Taxonomy of platform envelopment: A case-study of Apple and Samsung

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ABSTRACT

The increasing prominence of platform products is a novel phenomenon impacting most industries. Consequently, several industries, such as IT, have become platform battlegrounds. These battles largely unfold through what is known as platform envelopment. This paper creates a distinction between two alternative approaches to platform envelopment in relation to strategy, through a case-study of Apple and Samsung, which is conducted by examining various sets of press releases and blog posts regarding the product introductions between 2006 and 2011. The results will provide an insight into how envelopment actually occurs and apply a strategic perspective into this, thus contributing to the platform literature.

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1. INTRODUCTION

The emergence of platforms is a novel phenomenon, influencing most industries today, from products to services (Gawer, 2009). Especially, quite recently, many high-technology industries, ranging from smartphones to social networking sites, such as Facebook and Twitter, have become platform battlegrounds (Gawer & Cusumano, 2008). These battles between platform providers can be illustrated through what Eisenmann et al, (2011) refer to as platform envelopment. Platform envelopment implies that a provider in a certain platform market can enter another platform market, combining its own functionality with the target's in a multi-platform bundle that leverages shared user relationships (Eisenmann et al, 2006), hence leaving typically smaller and financially weaker envelopment's target firm virtually irrelevant to the market (Suarez & Kirtley, 2012). A way to avoid this envelopment, is to change business models (Eisenmann et al, 2006). This, in turn, can be achieved, for instance, by changing what is offered to the customer (Linder & Cantrell, 2000).

This type of "battle for dominance" has been prevalent, for instance for Apple and Samsung. Not only has Apple been pursuing numerous litigations regarding, for instance, Samsung's smartphone designs, but also the competition is constantly ongoing in a sense that these companies are continuously seeking to expand their portfolios, to protect themselves and to attack the competitor (Paik & Zhu, 2013).
The purpose of this paper is to investigate these two platform companies, Apple and Samsung, in terms of the innovation in their business models over time. More precisely, the focus shall be set at the product offering changes during the period of time from 2006 to 2011, in terms of new product introductions, for which the relevant information shall be gathered through press releases. The period from 2006 to 2011 was chosen to be the most appropriate for this study, as for instance, due to the emergence of smart phones and smart TVs, it can be assumed to be of high technological dynamicity, which adds to the research in a sense that various product introductions can be studied, providing a representative sample. As a result, more thorough insight into the researched topic of the product offering changes of platform companies, is assumed to be obtained. The main aim for this paper, is hence to provide an answer for the following main research question:

How do platform companies develop their product offerings over time through envelopment?

The results will provide managers, as well as academics with an insight into how platform companies can, and have innovated in terms of their business models' value proposition segments. This is something that appears to have remained relatively untouched. The existing body of literature studies how platform markets evolve over time, in relation to envelopment through the lenses of, for instance, winner-take-all and supra-platform competition. However, envelopment, which ultimately represents bringing new offerings in the markets, has not been thoroughly studied from a perspective that relates it to the company strategy. While for example Eisenmann et al (2011) provide a typology for envelopment, this has not been linked to the practice appropriately, for instance, in terms of actual case-studies about platform companies.

Next, the following section provides theoretical background regarding platform markets, their competition, strategic issues, and business models. Then the methodology section introduces the companies, Apple and Samsung, as well as the methods for categorizing products into different layers in order to analyze the changes in the offerings in the subsequent analysis section. Last, the discussion and conclusion sections will conclude the findings and discuss potential limitations, and make suggestions for future research.

2. THEORETICAL FRAMEWORK

2.1 Platforms

Platforms, for instance a village market, have existed for centuries. The term "platform" has, however achieved an increasing popularity within executives only recently, largely due to the emergence of information technology (Hagiu, 2006), and now platforms, such as PayPal or eBay, include some of the largest and fastest growing businesses of the past decade (Hagiu, 2013).

As discussed by Cennamo & Santalo (2012), platforms, and hence the resulting two-, or multisided markets emerge to mediate transactions between separate groups of users: for instance, the consumers of video games and producers of gaming platforms' application and complementary content. These transactions occur, for example, in terms of videogames, when the buyer buys a game created by the seller, and plays it using the console provided by the platform (Rochet & Tirole, 2004). Hence, the ultimate function of a platform is to create and maintain the infrastructure for interactions for two different user groups, consequently generating revenue from one, or both sides (Beyeler et al, 2012).

2.2 Strategic issues within platform business

Strategically, platforms can be seen to be rather complex, compared to traditional business, as transactions within platform markets entail triangular set of relationships in a sense that two user groups interact through the platform, when providers are acting as intermediaries (Eisenmann et al, 2006). As Eisenmann et al (2006), further argue, managing platforms is challenging, also, since the strategies making traditional offerings successful, will not work in two-sided markets. Beyeler et al, (2012), support this statement by noting that the different kind of costs occurring to different users of a platform, as well as the platform operators' capability of determining prices and control access, may lead to strategies that are often surprising. For instance, a platform operator can subsidize one side of the market at the expense of the other side (Beyeler et al, 2012).

