
Markets-as-Mobile-Networks

How Co-production and Cooperation Shape Emerging Media

Abstract

As mobile video services enter the awareness of consumers, the industry will need to reorganize itself in new ways. Which market actors will benefit from this, and which will be eliminated as a result?

The purpose of this thesis is to develop knowledge of, and produce a theoretical framework surrounding, consumer value attribution and actor value constellations of mobile TV services. Through an iterative research methodology these concepts are then applied to a variety of potential future market scenarios in order to describe strategies on a practical level.

The conclusions are that there are two variables impacting future market structure; the level of demand for services enabling consumer co-production, and the level of cooperation between industry actors.

The authors then proceed to map potential market scenarios along these variables and outline potential actor behavior for each and provide a detailed description of scenarios, dubbed “Status-quo”, “Platform-portfolios”, and “Total convergence”.

Authors: Jan Björk (18683) & Sarah Lee (19228)

Supervisor: Per Andersson

Examiner: Bertil Thorngren

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Opponents: Johan Radojewski (20261) & Rebecca Lucander (20660)

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I. INTRODUCTION

It is May 29, 1999, approximately 11.46 pm. The Svensson family has gathered at their home, all focused on the centre-piece of the living room – the television. The family members are pushing each other around for some more space in the sofa, when it suddenly happens. Estonia has just directed its “douze points” to Sweden which has pointed out the new winner of the Eurovision Song Contest in Israel – Charlotte Nilsson. And as the show is moving towards its end, she is taking up the full screen whilst dancing and sparkling in all pink, in her encore performance of *Take me to your heaven...*

No one knows when Sweden’s next success in the Eurovision Song Contest will be. What we do know however, is that when it happens we will not find the Svensson family displaying the same media consumption behavior as before. Let us assume that it only takes Sweden ten years after the victory in Israel to win again – which would make it the year of 2009. The Svensson family will most likely have invested in a Tivo-like Personal Video Recorder and will be watching the show divided into shorter segments. The family will probably also skip the commercial breaks and commentary. There will also be more space in the sofa, since one of the kids watches the show in another room, online through the computer. The other kid does not care much for the show any more and is therefore satisfied with watching only the highlight clips on YouTube the next day. The third kid has not made it home yet, as she is stuck on the bus, but is watching the show through her brand new Nokia cellphone.

This scenario illustrates the technological development and its consequences for every day life in terms of media- and media relating services and equipment. The development diverts the consumer from previous media consumption patterns where the audience behavior, in terms of time, space, and the form of consumption, was determined by the service provider – a power that is now in the hands of the consumer.

The scenario above shows how consumption patterns are shifted and how the behavior of consumers is altered by new media services, but we must also consider how this will affect the service providers and their business constellations. Let us assume that the family of the above example lives in an apartment and watches TV through the traditional TV-set with a subscription from ComHem. As the provider, ComHem has negotiated contracts with each separate TV channel which allows them to bundle these into TV packages and market them to

end-consumers. Should we follow the value chain further back, we will find that the TV channels acquire their content both through internal productions and by purchasing content from production companies. It is however now obvious whether or not the same holds true for mobile distribution of TV. For the consumer who wants to watch TV shows on her mobile phone she might not need to purchase a subscription from ComHem (Or Viasat, CanalDigital or any other TV operator). Whether it will be the TV operators, the mobile operators or an entirely different set of actors who will come to supply the consumers with mobile TV is yet to be seen, as is the structure of the value chain of suppliers or how allegiances within business alliances will function.

The examples above show that the future adoption of media services is not only dependent on the preferences of the consumer, but also how the industry actors will organize themselves. Thus, the shape of the new media services is influenced by two forces – consumer preferences and how well the industry is able to organize itself and apply suitable business models and strategies that fit these preferences.

1.1. Problem area

The rapid growth and development within the media industry enables a greater choice for consumers as to through which window video media is to be consumed. This thesis will not analyze nor discuss the traditional TV-set which during an extended period has represented *the* media window, but will instead focus on television services through the screen of mobile phones – mobile TV.

