Sustained competitive advantage: mobile phone industry

Many studies have been conducted in the United states about whether a first-mover advantage is a source of sustainable competitive advantage, but there is still a debate whether this is true or not. My research proposal focuses on the first-mover (dis) advantages and the resource-based view of a firm, which will be applied to the European mobile phone industry, to study whether first-mover advantages are really sources of a sustainable competitive advantage.

This research aims to answer the following research question:

“ Are first mover advantages really a source of a sustainable competitive advantage in the European mobile phone/tablet industry?”

To answer this research question, the following sub questions are made up, which together will give an answer to the research question:

What are the views on competitive advantage within the perspectives of the industry structure and the resource-based view, and which limitations exist?

What is a first-mover advantage and how can an organization gain advantage of this?

Is the first-mover advantage sustainable in an industry?

Can a latecomer in the industry overcome “ latecomer” disadvantages and successfully gain a leading position?

This research consists of two parts, a theoretical block and an empirical block. The theoretical part introduces existing knowledge about two competitive streams of thinking and first-mover advantages. This is done by a comprehensive literature study. The main aim of this part is to relate previous research with this study. The second block concerns the empirical research.

This assignment is a research proposal, which implies that the actual field research will not be a part of this report. This means that no actual conclusions and discussion can be provided.

Chapter two discusses the literature review. This chapter includes different streams of thinking concerning theories about competitive advantages, which eventually will be related to first-mover advantages. Chapter 3 uses the input from chapter 2 to develop a theoretical model and to formulate hypothesizes. This chapter forms the basis of the research that has to be carried out. Chapter 4 will discuss the methodology. The methodology section is about ‘ the science of finding out’; it describes the procedures for scientific investigation (Babbie, 2009). Besides the data collection process, this chapter is also about validity and reliability. Finally, this chapter also deals with the actual data analysis methods that are used to put the research into practice.

Literature review

One of the main issues in strategy research is: Why do organizations differ in their behavior and their profitability? In answering this question, researchers have often selected to view organizations as independent entities striving for competitive advantage from either external industry sources (e. g. Porter, 1980) or from internal resources and capabilities (e. g. Barney, 1991). The ability of a firm to attain long-term performance advantages is rare indeed

(Wiggins & Ruefli, 2002). It is suggested that organizations that adopt a first mover strategy, are able to secure sustainable and positive economic outcomes (Lieberman and Montgomery, 1988). A critical choice is the entry timing; whether to be the first mover or waiting to move. Being the first mover brings is risky, but the returns are substantial (Porter, 1998). The industry structure is facing a change, where the level of competition is getting higher. Organizations have to come up with strategies that suits the constant changing environment. Accordingly, organizations' resources are useful to bargain and compete in the competitive industry. This view is in line with the resource-based view that suggests that resources represent a mechanism for gaining a competitive advantage (Veliyath and Fitzgerald, 2000).

In competitive strategy, there are different perspectives. In my previous paper about " Strategic alliances, Competitive advantage, and Industry dynamics" I proposed a framework in which several competitive theories are incorporated, to explain how to gain a sustained competitive advantage in a network. With this framework, I had the intention to highlight the importance of several competitive theories, combined with a network perspective, in order to generate a sustained position in a market, where several criteria's should be met. I argued that looking from a single competitive stream in not sufficient in the dynamic market organizations' face these days. An integrated framework is presented, in which several competitive views are merged with a network view, in order to be able to evaluate and asses the relationships of an organization, that eventual lead to a higher market share. For further explanation of this framework I recommend my pervious paper.

In the following two sections, two competitive streams will be discussed. On the one hand, the external analysis, in order to assess potential opportunities and threats. On the other hand, the internal analysis, which helps us to define the strengths and weaknesses of an organization.

