	1%	0%	0%
Apple	44%	65%	69%	61%	65%
Samsung	15%	17%	34%	43%	41%

Source: Created by author based on numbers from (Yarow, 2014)

Appendix 5.5: Market share by shipment

Market Share	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014
Apple	13,8 %	23,0 %	23,0 %	16,6 %	14,4 %	20,9 %	17,1 %	13,0 %	13,1 %	17,9 %	15,5 %	11,9 %
Samsung	22,7 %	22,5 %	28,8 %	32,2 %	31,0 %	29,1 %	31,9 %	32,3 %	31,3 %	28,8 %	30,2 %	25,2 %
Huawei		3,5 %	3,3 %	4,1 %	3,8 %	4,6 %	4,3 %	4,3 %	4,8 %	5,8 %	4,9 %	6,9 %
LG			3,2 %	3,7 %	3,8 %	3,8 %	4,7 %	5,0 %	4,6 %	4,6 %	4,4 %	4,9 %
Lenovo				3,1 %	3,7 %	4,1 %	3,6 %	4,7 %	4,7 %	4,9 %	4,6 %	5,4 %
Nokia	13,6 %	12,2 %	7,8 %	6,6 %								

Source: Created by author, based on (IDC, 2014)

Appendix 6.1: Apple's unit sales by product FY2013

In million units	Total sales (in million units)	Percentage of tot. net sales
iPhone	150.2	53%
iPad	71.0	19%
Mac	16.3	13%

Source: Created by author, based on numbers from (MarketLine, 2014; Apple Inc., 2013)

Appendix 6.2: Apple's key financials

Apple	2009	2010	2011	2012	2013
Operating Revenue (th USD)	42 905 000	65 225 000	108 249 000	156 508 000	170 910 000
Profit margin (%)	28,1 %	28,4 %	31,6 %	35,6 %	29,3 %
R&D Expenses (th USD)	1 333 000	1 782 000	2 429 000	3 381 000	4 475 000
R&D Intensity (%)	3,1 %	2,7 %	2,2 %	2,2 %	2,6 %

Source: Created by author, based on (Apple Inc., 2013)

Appendix 7.1: Key financials for Samsung

Samsung	2009	2010	2011	2012	2013
Operating revenue	119 359 102	136 262 182	143 255 570	187 841 967	216 688 138
Profit margin (%)	9,0 %	12,5 %	10,4 %	14,9 %	16,8 %
R&D expenses	3 491 706	8 018 463	8 643 136	10 772 272	13 567 748
R&D (%)	2,9 %	5,9 %	6,0 %	5,7 %	6,3 %

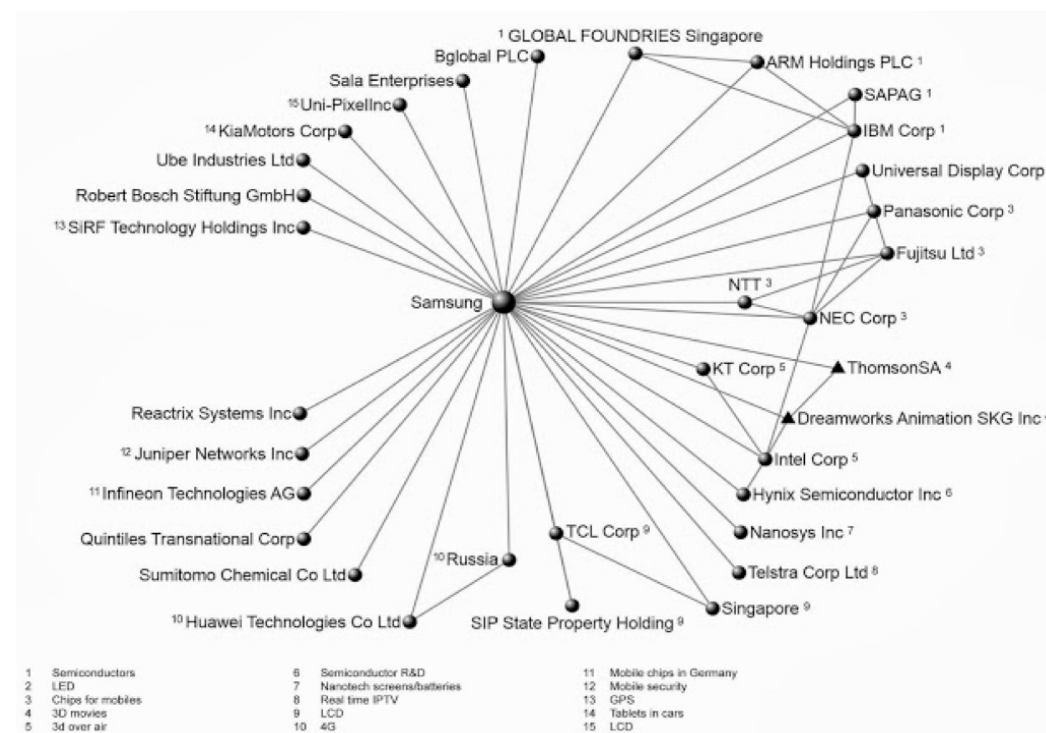
Source: Created by author, based on (Samsung, 2013) and Orbis database (2009-2013).