Eisenmann et al, (2006) argue, that strategic challenges are largely related to pricing, which is complicated, as a price has to be set for both sides of the market factoring in the impact on the other side's growth and willingness to pay. In order to get pricing right, three factors have to be considered: (1) subsidizing quality- and price-sensitive customers, (2) securing "marquee" users' exclusive participation in platform to attract more users from the other user group, and (3) deciding whether to share the single platform to reduce the rivalry and grow the market size, hence reducing market outlays, or fight for proprietary control. (Eisenmann et al, 2006).

Apart from pricing, Hagiu (2013), illustrates three other challenges in terms of strategy. Firstly, a provider has to decide, (1) how many sides to bring on board. Adding more sides could help a company to grow, but it also increases the friction between the sides. For instance, some individual users of the professional networking service LinkedIn, may be reluctant to be part of a

network including corporate users. Second challenge is (2) designing the platform. This refers to the choices regarding which features to include to the platform. Generally, this can be determined by conducting a cost-benefit analysis illustrating whether the cost of implementation is less than the benefits expected. Nevertheless, there is scope for expensive mistakes. Last, platforms must (3) establish rules, regarding who is allowed to join the platform, and what the sides are allowed to do (Hagiu, 2013).

2.3 Dynamicity within platform competition

Competition is generally considered as dynamic and interactive, thus characterized by action/response dyads. These action often include advertisement campaigns, new product introductions and entries into new markets (Chen & Miller, 2012). This is the case particularly within platform markets due to their dynamicity.

As stated by Rysman (2009), value for each side of a platform's market depends on the other side, resulting in either vicious or virtuous cycle of value creation, as well as especially harsh competitive dynamics. The hallmark of the existing platform competition literature is the concept of network effect, which refers to consumers placing high value on platforms with high user amounts. This can be seen to occur as a result of consumers valuing direct links to the other consumers (direct network effect), or through the prediction that a platform with numerous users, will also offer a large variety of complementary products and services (indirect network effect) (Rochet & Tirole, 2003). Thus systems that are expected to be popular, and hence, have a wide variety of available components, will be more popular (Katz & Shapiro, 1994). Eisenmann et al (2006) also create a distinction between a same side effect and cross-side effect. Same side effect refers to whether increasing the number of users on one side makes it more, or less attractive for the users on the same side to be part of the platform, whereas cross-side effect is about whether an increase in one side makes the platform more attractive to the other side. Same side effect is assumed to be negative, but cross-side effect is often positive. In other words, when a platform is managed successfully, a virtuous cycle is assumed to emerge as a result: more demand from the other user group spurs more from the other also (Eisenmann et al, 2006). Consequently, due to these network dynamics, the platform literature generally assumes Winner-Take-All outcome (WTA), in which the platform with the greatest amount of users will "tip the market" in its own benefit (Caillaud & Jullien, 2003). This WTA paradigm suggests that platform companies should adopt aggressive strategies to expand their installed base of users and their stable of application providers so that benefits achieved on each side of the market can be mutually reinforcing. In other words, "get-big-fast", which is something that can be achieved through many strategies (Cennamo & Santalo, 2013). As Eisenmann et al (2006) state, platforms can, for instance, set prices low in order to penetrate the market and grow users' installed base and then leverage on this installed base to generate money on the other side of the market, by charging the developers of applications accessing the platform in attempt to reach the potential customers. Moreover, platform can use exclusive contracting to secure content, hence decreasing the supply of similar goods to its rivals, while increasing the competitiveness of its own offering (Armstrong & Wright, 2007). As an alternative to the still prevalent, traditional view of Winner-Take-All, Cennamo & Visnjic (2013), propose that platform markets evolve through numerous envelopment moves, into supra-platform markets with eroding boundaries between the different market spaces.

Nevertheless, due to the aforementioned network effects and high switching costs, incumbents find it challenging to enter platform markets. In order to overcome the barriers of entry, the new entrants must offer revolutionary functionality. This is why platforms often evolve through sequential Winner-Take-All battles with more advanced new platforms replacing the old ones (Eisenmann et al, 2011). A potential alternative entry path for newer platform providers is envelopment, which, as mentioned, refers to a platform provider's entry into another's market by combining its own platform's functionality with that of the targets to exploit common user relationships and components (Eisenmann et al, 2011). As Cennamo & Visnjic (2013) argue, platform competition generally unfolds in two distinct, yet interdependent phases: first, platform owners make business model decisions in attempt to enhance user- experience within a certain market. Then platforms expand from their core by enveloping into neighboring platform markets, trying to further improve user-experience through cross-platform complementarities. These envelopment attacks are generally successful if (1) the target's and attackers users overlap to a high degree, or (2) the attacker is capable of harnessing the price discrimination benefits, or (3) economies of scope are high. Additionally, if the platforms are complements when the envelopment occurs, large overlap in the platforms' user bases is seen to be important for the successful envelopment, whereas enveloper's realization of remarkable economies of scope plays a major role when the platforms are weak substitutes. In case that platforms are functionally unrelated, significant economies of scope as well as the overlap in the user base is likely to make envelopment a success (Eisenmann et al, 2011).