External analysis

Thompson (1967) defines originations in his book ‘ organizations in action’ as open natural systems confronted with both internal and external uncertainties. Because of the assumption that under the condition of uncertainties organizations try to reach their goals in a structured manner, organizations try to seek for closure to rationalize the conduct of doing business. By designing and structuring the firm to meet the environment (and its needs) in an optimal way, firms determine their ‘ task environment’ by determining their domain. Thompson reasons as follows: A firm’s environment is literally the rest of the world or everything else. Because of the comprehensive nature of this definition, he adopts the concept of ‘ task environment’ used by Dill (1958) to denote those parts of the environment which are relevant or potentially relevant to goal setting and goal attainment (Thompson, 1967). Dill found the task environment to be composed out of four major sectors: (1) customers; (2) suppliers; (3) competitors; (4) regulatory groups.

In the five-forces model, the strategic choice is based upon five competitive forces, which are bargaining power of customers, bargaining power of suppliers, the threat of substitutes, the threat of the entry of new competitors, and the intensity of competitive rivalry. It helps organizations to determine opportunities and threats, in order to generate a better understanding of the industry structure, which could lead to new possibilities and actions for strategic change. To reduce the threat of entry, Porter (1985) suggested to implement barriers to entry by exploiting economies of scale, by differentiating their products, by exploiting cost advantages independent of scale, by implementing arrange discouraging strategies or by encouraging the government to impose barriers to entry. An organization gains a competitive advantage by positioning itself into a favorable industry-specific situation. These positions are cost leadership, differentiation or focus (Porter, 1985).

The five-forces model stresses that the main factor of firm performance is the industry in which an organization operates. However, research has shown that there is often more heterogeneity in the performance of organizations within an industry than there is in the performance of organizations across industries (Rumelt, 1991). By adopting the industry as the unit of analysis, the intra-industry heterogeneity in performance cannot be explained and the attractiveness of an industry cannot be evaluated independently of the unique skills and capabilities that an organization brings to that industry (Barney & Hesterly, 1996).

Content

4. 5 Five Forces Analysis of China’s Mobile Phone Industry

The main players in the mobile phone industry consist of mobile equipment suppliers, manufacturers, and customers. The interplay between the players determines the overall threats of the industry and thus helps firm managers to select and implement strategies. The following section applies Porter's five forces model to analyse China's mobile phone industry.

The threat of entry is moderate in the mobile phone manufacturer industry. This is because some new barriers to entry have been introduced. Product differentiation plays a role in increasing the cost of entry while there are few international manufacturers with leading brands predominant in this market. Brands can be powerful while the customers lack the knowledge to differentiate the competing products or services. Customers prefer to choose products or services provided by the companies with good reputations because they believe in the quality behind the brands. This effect is parallel to the creation of monopoly power for these incumbent firms (Segal-Horn and Faulkner, 1999: 39). Government barriers to entry are in the form of the requirement of licenses. Mobile phone manufacturers are in want of licenses to produce and sell mobile phones in this market (Roseman,

2005). Obtaining a license requires meeting the regulations and standards of the MII, which is in charge of the business of telecommunications sector.

Production scale is another important issue in China (Chen, 2004).

Many successful manufacturers decrease production costs by producing a huge amount of volume to reach economies of scale. On the other hand, relatively high capital requirement in developing new technologies claiming financial resources may limit the number of prospective entrants (Porter, 1979). Technological development can raise the level of fixed costs in the production process. However, despite these barriers, new firms can still enter this industry by outsourcing core technologies and product modules through joint venture or alliance, and exploiting firm resources. For example, many domestic mobile phone manufacturers successfully enter this market by means of their rich local knowledge, distribution channels, and knowledge gained in join venture.

56

4. 5. 2 Threat of Rivalry

The threat of rivalry is quiet high in the mobile phone industry. This is because there are numerous firms making and selling mobile phones in this market and the level of industry growth is declining. However, the number of mobile phone manufacturers is increasing. The market share of local makers increased from 5% in 1999 to almost 40% in 2003 (Bout et al, 2004). Furthermore, local vendors in China have taken away half of the Chinese market from foreign vendors (Ramstad, 2003). On the other hand, when an industry matures, its growth rate will fall and this leads to intense competition and lower profits (Porter, 1980). According to Figure 1, the growth rate of mobile phone users increasingly declining in recent years demonstrates that this industry has come to maturity. Firms in this industry fight for market share at the expense of other established companies. This may lead to fierce price competition when competitors aggressively pursue a greater market share.