Appendix 7.2: Sample of Samsung's subsidiaries

Subsidiary	Ownership
SAMSUNG AUSTIN SEMICONDUTOR CO LTD	100
DONGGUAN SAMSUNG MOBILE DISPLAY	100
TIANJIIN SAMSUNG LED	100
SAMSUNG ELECTRONICS HUIZIHOU	100
SAMSUNG ELECTRONICS VIETNAM	100
BEIJING SAMSUNG TELECOM R&D CENTER	100
SAMSUNG BANGLADESH R&D	100
SAMSUNG ELECTRONICS (CHINA) R&D CENTER	100
SAMSUNG GUANGZHOU MOBILE R&D CENTER	100
SAMSUNG LCD NETHERLANDS R&D CENTER HK	100
SAMSUNG MOSCOW RESAERCH CENTRE	100
SAMSUNG R&D INSTITUTE JAPAN CO.LTD.	100
SAMSUNG SEMICONDUCTOR CHINA R&D LTD	100
SAMSUNG SEMICONDUCTOR ISRAEL R&D CENTER	100
SAMSUNG TIANJIN MOBILE R&D	100

Source: Created by author based on (Samsung, 2014) Orbis data set (first 100 subsidiaries)

Appendix 7.3: Samsung's alliance network (2008-2009)



Source: (Shipilov, 2013)