2.4 Business model innovation in terms of value propositions

Innovating business model serves, on one hand, as way to avoid envelopment attacks, but on the other, it also makes them possible (Eisenmann et al, 2006). Yet, while essential also to every successful organization, a business model is frequently misused as a concept (Magretta, 2002). Therefore, before discussing how to innovate a business model, it is important to know what a business model is, and what is to be innovated (Gassmann et al, 2015). It is stated that: "a business model depicts the content, structure and governance of transactions designed so as to create value through the exploitation of the business opportunities. A business model elucidates how an organization is linked to external stakeholders, and how it engages in economic exchanges with them to create value to all its exchange partners" (Zott & Amit, 2007). Hence, the functions of a business model are to articulate value propositions, identify market segment, define the structure of the value chain, estimate the cost structure and profit potential, describe the position of the firm within the value network and formulate the competitive strategy (Chesbrough & Rosenbloom, 2002).

Business model innovation, in turn, has become increasingly important both, in academics and in practice, due to the increasing amount of opportunities for business model configurations enabled by technological progress, new customer preferences and deregulation (Casadesus-Masanell & Zhu, 2011). It can act as a pathway to competitive advantage, if the business model is sufficiently differentiated and hard to replicate for the new entrants, as well as for incumbents (Teece, 2010). Recent increase in the popularity of business model innovation within companies has emerged, since process and product innovation have a tendency to be more time-consuming and expensive than business model innovation (Amit & Zott, 2012).

Furthermore, instead of more traditional process or product innovation, also business model innovation can help companies to stay ahead in terms of product innovation game (Amit & Zott, 2012). Also, as demonstrated by a multitude of new entrants in various industries, innovative business models can provide basis for sustainable business success, even in competitive contexts with well-established incumbents (Casadesus-Masanell & Zhu, 2011). Consequently, managers often perceive business model innovation as more important for competitive advantage than, for instance, product or service innovations (Gassmann et al, 2015). Still, just as product and process innovations, also business model innovations can be imitated, and hence, there exists an array of business model innovations that were never implemented due to the expected competitive imitation by the incumbents (Casadesus-Masanell & Zhu, 2011).

Yet, it is stated that the notion of business model innovation has not been distinctly established in earlier research (Mahadevan, 2004). When it comes to the mere definition of innovation, Rothwell and Zegveld, (1985), define it as something that involves commercialization of technological change, and an invention of something new, simply as one element. Business model innovation, in turn, relates this to business models. Thus, as suggested by Casadesus-Masanell & Zhu (2011) business model innovation refers to "the search for new logics of the firm, new ways to create and capture value for its stakeholders, and focuses primarily on finding new ways to generate revenues and define value propositions for customers, suppliers and partners". Quite similarly, Mahadevan, (2004), in turn, defines business model innovation as "strategic initiative to configure or reconfigure various elements pertaining to the three dimensions of the business model to enhance value creation potential of a firm, and sustain it over a longer time". The three dimensions discussed here are based on the work of Markides (2000). Markides states that every firm should position itself appropriately in terms of the three dimensions, namely, (1) WHO, addressing the firm's target customers, (2) WHAT, focusing on the nature of the value proposition, for instance, what is offered to the customer, and, (3) HOW, referring to the value delivery system. Therefore, it can be suggested that business model innovation represents configuring, or reconfiguring what the firm offers, to whom it is offered (value proposition), and how that it is delivered, and used for generating revenue in a sustainable way. This relates to the concept of value proposition.

Value proposition is a widely used concept without a specific definition (Hassan, 2012). However, generally it answers the question; what are we offering to whom? Therefore, it reflects explicit choices regarding target customer segment, products or services offered to the customer to satisfy their needs, and how compensation from the offering is generated (Lindgardt et al, 2009).

Value proposition is one of the necessary components of a successful business model (Johnson et al, 2008). Subsequently, the strategic management of a value focus of each firm's value proposition should be viewed as a dynamic, competently developed operating resource that is at the heart of competitive advantage and performance (Kowalkowski, 2011). As Anderson et al, (2006), state, a distinctive value proposition needs to be crafted if a competitive advantage is to be achieved. Rintamäki et al, (2007), in turn, illustrates the importance of a competitive value proposition by stating it should grow the benefits and/or reduce the sacrifices, build on those competencies and resources that can be better utilized than competitors', be unique, and thus different from the competition, and result in competitive advantage.

In general, value propositions can be changed in terms of three dimensions: cost, performance and customer roles (Kambil et al, 1996). However, merely selecting a new value propositions does not guarantee success. Instead, managers also have to re-architect organizational system in a way that enables them to deliver the value proposition effectively, and create a unique, defensible position (Kambil et al, 1996). Still, companies can, often escape "commoditization traps" of their respective industries by either extending or re-inventing value frontier, or by shifting the frontier radically, and as discussed, be unique or different as a result. (Kambil et al, 1996). In doing so, they define new value propositions, which is vital for businesses, as ultimately, it is perceived value that attracts customers, or "lures" them away from the competitor (Grönroos & Ravald, 2010).