Mobile TV has existed as buzz word for quite a few years, although not much has happened in the market, as it is characterized by a certain market immaturity with uncertainties regarding both the consumer and the supplier side. The consumer uncertainty to the service can best be seen as a continuing shift in perception of what the service should entail, thereby the demand for the suppliers' offerings are ever-changing and multifaceted. Amongst the suppliers these changes in consumer demand prevent the formulation of standardized business models and the creation of long-term service portfolios and offerings.¹

It would be impossible for industry actors to provide service delivery capabilities suiting all forms of consumer demand as this implies the ability to satisfy all consumers needs, no matter

¹ Workshop 2007-02-19, session 1, pp 15-18

how diverse, at any given point in time. The sheer economic scale of such an operation, as well as the immense scope of infrastructure investments required would be enormous and completely unsustainable in the long run.

This complex interaction of different organizations and the ever-changing preferences of consumers in regards to new media affects not only the business models involved in mobile TV distribution, but can also be found in multitude of new media platforms. However, even though this thesis aims to focus on the above mentioned uncertainty in consumer value attribution in combination with the multifaceted constellations of organizations, the scope of this the thesis is delimited to the mobile TV market.

1.2. Purpose and research question

The main purpose of this thesis is to develop knowledge regarding, and produce a theoretical framework surrounding, consumer value attribution and actor value constellations of mobile TV services. In order to describe strategies on a practical level, these concepts will be applied to a variety of potential future market scenarios.

By the time this thesis is published, many of the sources will be considered dated and the concept of “mobile TV” is almost unheard of in the modern mobile discourse. It is however not our intention to create a map of the modern mobile TV landscape, rather to analyze the discussion surrounding, as well as ideas prevalent in, the Mobile TV discourse during its period of emergence as a medium. Through qualitative analysis of the above-mentioned areas we will draw inferences on implications for emerging media in general, exemplified through strategic imperatives for the outlined Mobile TV market actors.

Hence, this thesis will be structured in three parts where each section will be based on the findings and conclusions of the previous one. First, we will present consumer insights in order to establish the scope of the service and thus the demand. Secondly, we will employ an industry perspective in order to highlight the complexity of service offering and outline the market and how actors therein organize themselves in business network constellations capable of matching the demand of consumers. Lastly, we will combine the information acquired in order to outline the possible outcomes in terms of future market scenarios that these business network constellations might render. In accordance with our purpose, we state our first research question:

- *What determines the consumer value perception of mobile TV offerings?*

Consumer preferences have implications for business models in various ways. Even if industry actors could handle supplying a product or service demanded by consumers in terms of content, but then not be able to distribute it accordingly, the product or service would fail. Hence, consumer preferences dictate the formulation of business models beyond the actual content, reaching well within the distribution network.

As industry actors seek to deliver a product and service not constrained to specific content but also containing the method of distribution, what is the key factor when positioning these offerings? In order to address the supply side of the defined problem area we have formulated our second research in the following manner:

- *What determines the mobile TV service delivery capabilities of the distribution network?*

Finally, in order to fulfill the overarching purpose of understanding potential market behavior, the factors derived from the previous two questions will be used to analyze potential business model evolution. As such, the concluding question we aim to answer is

- *Which generalized market scenarios can be described according to these factors?*

1.3. Delimitations and definitions

In this thesis we will not seek to evaluate any particular mobile TV distribution platform. We will attempt not to delve into technical specifications, nor will we determine the feasibility of meeting demand for certain technologies. As such, we will not dig further into the technical part of mobile TV, and not search for any quantitative measures of what the future market size will be. As we are not evaluating technological systems we are not looking at the potential costs incurred and consequently not calculate the potential return on investment.

The common definition of the term “mobile TV” is that of video services accessible through a mobile device, transmitted to the device in real time. We have chosen to limit this term further, restricting “mobile device” to mobile phones. Thereby we delimit the scope from several portable devices, such as laptops and media players, while maintaining the delimitation of services to not include video content stored on the mobile phone, i.e. podcasts and other downloaded video clips.