On the other hand, the brand names of some incumbent companies can help ease the degree of rivalry to certain extent. However, the rapid duplication and imitation of new technologies in this industry not only diminishes the profit margin (Barney, 1986) but also represents a high level of rivalry. Moreover, with WTO accession, the reforms in telecommunications make the mobile phone market more competitive (Walmsley et al., 2006). All of these factors determine a high level of rivalry in the mobile phone industry.

57

4. 5. 3 Threat of Substitutes

Substitutes meet similar customers' needs in different way. In other words, they provide different products with roughly the same functions to satisfy the customers. In terms of the mobile phone industry, the product has function beyond basic communication.

Mobile phones are steadily becoming multifunctional now as more and more entertainment devices are integrated with them. Mobile games, digital cameras, mp3 players, and the Internet are integrated with mobile phones. The difference between mobile phones and music players as well as digital cameras is indistinct in customers' minds. However, at the broadest level, firms in the mobile phone industry are in the consumer electronic industry. Therefore, some forms of consumer electronic products, such as video game players, cameras, personal stereos, and hand held personal digital assistants (PDAs), are partial substitutes for mobile phones. On the other hand, recently, the products of international challengers, such as iPod and Blackberry, make the high price market more competitive. Therefore, the level of the threat from substitutes in this industry is considerable high.

4. 5. 4 Threat of Supplier

A mobile phone consists of hundreds of components. The suppliers in this industry are chip makers, design firms, and distributors. Only a few of China's domestic manufacturers are able to design and produce mobile phone by themselves. Most of them are imported components

from suppliers and other manufactures. For example, Motorola has

Resource-based view analysis

Firm resources

Firm resources are those valuable attributes (VRIN) of a firm's physical, human and organizational capital resources (i. e. it includes all assets, capabilities, organizational processes, firm attributes, information, knowledge etc.). that enable a firm to conceive of and implement strategies that will improve its efficiency and effectiveness (Barney, 1991; Wernerfelt, 1984). These resources are all owned and controlled by a firm (Kraaijenbrink et al, 2010).

As seen in the definition from firm resources above – nonetheless the research vagueness of its definition (Kraaijenbrink et al, 2010) – it can distinguish into three types of resources; physical, human and organizational capital resources (Barney, 1991; Kraaijenbrink et al, 2010). Physical capital resources include the physical technology used in a firm, a firm's plant and equipment, its geographic location, and its access to raw materials (Barney, 1991). Human capital resources include the training, experience, judgment, intelligence, relationship, and insights of individual managers and workers in a firm (Barney, 1991). Organizational capital resources include a firm's formal reporting structure, its formal and informal planning, controlling, and coordinating systems, as well as informal relations among groups within a firm and between a firm and those in its environment (Barney, 1991).

Firm heterogeneity

The models developed to analyze firm heterogeneity are collectively referred to as the resource-based view of the firm (Barney, 1991; Barney, 1994; Peteraf, 1997; Helfat & Peteraf, 2003; Hoopes et al, 2003). Firm heterogeneity is defined as relatively durable differences in strategy and structure across firms – within in the same industry – which have the aim to produce economic rents and a sustained competitive advantage (Barney, 1991; Helfat & Peteraf, 2003; Oliver, 1997). Therefore, one of the issues toward competitive heterogeneity is that effect of industrial forces vary across firms in an industry. This is because each firm’s strengths and weakness differ and therefore the external opportunities and threats will have various effect on firms (Hoopes et al, 2003). It is common to relate competitive heterogeneity to Porter’s’ “ Five Forces model” (Hoopes et al, 2003; Porter, 1980). According to Peteraf (1997): “ heterogeneity implies, that firms of varying capabilities are able to compete in the marketplace and, at least, breakeven. Firms with marginal resources can only expect to be breakeven, those with superior resources earn rents.”