3. METHODOLOGY

3.1 Research setting

For this research Samsung and Apple, and their product introductions between 2006 and 2011, which are studied in terms of press releases, and a set of Samsung's blog posts, were chosen as the case study targets. As large companies with numerous platforms, the case study results of Samsung and Apple are assumed to be relatively high in external validity, due to the possibility to take various platform products into account, and therefore, to a large extent generalizable to platforms in general. The time period was set at 2006-2011, as the markets were relatively dynamic back then, in a sense that the first smartphones (iPhone in 2007), and first tablets (iPad in 2010), were released, which then increased the potential to develop software for these devices also during that period. This also adds value to this study in a sense that actual remarkable changes, rather than a period with low dynamicity is studied. In other words, this ensures a sufficient sample size, which ultimately improves the external validity of the results gathered.

Table 1 provides a short overview of the founding, as well as current situation of both companies.

When it comes to the founding conditions of the companies being researched, Samsung was founded in 1938, as a small export business in Taegu, Korea selling dried fish. Yet, it has changed radically, also in terms of business model, to become one of the world's leading electronics companies, specializing in digital appliances and media semiconductors as well as media and system integration. Apple, in turn, was established in 1976, and started by selling solely computers. Already in 1977, Apple made a proper breakthrough, as its new computer model, Apple II, debuted at a local computer trade show, being the first computer to come in a plastic case, including also color graphics. The sales started soaring, and by 1980, Apple, additionally beginning to sell the product abroad, had developed a new computer model, Apple III, and gathered several thousand employees. Therefore, by the year 2006, both companies had expanded remarkably in terms of size and product offerings.

	Samsung	Apple
Founders	Lee Byung-chul	Steve Jobs, Steve Wozniak and Ronald Wayne
Year founded	1938	1976
Company HQ	Seoul, South Korea	Cupertino, California
Employees (2014)	489,000	98,000
Revenue (2014)	US$ 305 billion	US$ 182,795 billion
Subsidiaries	Samsung Electronics, Samsung Life Insurance, Samsung Fire & Marine Insurance, Samsung Heavy Industries, Samsung C&T Corporation, Samsung SDS, Samsung Techwin, Renault Samsung Motors	FileMaker Inc., Anobit, Braeburn Capital, Beats Electronics
Competitors	Panasonic, Sony, LG Electronics Inc., Apple	Dell, Samsung, Sony, Acer, Google

Table 1: Overview of the companies

3.2 Data analysis

Collecting and analyzing data can be illustrated through three steps. First, each press release from the total collection of press releases shall be extracted in order to identify the characteristics that are relevant for answering the research question. This is done according to the template shown in APPENDIX 1. Next, the product introductions shall be categorized based on whether they are entirely new products, or simply a new version of an existing product, as well as based on layers by Fransman (2010) explained below. After this all the product introductions can be analyzed, in order to find out how the companies envelop, or in other words, develop their offerings over time. Finally, a conclusion providing an answer to the research question shall be provided.
In total four sets of data are analyzed: Samsung's press releases in USA, in Canada and United Kingdom, and one set of 839 press releases for Apple, from 2006 to 2011. Additionally, blog posts by Samsung, providing information regarding the product introductions in 2011 were analyzed. Thus, in total, approximately 1500 articles were examined, of which some were duplicates or irrelevant when it comes to investigating product introductions.

The layers, which provide the basis for categorizing the platform products are based on the updated work of Fransman, 2010, which is considered as the most appropriate for this purpose, due to the clear distinction it makes between the different platform layers. Fransman's model includes initially four layers: (1) networked elements, (2) converged communication and content distribution networks, (3) platforms, content and applications, and last (4) end customers. Items in the first layer, including for instance routers, servers and PCs, are produced, and some of them are strung together in layer 2, to form converged networks that are interconnected (e.g. telecoms or cable TV). In the third layer, the platforms are created, upon which applications and content are provided to the final customers on the fourth layer.

However, in order to provide some in-depth results regarding the product market changes, Fransman's model is extended to correspond to the assumed product types released. Hence, a new layer is included for operating systems, and platform, applications and content are differentiated from each other into separate layers. Table 2 illustrates the layer model used for this paper.

Layer	Description
1	Devices (Access points)
2	Operating systems
3	Network
4	Platforms, content and applications
4a	Platforms
4b	Content
4c	Applications
5	Final consumers/users

Table 2: Platform layers

Potential software products, in turn, are categorized based on the categories by Zahavi & Lavie (2009), which, basing its categorization on 6 362 product introductions by 156 firms, between 1985 and 2001, appears to be the most extensive framework for software classifications (Zahavi & Lavie 2012). These categories are illustrated in APPENDIX 2.