We have chosen to define the term “service delivery capability”, found in our second research question, as the ability of market actors to compile and distribute an offering corresponding to the demand of consumers.

The thesis is also dependant on two terms, defined below:

On-demand service A video or movie service which allows the viewer to access the desired content immediately². Examples of such services include YouTube and Hulu.com

Broadcast content A stream of linear content, making consumption restricted to a pre-programmed schedule as set forth by an aggregator. Examples of this include the TV channels of traditional TV broadcasts.

1.4. Expected contributions

Amongst other things, we expect to develop knowledge on the establishment of new media platforms, focusing on emerging video services, including view points from actors with ties to either “old” or “new” media. This includes market organization, issues pertaining to the targeting of consumers, as well as the process of resolving conflicting interests between industry actors.

We also expect to provide an illustration of a deductive panel based research methodology, which we hope to become more prevalent in research on strategic management.

From a theoretical perspective, we hope to contribute with an implementation of alternate levels of abstraction when describing market conduct with varying degrees of actor interaction.

1.5. Brief Historical Introduction

Apart from handheld television sets appearing now and then during the 80s and 90s, the advent of mobile video services came with the emergence of mobile phones with displays capable of showing color. The services were limited to very short and simplified animations, such as cartoon characters waving their arms, and short slideshows of low-resolution images.

² Wikipedia, search: “On-demand” http://sv.wikipedia.org/wiki/on_demand, Accessed May 1, 2009

These were sent out as MMS messages (Multimedia Messaging Service), which could be authored and sent not only by commercial entities for marketing purposes, but also by all consumers with an MMS capable handset, just like they would an SMS text message.³

As the technological level advanced, the next major innovation would occur with the coming of the third generation mobile phone networks (3G). As opposed to previous standards, 3G (and its veritable cornucopia of different standardization extensions) has a much higher capacity for data transfer, which enables images and videos transmitted to have a much higher level of image and sound quality⁴. One of the main features of 3G handsets used when marketing the devices was basically only a showcase of what the new technology was capable of – Video calls. The feature is not widely used and many current 3G handsets does not support it, as they lack the front-facing camera needed to transmit your image to the person you're calling, but it has found a small niche market previously disregarded by operators; telephony for the deaf and/or mute.⁵

The 3G networks, with their higher speed of data transfer, also enabled a richer online multimedia experience. Web browsers had been implemented on several handsets before but did not receive a wide user base, but as the capabilities now increased, the web pages designed for mobile browsing no longer needed to be too far from those displayed when using a computer. More images of higher quality, sound clips, etc, became part of the mobile browsing experience. However, there are still interoperability issues – mobile web content producers can still not be certain what the site will look like for any given user without knowing the exact brand and model of the phone she is using.⁶

The first commercial Swedish mobile TV-like video service was a component of the TV reality show “Big Brother”. The show had an online strategy enabling users to, for a fee, watch 24/7 video feeds from the “Big Brother” house, and choose through which camera and which room they watch. The service was delivered on the web, as well as through cooperation's with IPTV operators as a package of channels, and lastly, as part of the service offering of the mobile telephony company Tre. In this case, the Tre online portal led consumers to the content. After signing up for a 3-tiered service subscription, with each tier

³ Novak & Svensson 2001

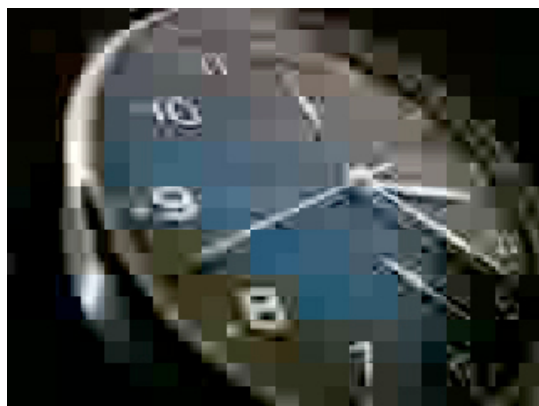
⁴ ITU, “Cellular Standards for the Third Generation: The ITU's IMT-2000 family”