Appendix 8.1a: Evaluation of Apple's CA, using VRIN-criteria

Capabilities and distinctive competences	V	R	I	N	Explanation
Brand equity and customer satisfaction	✓	✓	✓	✓	Due to the other advantages of Apple, the company has achieved incredible brand loyalty among customers, as well as being the cool alternative in smartphone industry. This is something that is valuable as it allows Apple to charge premium price, additionally, it is rare and from the dynamic capability perspective it gives Apple an extra quality seen from the customers view. It takes a long time to build a brand, thus it will remain non-subsidiary for a while, and will not be imitable. Future: Continued leverage in brand loyalty dependent upon Apple keeping its "cool" by still being seen as the tech leader
Technology development (R&D and Innovation)	✓	✓	✓	✓	For Apple's case this is mostly done in terms of the company's focus on the customer and the ease to use of the products they create. Additionally, they have been criticised for too much incremental innovation, however as the analysis point's out: it takes time to create breakthrough and radical innovation. Over time, when technologies become generic, prices will fall. So Apple will be forced to continue innovating.
First-mover advantage	A way of getting and use the resources first				Not a resource in the terms of VRIN, however, it is seen that it has been valuable for Apple to be first in the market, and it is impossible to be first twice, additionally, it has been an important factor for which Apple could take a premium price, as well as being the original brand, creating a important coolness factor. Thus, in the case of Apple it is seen as a CA.
Vertical integration	✓	✓	✗	✗	Vertical integration in terms of software and design. This is part of the company's strategy, however they do not produce everything themselves, but has a advantage as they make the design and software in-house
Strategic alliances	✓	✗	✗	✗	Apple has many strategic alliances, for instance with Beats headphones, IBM to help business systems sync with IOS (from this summer), and car producers (BMW, Tesla etc.) to use iPhone as navigation.
Outsourcing	cost advantage and flexibility				Apple outsources the manufacturing process of the smartphone production to trusted suppliers, in order to focus on the software, design and quality of the product, which is where the differentiation is created. Thus an advantage for Apple
Hardware	✗				Not part of the company's competences, however, free to choose between the best hardware producers – and big enough to be courted by any major producers/technology provider. More flexible than Samsung. Increasingly important in a fast-paced market.
Software	✓	✓	✗	✗	Software is one of the core competences of Apple, and the choice of letting third party developers make software specifically for iPhone is absolutely valuable and rear in the sense that the smartphone market is mainly a competition between iOS software and Android. However, it is imitable by others and there is a substitute as most of the market chooses Android over iOS.
Ecosystem and "lock-in" of customers	✓	✓	✓	✓	The way Apple uses the software in all its products is what makes the vertical integration of software worth it for Apple. This is unique in the smartphone market, and even though competitors have tried to copy the lock-in effect, none has made it yet. Thus this is a source of CA for Apple, and it fulfils all criteria's.
Product diversification	Weak				Apple does not provide the customer with opportunities in the smartphone market, and compared to Samsung they are less diversified looking at the company as a whole. However, they provide customer with the choice of premium price or older versions for medium price. The largest and most relevant diversification today is the ecosystem: iCloud, iCloud drive/Drop-box, iTunes. Without their own software IOS making it "plug and play" will be increasingly difficult. Only Apple has this advantage.

Source: Made by author, based on the analysis and (Barney, 1991)

Appendix 8.1b: Evaluation of Samsung's CA, using VRIN-criteria

Capabilities and distinctive competences	V	R	I	N	Explanation
Brand equity and customer satisfaction	✓	✓	✓	✓	The brand equity for Samsung has seen a rapid increase and is a significant explanation to the company's growth the last years as they have been spending much more on marketing, and changed strategy to take the responsibility of reaching customers awareness from within the company and not from a second hand institution.
Technology development (R&D and Innovation)	✓	✓	✓	✓	Innovation is a big part of Samsung's rapid success. The company has changed from benchmarking Apple on technology, to be a trendsetter on its own, and with their waterproof flagship in the high-end they put pressure on Apple's iPhone, illustrating a long-term plan and is not easily imitable. It requires a big commitment and investment over the long perspective, and as seen in the new Chinese companies and Samsung's previous strategy, it is often more tempting to go for the short-term copying, reducing investment. However, this will leave the company always one step behind.
Fast 2nd	✓				For Samsung, it has been important that they had Apple to benchmark in the first place, additionally, the researcher is sure that the company has benefited of being a supplier of iPhone's hardware, given insight in the technology and process of Apple. CA, taken advantage of cheaper innovation and an opportunity in the market. And therefore Apple is cutting them off, to stop the copying.
Vertical integration	✓	✓	✓	✗	Huge part of their CA in the industry, especially as it reduces the cost and is one of the reasons for how the company could become the fast second. Thus the company earn more on each sold smartphone and can compete with Apple, being the two companies making most profit.
Strategic alliances	✓	✗	✗	✗	The alliances are valuable to the firm as it gives them both technology and the software needed to be competitive in the industry. Additionally, it provides the company with R&D advantages through synergies with other companies as PayPal. Nonetheless, the theory indicates this as a normal and necessary advantage in the industry and it is likely that all the competitors in the smartphone has strategic alliances in one way or another.
Outsourcing	cost advantage and flexibility				The company outsource the software to Android and thus more flexible as it can change in the unlikely event that another company should be more attractive in the software platform, such as Microsoft. Additionally, it gives Samsung the opportunity to focus on the core competences of the company.
Hardware	✓	✓	✗	✗	Samsung is excellent in hardware development and does the manufacturing in-house, giving them valuable advantages. There is a risk of substitution when it comes to products developed through technology, and Samsung is not without competitors.
Software	✗				Not part of the company's competences, however, can choose open platforms like Android, which provide many advantages More flexible than Apple, even though there is less software platforms in the market. This is a great opportunity for the company in the future.
Lock-in customers	✗				This is a feature, which Samsung is missing at the moment. However, as the next section will discuss, it is an opportunity Samsung is trying to take advantage of. The future will show whether they will succeed or fail as others have done before
Product diversification	✓ ✗	✓ ✗	✗	✗	This has been an advantage for Samsung as they can compete in two markets. However, without the ecosystem to take fully advantage of the huge market share and now with competitors taking over the low-end, Samsung gets stuck-in-the-middle. At the same time the company has been criticised for having too many products, hence not focusing on what most of the customers wants, rather giving them too many choices to choose from.