Furthermore, it is worth clarifying that for the purposes of this paper, product introductions are seen as product launches provided that the product is entirely new. In this instance, for example the original iPhone made by Apple would qualify as a product launch, whereas iPhone 3 would be seen as a new version of an existing product.

4. ANALYSIS

4.1 Overview

When it comes to entries to new software markets, the table (Table 3), illustrates a major increase over time, together with the emergence of new devices, such as smartphones, pods and tablets. The year 2009, however, deviates from the data with only one new software product launch. Still even in 2009, various new versions (e.g. iLife 09) from existing products were released. It must be taken into account that according to the analyzed press releases and blog posts, the software releases by Apple occurred generally earlier, before Samsung's, which slowly started in 2009. Also, they were more frequent. During the research period, Samsung entered to eight new segments, whereas Apple entered to 28. Compared to Apple, Samsung launched more devices, including for example phones and computers. Additionally, the amounts of product releases from Samsung varied greatly over time, whereas Apple's remained relatively unchanged. Hence, it is obvious that between Samsung and Apple, there is only limited

resemblance. Still, some similarities in terms of market entries can be identified.

2006	2007	2008	2009	2010	2011
1	5	6	1	12	11

Table 3: New software releases during the research period combined

4.2 Strategies and envelopment

In 2009, for instance, Samsung launched its movie store application for phones. Apple had previously entered this market by enabling movies on iTunes, which was initially a mere music platform. Other instances, in which Apple's and Samsung's products compete include the tablets, Galaxy Tab and Apple's iPad, for instance. This is also a valid example of envelopment, which is something Samsung as a follower in terms of market entries, appears to engaging into often. In both cases, Apple released its product first and Samsung acted as a follower. The same applies to the releases of the first tablets and smartphones. This may be a reflection of strategy on a higher level: Apple's early entries refer to a "pioneer" strategy, whereas waiting, and entering later represents a follower strategy (Miller et al, 1989).

As discussed previously, the existing platform literature generally assumes Winner-Take-All battles that get sequentially disrupted and repeated, as a result of network dynamics (Cennamo & Visnjic, 2013). In these single-winner outcomes, managers are normally encouraged to subsidize the early adopters, and then, to rely on the network effects to drive the market to "tip" towards a single standard, typically owned by a single company (Kemerer et al, 2011). When it comes to the competition between Apple and Samsung, the results suggest, however, that this may not be the case. For these companies during the researched period of time, "winner-take-some", might be more suitable way of describing the competition. The competition between these two has elements of supra platform competition, which assumes various different business models, envelopment moves to innovate those business models, or to compete, and innovations to protect the core market (Cennamo & Visnjic, 2013). As Cennamo & Visnjic (2013), further explain, these supra platform markets emerge as a result of parallel envelopment moves into neighboring markets, which lead to the erosion of the boundaries of the markets. For example, iTunes, initially a music platform has now expanded to books, movies and to other content.

Therefore, also when it comes to the development of the offerings of platform companies, envelopment is a concept that acts largely as an explaining factor. Platforms enter into the markets of neighboring providers that have overlapping consumer bases, and utilize relatively similar components (Eisenmann, 2011). This is also highly visible when it comes to Apple and Samsung: a look into the years 2009-2011 (APPENDIX), after Samsung made its first software entry for the period of time studied, reveals its tendency to join a market already served by a competitor. Examples, as mentioned, include Samsung's movie store application, which could be seen as an envelopment attack against iTunes, which had previously included films to its content, and Samsung's TV application store, which at least partially competes against Apple TV. It is also apparent that the business models and competitive strategies of platform companies exceed the borders of one single market greatly, as the possibilities in terms of competitive moves and business model innovation, within the neighboring markets are being taken into account (Fuentelsaz & Gomez, 2006). Thus, the same applies to the product offerings of these companies. Merely during the period of time between 2006 and 2011, both, Apple and Samsung, joined for instance, markets related to TV, and film entertainment, printing and messaging, just to mention few. For instance, iTunes, initially a music platform has been enhanced into something that possesses no proper borders anymore, as it and its store function, now cover for example, books, games, applications, music and movies. Cennamo & Visnjic (2013) illustrate this by stating that platforms can disrupt the market, and obtain leadership by devising their business models for positioning in the envisioned supra-platform market in which, the market boundaries erode.

The existing platform literature (e.g. Eisenmann et al, 2011; Eisenmann et al, 2007) only creates a distinction between different types of envelopment. These are, however, not properly applied to the companies in terms of actual case-studies. This distinction concerns envelopment of weak substitutes, complements, and functionally unrelated envelopment (Eisenmann et al, 2011). Based on this research, additional types of envelopment that to some extent differ from those mentioned can be identified.