⁵ Ahonen 2009

⁶ Wikipedia, search: “Mobile web”, http://en.wikipedia.org/wiki/Mobile_web, May 2, 2009

enabling new features, consumers could watch the video. The billing was performed by Tre, and revenues generated and costs attributable to the platform were divided amongst the collaborating businesses, including the content producer Meter, and the format owner Endemol.⁷

One of the most major reasons why the use of mobile video services has not become widespread is the cost to the consumer. Operators have tried to promote their own content features by charging data transfers by the megabyte, if the transfers extend outside the realm of the operator. As a consumer has no idea of the size of the video (or image) available, there is a large uncertainty as to the actual cost of watching it. Even if the size is known, the cost is steep. The fairly standardized cost per megabyte for most operators, SEK 15 (€ 1,35), would make watching a 3 minute clip with very low sound and image quality (playable on all 3G handsets) cost SEK 20 (€ 1,80), whereas a clip of the same duration, but with a higher sound and image quality (playable on newer 3G handsets), would cost roughly SEK 85 and SEK 90 (€ 7,65 to € 8,10).⁸



Low quality
(QCIF, h.263, 15 fps, 55 kbits/s)



Higher quality
(QVGA, h.264, 25 fps, 255 kbits/s)

Figure 1 An illustration of the two levels of quality described above.

However, a few operators now employ a cap on daily cost for data traffic (such as Telia, who charge a maximum amount of SEK 9 /€ 0,80 per day for data) but the majority of users of

⁷ Björk et al 2006

⁸ ITU, "Common conditions for 3GPP/3GPP2 conversational and streaming over RTP/IP"

video services normally benefit from a flat rate extension of their existing contract, which costs slightly below SEK 200 (€ 18) per month on top of the original subscription cost.⁹

To battle the cost of bandwidth and further the emergence of video consumption on a mobile platform, there has arisen another method of distribution of mobile TV through broadcasting. By integrating a digital TV receiver into the handsets and broadcasting a digital transmission as one would for (the traditionally immobile) digital terrestrial TV (in Sweden: DVB-T), but modified for stability and mobility performance, a user could watch TV as if in their living room, being able to view a selection of channels.¹⁰ As this would require a significant investment in infrastructure (such as new TV transmitters in numbers capable of covering a large share of the population) as well as renegotiations for mobile distribution of content for the new platform, the ambition of the broadcast mobile TV being like the living room in terms of content and scope is a very ambitious one.

1.6. Methodology

Mobile TV as a research topic is fairly young, with little work done in regards to the strategy and market structure fields, and thus the amount of data compiled by others is quite small. To approach the problem of amassing the data required, as well as for us to gain the ability to put it in context, we have had to use an innovative approach to the empirical methodology. The research project was initiated during the spring of 2006, with work continuing well into the fall of 2008. The time frame of the project has been extensive due to the combination of the exhaustive scope of the research and the iterative approach to the data gathering process employed. The method when gathering the data has as such been somewhat unorthodox in comparison to the traditionally linear scientific method.

1.6.1. The Pilot Study

Prior to starting the work on this master thesis, one of the authors conducted a 3 month long case study as part of the course 5082 – Media Management. The purpose of said case study was to set the strategic guidelines and evaluate potential business models for mobile TV for the Swedish television company “Kanal 5”. As part of the project, a quantitative consumer preference survey was undertaken, as well as several interviews with industry professionals,

⁹ Telia, “*Prislista för tilläggstjänster*”, 2006

¹⁰ DVB Project Office

consumer focus groups and a broad survey of literature and research on the then current level of technological progress within the field. In this thesis, the material gathered within the aforementioned project has been used as if they were the results of an extensive pilot study and as such has laid the empirical foundation of the continued research into this topic.

The consumer preference survey was published in the form of a web page, with follow-up questions differing between respondents given their answers to previous questions. After the results were compiled and responses that could not be deemed serious were filtered (e.g. responses containing profanities or unrealistic monetary values were attributed a proposed service), 321 responses remained. An analysis using SPSS deemed the results statistically significant at a 95% confidence level.¹¹

Two focus groups were held, divided by age group. The participants were chosen among those who in the survey had opted to be contacted should the need for further information arise.