An introduction to first-mover advantages

Organizations are constantly trying to outperform other organizations, by implementing different, superior strategies. According to Porter (1996), an organization can outperform competitors when the organization is able to create a difference that it can preserve. The organization is able to do so by (1) delivering greater value to customers, (2) create comparable value at lower cost or (3) do both. Lieberman & Montgomery (1988) suggested that an organization adopting a first mover strategy might be able to secure and sustain positive returns.

I define the first-mover advantages as “ advantages in terms of the ability of pioneering firms to earn positive economic profits” (Lieberman & Montgomery, 1988). Research point out that pioneering organizations obtaining superior resources and capabilities, enjoy first-mover advantages and thus generates higher levels of market share or financial revenues than later entrants (Frawley and Fahy, 2006). First movers may gain advantages from several sources, such as learning effects, control of scarce resources or by creating buyer-switching costs (Boulding and Christen, 2001; Lieberman and Montgomery, 1988). Lieberman and Montgomery (1988) argue that there are three sources of advantage from first moving. The first source of advantage is about the pre-emption of scarce resources. The second source of advantage comes from technological leadership, which results from successful patents and R&D and from learning curve effects. The third category deals with influencing the behavior of buyers (switching costs). Lieberman (2008) added a fourth source, which is referred to as network effects. “ These potential sources of advantage can be offset, however, by higher costs or risks faced by the pioneer” (Lieberman, M., 2005). The potential sources will be discussed in the following section.

Advantages derived from first moving are gained when certain conditions surround the move (Lieberman & Montgomery, 1998). A condition could be the nature of an organization’s internal characteristics. These characteristics can play a significant role in the degree to which first mover advantages and sustainable performance increases are being realized. Research highlights the significance of specific internal characteristics and first moves (Szymanski, Troy, & Bharadwaj, 1995), but the relationship among internal characteristics of an organization, first moving, and performance is not clear yet (VanderWerf & Mahon, 1997).

Potential sources of first-mover advantages in the mobile phone industry

Pre-emption of scarce assets

Earlier research on first-mover advantages showed that market entrants could be able to acquire superior resources of different types and select the most attractive niches, such as (1) physical resources, (2) geographic positions, and (3) positions in customer perceptual space (Lieberman, M., 2005). For example, when a product requires certain natural resources, a first-moving organization may be able to gain control over their supply (Lieberman and Montgomery, 1988). On the distribution end, organizations may be able to secure major sites. Dos Santos and Peffers (1995) illustrate this with banks, where early moving banks got the best sites for their cash dispensers. An example towards the mobile phone industry would be a deficit in screens. Because of the earthquake in Japan, many manufacturers have problems with the supply of mobile phone screens. Other comparable assets that may be pre-empted by first movers may only support to gain and sustain an advantage in limited conditions. These contain geographic space and investing in plants to try to reach economies of scale (Lieberman & Montgomery, 1988).

Technological leadership

First movers can gain an advantage through sustainable leadership in technology (Lieberman and Montgomery, 1988). Technological leadership is an indication of the knowledge and expertise of the first mover, learned from research & development and other activities (Cho et al., 1998). The literature provides two mechanisms in which advantages can be derived. First, learning effects. Learning effects exist if it takes time for an organization to learn to use a new asset properly, so it is hard for later entrants to copy (Dos Santos and Peffers, 1995, Lieberman & Montgomery, 1988). These effects can be described by learning curves that show how effects of new technologies change over time. A steep learning curve enables a first mover to gain significant advantage over later entrants (Cho et. al., 1998). In addition, accumulated experience in downstream activities can offer important benefits to early movers. The first mover will have a cost advantage, unless later entrants learn how they can produce the product at a lower price than the first mover did. " Porter discusses how Procter & Gamble developed an advantage in disposable diapers in the United States. However, researchers have found that in most industries it is relatively easy for later entrants to learn new technology quickly and overcome the lead held by the first-mover firm" (Reference for Business, N. D.).