Samsung's movie store application, which can be seen as an envelopment attack against Apple's iTunes, illustrates what could be said to be a minor envelopment attack. Considering the wide functionality of iTunes, Samsung's movie store cannot be seen as a full competitor. Amongst the vast content of iTunes, including books, games, applications, music, and TV entertainment, for example, only the movie segment faces the competition initiated by the movie store through its release. In terms of the envelopment types defined by Eisenmann et al, 2011, these platforms would hence be classified as weak substitutes, as they state, weak substitutes serve the same broad purpose, but satisfy different sets of user needs because they rely on different technologies. Examples of this include LinkedIn and Monster.com, which both ultimately serve as employment networks. Yet, whereas Monster.com is designed for finding employment, LinkedIn's functionality includes also messaging, networking and staying informed about the business environments. iTunes and movie store, in turn, while serving largely the same purpose of entertaining, also fulfill similar needs. Movie store is simply too narrow functionally to compete against the full functionality of iTunes. Thus, this sort of envelopment does not appropriately represent envelopment of weak substitutes. Rather than that, it could be said to be a separate form of envelopment, in which the both products are principally substitutes, but the limited functionality of the entrant, allows it to compete against the other platform only partially. Arguably this kind of envelopment still contains elements of weak substitutes. However, what ultimately sets it apart from them, is the high similarity of the both products. The competition is restricted, due to the limited functionality of the entrant, not because the products differ in terms of the needs they attempt to satisfy.

Apart from movie store, which, in fact still partly belongs under envelopment of weak substitutes, Samsung's envelopment attacks fit to the categorization by Eisenmann et al, (2011), as upon their release, they are not revolutionary to fit to the functionally unrelated category. Apple's product launches, in turn, could be said to be functionally unrelated in many cases upon their release (e.g. iPhone, iPad). Eisenmann et al (2011), state that even if two products are designed to serve entirely

different purposes, as with handheld gaming devices and smartphones, they may still have overlapping customer groups and employ similar components. However, blue ocean would perhaps be as suitable metaphor for characterizing revolutionary products such as iPhone, iPad or App Store. As Kim & Mauborgne (2004) suggest, blue oceans refer to previously unknown market places, for which demand is created, rather than fought over. For instance, iPhone had at merely indirect competition prior to the second smartphone market entry (e.g. gaming devices, MP3 players). Approximately a year later, this was largely the case with App Store as well. Thus, whereas functionally unrelated depicts Apple's product launches in terms of their features, blue ocean ideology appears to be the underlying logic behind them. The tables (APPENDIX) also illustrate, that Apple has made its entry into every new market during the research period before Samsung. In fact, in relatively many cases studied, Apple is indeed the first entrant.

All in all, the data examined enables the distinction between two different envelopment approaches. Whereas apple often pursues the functional unrelatedness, driven by the will to release something entirely new, Samsung often enters the existing markets as a follower. The data help to also identify that Samsung appears to release largely devices, which are mainly new versions of existing products, rather than new. Thus, its follower ideology does not merely apply to its software releases. Apple, in turn, has a tendency to launch more software products. Also they are oftentimes entirely new, entering to a previously unknown market. The same goes largely with Apple's hardware, as illustrated through examples above.

5. DISCUSSION

Through a systematic analysis, this paper has delved into the platform competition, and development of the platform companies' offerings in terms of two case study companies; Apple and Samsung.

The findings question the prevalence of Winner-take-all competition within the markets of the companies studied. Instead, the competition between the case study companies can be characterized at least partially as supra-platform competition, involving diverse business models, frequent envelopment moves and eroding market boundaries. Especially Apple, according to the data, serving as a vastly combined software/hardware company, could be suggested to have a broad business model. To some extent this surely applies to Samsung as well, even though it is more concentrated on devices, such as laptops, washing machines and phones.

When it comes to innovating business models through platform envelopment, this paper creates a distinction between two different strategies for envelopment. Samsung appears to have a tendency to envelop into the markets already occupied by the competitors as a following entrant. Practical examples of this include its attack through the release of Galaxy Tab, against Apples iPad, or its first Galaxy smartphone against iPhone. The market entries studied suggest that Apple, in turn, prefers to enter sooner than its competitors. This represent a pioneer strategy, which is associated with being the first entrant on a market (Kalicanin, 2008).

It is also illustrated how the strategies are related to the envelopment moves to the new markets. Apple's pioneer strategy involves envelopment that is functionally unrelated to the competition. In practice, they hence, employ similar components, and are characterized by often overlapping customer groups with the competitors, but have no functional relation. The underlying logic for the product introductions can thus be said to be the attempt to find a previously unknown, blue ocean market, and create demand in it. For companies, this would generally result in an ample opportunity for rapid and profitable growth (Kim & Mauborgne, 2004).

An alternative strategy, as utilized by Samsung, involves largely envelopment of weak substitutes, serving the same wider purpose, yet satisfying different user needs than the competitors. For instance, Samsung's TV application store can be seen as a weak substitute for Apple's iTunes: once again, the larger purpose for both is to entertain, yet it is done by utilizing different approaches. On the other hand, as Eisenmann et al (2011), claim, one firm can simultaneously serve as a platform provider in one network and either as a supply-side user or a component supplier in another. Samsung also has variety of products that represent this complementary kind of relationship to another product, and thus envelopment of complements. For example, its TV application store complements the TVs.