Source: Made by author, based on the analysis and (Barney, 1991)

Appendix 8.2: Worldwide Smartphone Vendor Market Share

(in unit shipments)

	Q2 2011	Q2 2012	Q2 2013	Q2 2014
Samsung	17,0%	32,2%	32,2%	24,9%
Apple	18,8%	16,6%	13,0%	11,7%
Huawei	2,5%	4,1%	4,3%	6,7%
Lenovo	0,2%	3,1%	4,7%	5,2%
LG	5,7%	3,7%	5,1%	4,8%
Others	55,7%	40,2%	40,7%	46,7%

Source: Created by author, based on numbers from (IDC, 2014)

Appendix 8.3a: projector phone



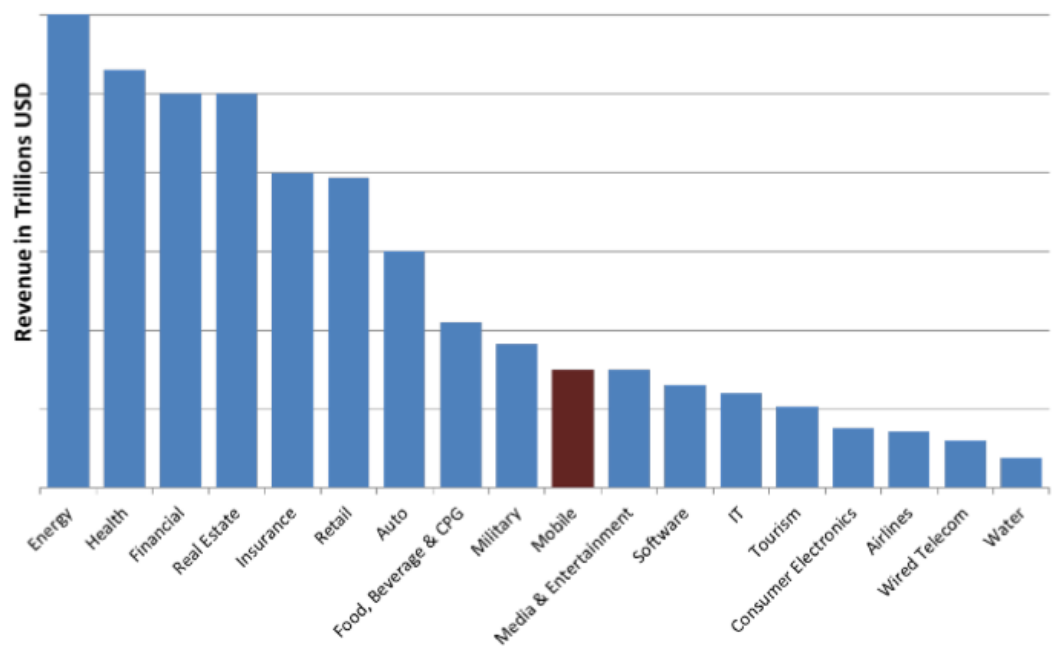
Source: (Benson, 2013)

Appendix 8.3b: Wrist phone



Source: (Benson, 2013)

Appendix 8.4: Global Trillion Million Industries



Source: (Sharma, 2014)