The second mechanism which can be derived from technological leadership is obtaining patents or trade secrets, which will be kept by the first mover. In the mobile phone industry, patents appear to protect first mover advantages. However, I think that other mobile phone producers can invent their own technology quite fast, so that the protection of the first mover's invention can be bypassed quickly enough. A stronger advantage from leadership occurs when the first mover can establish their product as the industry standard, making it more difficult for later entrants to gain customer acceptance (Reference for Business, N. D.). Organizations that enter a market could be able to learn about their potential customer base and be able to better market and sell to customers. This may be particularly true when entering foreign markets (Cho et al., 1998)

Buyer behavior

The behavior of buyers constitute of opportunities for the first mover to achieve a differentiation advantage or a cost advantage to be endowed in the first/mover by the marketplace (Kerin, Varadarajan and Peterson, 1992). Before later entrants enter, first movers have a monopoly over what consumers see and learn (Dos Santos & Peffers, 1995). Organizations are gaining experience and asymmetric information about the customer, form customer learning, and create switching costs (Kerin, Varadarajan and Peterson, 1992). Switching costs provide incentives for an established relationship to continue. An example in relation to the mobile phone industry is that application stores of manufacturers sell applications that will only work on their operating system. Apple did so with the iPhone. In this case, applications that customers bought would only work on iOS, the operating system for iPhones. Apple built their image early with customers, and educated the customers on what a smartphone should be in general, so that they think that what the first mover offers is what the product should be like (Bohlmann et al., 2002; Brown & Lattin, 1994). Moreover, customers do not feel to try later entrants, since they are not familiar with these products (Bohlmann et al., 2002). Later entrants have to spend more resources than first movers to attract customers on the grounds of the buyer switching costs.

In a follow-up to their key 1988 article, Lieberman and Montgomery (1998) articulate a link between the first-mover advantage literature and the resource-based view of the firm (RBV).

They contend the sources of advantage described above are, in essence . resources. of the firm. Every study of first-mover advantage is really a study about resource building and accumulation (Lieberman & Montgomery, 1998). Others agree that early moves can result in a firm building resources (e. g., Carow et al., 2004), and that this is an important phenomena to study (Ketchen, Snow, & Hoover, 2004a). Indeed, it has long been thought that products (such as those of a first move) and resources are . two sides of the same coin. (Wernerfelt, 1984: 171). Thus, these sources of advantage created with a first move can be subject to a resource-based analysis. Such an analysis is described below.

A buyer contemplating switching from the first-mover's offering to a later

entrant's offering generally faces two types of switching costs: 88 (1) contractual

switching costs are those imposed on buyers by the first-mover through long-term

buyer-supplier agreements (e. g. frequent flyer programmes), (2) non-contractual switching costs can stem from initial transactions costs or investments that the buyer

makes in adapting to the seller's product. These include the time and resources

spent in qualifying a new supplier, the cost of ancillary products (e. g. software for a

computer with another operating system) and the time, disruption, and financial

burdens of learning to use the late entrant's product. The existence of contractual

and non-contractual switching costs not only differentiates the first-mover's offerings

but also stresses the need to attract customers away from the first-mover.

Switching costs typically enhance the value of market share obtained early in the

evolution of the market. Thus, they provide a rational for pursuit of market share.

However, a first-mover with a large market share does not necessarily earn high profits. Early competition for market share can dissipate profits. Under certain

conditions the inertia of an incumbent with a large customer base can make the firm

vulnerable to late entrants who prove to be relatively more profitable.