Oftentimes, envelopment of complements and weak substitutes, in fact, go hand in hand. Arguably, they can exist even simultaneously. iTunes, for instance, can be seen to complement, for example Apple's notebooks that use it, yet being a weak substitute for Netflix or ViaPlay offering movies and TV shows. Functionally unrelated envelopment is often easier to distinguish as a separate phenomenon: looking into Apple's product launches, there is often an existing product with a customer group that may overlap slightly, as with iPhone and Gameboy, or iPad and TVs in general. Still, the overlap cannot be said to be high enough to make these weak substitutes.

While not certainly always entering blue ocean spaces, the new product introductions of Apple still suggest that Apple, relatively often does so. Various examples include iPad, iPhone, and for instance, Apple Watch released after the research period. Despite the strategy of leadership, or pioneering nature, at least the mobile handset business has remained as a stable oligopoly. Using a single product strategy to make assumptions of the whole company is silly, but the strategy involved for instance, in the initial release of iPhone into a previously non-existent market, is indeed of huge importance to Apple, and hence largely representative in this instance (West & Mace, 2007).

As discussed, Samsung, on the other hand, appears to have adopted a follower strategy characterized by "wait and follow" as guideline for new market entries (Miller et al, 1989). Due to this, its products are often functionally related to the existing ones, meaning it engages into envelopment in terms of weak substitutes and complements relatively more often than Apple.

6. CONCLUSION

This paper has created a distinction between two alternative approaches to business model envelopment through a case study of Apple and Samsung from 2006 to 2011. It is suggested that companies, such as Apple, with pioneer strategy, being oftentimes the first entrant in previously unknown blue ocean type of markets, engage into functionally unrelated envelopment. Others, such as Samsung, characterized by a follower strategy when it comes to new market entries, envelop in terms of complements and weak substitutes.

The findings expand the existing body of knowledge by relating the forms of envelopment into practice. Additionally, a more strategic perspective into envelopment is offered by viewing pioneer and follower concepts. This, hence provides a previously non-existent insight, into how platform companies actually develop their offerings. This is something that managers as well

as academics can make use of, when looking into the competitive dynamics of the markets of platform providers.

Given that a multitude of product introductions could be studied, the generalizability of the results is assumed to be rather high. Therefore, it is reasonable to suggest that also other companies, to a significant extent, are in line with one of the two separate envelopment approaches suggested here. Yet, some companies may have adopted an approach positioning them somewhere in the between of pioneer and follower as some sort of a hybrid.

When it comes to the potential limitations in terms of the generalizability of the findings presented, it must be noted that as a case-study, this paper studies only two companies. Hence, the possibility of the existence of other logics and strategies in terms of platform envelopment, adopted by other companies, cannot be excluded. Additionally, as this research is time-specific, it has to be noted that the envelopment strategies of platform companies, can change over greater periods of time.

Given the relatively recent increase in the significance of platforms for business, possibilities for the future research are numerous within various industries, such as video games or telecom. A logical way to proceed, would however, be researching the competition between the early and latter market entrants in platform context, as well as the advantages they each possess over the other. For instance, what role does the pre-emption of resources play within platform markets? While this has been already done for more traditional business, in terms of platform literature, it would provide an extension to the existing collection of theory.

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8. APPENDIX

Appendix 1: The columns of the MS Excel-based data collection template

1. Full article
2. Headline and paragraph
3. Launch date
4. Company (Samsung/Apple)
5. Product name
6. Product version
7. Product type
8. Customer classification
9. Category choice
    a. Product launch
    b. New version
    c. Launch with partners
    d. Bundling
    e. Platform
10. Software classification
11. Platform layer

Appendix 2: Software classifications by Zahavi & Lavie used in this paper

1. Operating system enhancements
    a. Performance measurement and enhancement
    b. Peripheral device drivers
    c. File system management
    d. Print utilities/spoolers
    e. Report generators
    f. Screen formatting
    g. Screen savers
    h. Security/auditing
    i. Year 2000 conversion
2. Entertainment
    a. Performing arts
    b. Fine arts
    c. Astrology
    d. Movies/television
    e. Gambling
3. Storage
    a. Backup and archiving
    b. Storage device management
    c. Storage infrastructure
    d. Storage replication
    e. Storage resource management
    f. Online storage & data backup
    g. Data compression
    h. Data/file recovery
    i. Hierarchical storage management (HSM)
    j. Information lifecycle management (ILM)
    k. Network-attached storage (NAS)
    l. Storage area network (SAN)
4. Internet communications
    a. Browsers
    b. Dial-up & connectivity
    c. Email
    d. Instant messaging (IM)/chat/internet relay chat (IRC)
    e. SMS tools
    f. Webcam
    g. Voice telephony
5. Sales & marketing
    a. Customer relationship management (CRM) (Package)
    b. Affiliate marketing
    c. Customer club/Program membership management
    d. Partnership relationship management (PRM)

    e. Professional services automation (PSA)
    f. Sales analysis
    g. Sales force automation (SFA)
    h. Survey analysis
    i. Telemarketing management
    j. Click-stream analysis
    k. Contact center
    l. Classifieds
    m. Customer service/support (CSS)
    n. Direct marketing
    o. E-commerce enablement
    p. Email campaign
    q. Help desk and field service
    r. Market research tools
    s. Pre-sale/proposal preparation
6. IT system management software
    a. Application management
    b. Change & configuration management and control
    c. Diagnostic/troubleshooting/problem management
    d. Event automation
    e. Job scheduling
    f. Load balancing
    g. Output management
    h. System performance management
7. Life style
    a. Buying guides
    b. Social networking/dating
    c. Cooking
    d. Health and physical exercise
    e. Home design/gardening/landscaping
    f. Parenting/family/genealogy
    g. Fashion
    h. Special hobbies
    i. Personal improvement
    j. Trip planners/travel
8. Personal productivity utilities
    a. CD/DVD writing
    b. Data entry
    c. Desktop management
    d. Password management
    e. Media management
9. System-level applications
    a. Virtual machine
    b. Virtual user interface
    c. Web hosting automation
    d. Web server
    e. Clustering/availability
    f. Distributed file system management
    g. Email server
    h. Instant messaging servers
    i. Operating systems
    j. Printer/fax server
    k. Remote access and control
    l. Replication server

Appendix 3: Product introduction data and new software market entries

Apple	Total	Product launches	New versions	Devices	Platforms	Application	Operating systems	networks
2006	35	2	33	22	2	9	2	0
2007	21	5	16	10	1	8	2	0
2008	26	3	23	15	3	6	1	1
2009	26	2	24	13	3	7	3	0
2010	29	9	20	15	4	7	1	2
2011	19	5	14	9	1	4	5	0

Samsung UK/Can	Total	Product launches	New versions	Devices	Platforms	Application	Operating systems	Networks
2006	0	0	0	0	0	0	0	0
2007	9	3	6	9	0	0	0	0
2008	40	15	25	40	0	0	0	0
2009	38	13	25	35	2	1	0	0
2010	42	18	24	38	4	0	0	0
2011	34	8	26	33	1	0	0	0

Samsung USA	Total	Product launches	New versions	Devices	Platforms	Application	Operating systems	Networks
2006	99	28	71	96	0	1	0	2
2007	30	7	23	30	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	13	5	8	13	0	0	0	0
2011	9	2	7	7	0	2	0	0

Samsung blog posts	Total	Product launches	New versions	Devices	Platforms	Application	Operating systems	Networks
2011	37	9	28	29	3	3	2	0

2006	Desktop/laptop	Phone	Tablet	Pod	TV
Operating system enhancements	Apple				
Entertainment					
Storage					
Internet communications					
Sales and marketing					
IT system management software					
Lifestyle					
Personal productivity utilities					
System-level applications					

2007	Desktop/laptop	Phone	Tablet	Pod	TV
Operating system enhancements	Apple				
Entertainment	Apple	Apple			Apple
Storage					
Internet communications					
Sales and marketing					
IT system management software					
Lifestyle					
Personal productivity utilities					
System-level applications		Apple		Apple	

2008	Desktop/laptop	Phone	Tablet	Pod	TV
Operating system enhancements	Apple				
Entertainment	Apple	Apple			Apple
Storage	Apple				
Internet communications	Apple	Apple		Apple	
Sales and marketing					
IT system management software		Apple		Apple	

Lifestyle					
Personal productivity utilities					
System-level applications		Apple		Apple	

2009	Desktop/laptop	Phone	Tablet	Pod	TV
Operating system enhancements	Apple				
Entertainment	Apple	Apple & Samsung			Apple
Storage	Apple				
Internet communications	Apple	Apple		Apple	
Sales and marketing					
IT system management software		Apple		Apple	
Lifestyle					
Personal productivity utilities					
System-level applications		Apple		Apple	

2010	desktop/laptop	Phone	Tablet	Pod	TV
Operating system enhancements	Apple				
Entertainment	Apple	Apple & Samsung			Apple & Samsung
Storage	Apple				
Internet communications	Apple	Apple		Apple	
Sales and marketing		Apple		Apple	

IT system management software	Apple	Apple	Apple	Apple	Samsung
Lifestyle	Apple	Apple	Apple	Apple	
Personal productivity utilities					
System-level applications		Apple & Samsung	Apple	Apple	

2011	desktop/laptop	Phone	Tablet	Pod	TV
Operating system enhancements	Apple				
Entertainment	Apple	Apple & Samsung	Apple	Apple	Apple & Samsung
Storage	Apple	Apple	Apple	Apple	
Internet communications	Apple	Apple & Samsung		Apple	
Sales and marketing		Apple		Apple	
IT system management software	Apple	Apple & Samsung	Apple & Samsung	Apple	Samsung
Lifestyle	Apple	Apple	Apple	Apple	
Personal productivity utilities		Apple		Apple	
System-level applications		Apple & Samsung	Apple & Samsung	Apple	