Customer Switching Costs

Early entrants may enjoy greater opportunities than followers to capture customers

through switching costs (also known as “ lock-in” or “ stickiness”). Switching costs arise

in several ways. For software products that require large initial investments by the buyer

(e. g., e-commerce transaction platforms) switching costs arise from the fixed cost nature

of the basic investment and incentives to maintain compatibility over time. Switching

costs can also develop more gradually as buyers gain experience with the seller’s

product, and as the seller customizes the product to conform to the buyer’s tastes. One example is the loyalty of many buyers to Amazon. com: users grow accustomed to

features of Amazon’s site, which evolve to suit the individual user’s preferences. These

factors allow experienced buyers to search more efficiently on Amazon than on the web

sites of competitors. The resulting lock-in may be compounded by a third source of

switching costs, arising from the desire of buyers to avoid risk and uncertainty. For

example, as Amazon’s reputation for reliability has grown, many consumers are now

willing to pay the firm a premium to avoid the risk of delay, fraud or loss that may be

associated with purchases from an unknown, but lower price vendor.

Undoubtedly, switching costs are an important source of advantage for many Internet

companies. Moreover, as the Amazon example suggests, switching costs are likely to enhance the first-mover advantages enjoyed by some Internet pioneers. Unfortunately,

though, comprehensive and objective measures of switching costs are not available.

Hence, it is not possible to directly test the importance of switching costs in this study

Testing

First-mover implications in international settings also have been studied. Examinations of

first entries into offshore oil drilling of different countries revealed that first movers had higher

long term market share and survival rates (Mascarenhas, 1992a, b; 1997). A study by Isobe,

Makino, and Montgomery (2000) examined Sino-Japanese joint-ventures in China. Again, the

idea of first-mover advantages was supported. Faster entry leads to superior economic

performance. Additionally, Pan and Chi (1999) discovered evidence that early foreign entrants

into China were more profitable than those who entered later.

Disadvantages

Despite many benefits that first-movers could develop, there are also possible disadvantages as well. Later entrants do not have to make all of the investments that the first-movers had to make. They can “ free-ride” on what the first-mover already did (Lieberman and Montgomery, 1988; Cho, Kim and Rhee, 1998). An example to illustrate this disadvantage could be a first-mover that invested a lot of money in the development of product X. After the introduction on the market, a late-mover could easily copy the product instead of developing a new product, thus the investment is lower. Furthermore, when the applied technologies are improved an dispersed, they become less expensive and even more efficient, which enables late-movers to adapt such technologies and make cheaper products (Bohlmann, Golder and Mitra, 2002). Another benefit for late-movers is that they can gain from the actions of the first-mover in that they already cultivated the customers and opened up distribution channels (Cho, Kim and Rhee, 1998).

Followers also face fewer uncertainties than first-movers face. Before Apple launched the iPad, Apple faced uncertainty for the demand of the product, because the product was unknown. Later entrants may have more insights in the demand for such a product after it is introduced to the customers. In consequence, first-movers are likely to make mistakes in positioning the product or skip features customers’ desire. Later entrants can learn from these mistakes and adapt their strategy and/or product to satisfy the desires of customers (Lieberman & Montgomery, 1988).

Inertia can be another problem for first movers (Lieberman & Montgomery, 1988). First-movers could not be able or willing to keep up with the shifting demands of customers or can be burdened with outdated resources. Later entrants have the possibility to compete with superior resources and that inertial forces prevent first movers from attaining these resources (Cho, Kim and Rhee, 1998).

Three types of benefits-technology leadership, control of resources, and buyer switching costs-can provide long-lasting first-mover advantages. However, researchers believe that in many industries, companies entering later can overcome these advantages. Sometimes there are even first-mover disadvantages, or advantages enjoyed by companies who enter later. For example, the first entrant may invest heavily in enticing customers to try a new type of product. Later entrants would benefit from informed buyers without having to spend as much on education. Later entrants may be able to avoid mistakes made by the first movers. If first movers become complacent, later entrants may take advantage of changing customer needs. As the Internet continues to develop, technology companies find themselves especially susceptible to second- or later-mover success. Follower companies are reverse-engineering many new products to develop competing products either faster or cheaper-negating much of the first-mover advantage.

Researchers are continuing to learn under what conditions first-mover advantages are most likely to occur. They are looking for differences across indust