The interviews with industry professionals were to the highest extent possible conducted in person, the only interviews conducted by phone were those where the subject was located abroad. The selection process by which the interview subjects were chosen was in most cases based on referrals, and others were selected from names we came across in our research and deemed interesting. No preference was given to organizational adherence, subjects were interviewed regardless of employer. Some were in direct competition, and as such the research purpose was emphasized prior to the interviews.

As literature on the subject was scarce, some of the research and literature survey was conducted as a result of thoughts and ideas presented by researchers interviewed at the KTH departments of media technology and human-computer interaction. Other sources were found through online catalogues, search engines and online forums for topics relating to digital broadcasting, as well as document banks published online by international standardization committees.

1.6.2. The Iterative Workshop Methodology

The structure of the research process employed when gathering research data has been of an iterative nature. In order to avoid overly generalized hypotheses, as the scope of this thesis is

¹¹ Björk et al 2006

a rather large one, the research process was divided into 3 parts, each using the same methodology, and each resulting in its own conclusions. The conclusions drawn from each part was then used as the input for the part immediately following.

A large inspiration for this iterative methodology has been that of a Delphi study¹². In such a study, a panel of experts is consulted at regular intervals to discuss and evaluate the findings presented. The panel is composed of people with different perspectives on the subject matter, both from the academic and from the professional field.

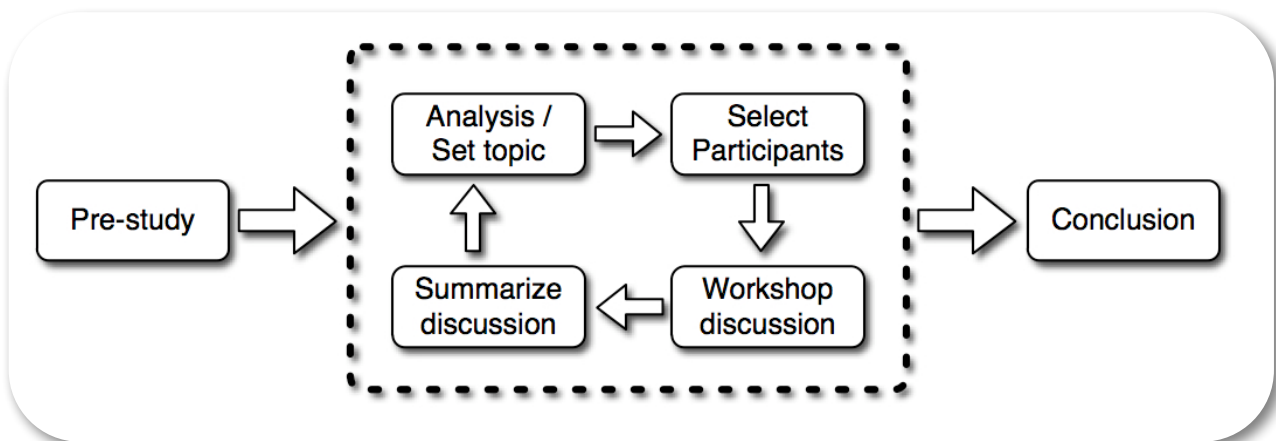


Figure 2 The iterative workshop methodology

Even though the method employed is similar to a traditional Delphi study, it differs in some key aspects.

- A Delphi study does usually not entail a physical meeting of the panel, whereas we conducted the meetings in a manner more resembling that of focus groups.
- The panel members usually do not differ between meetings. In our case, we narrowed the size of the panel in between iterations in order to eliminate a potentially biased group mentality originating from overrepresentation in the panel of some perspectives, and to avoid a static group dynamic.
- Delphi studies are normally conducted in an open forum context, where all members of the study interact, or as an opt-in electronic survey. However, in order to maintain a focus group dynamic we chose to divide the panel for each part evenly amongst several sessions, all of which discussing the same topics. Not only

¹² As described in Linstone & Turoff 1975

did this benefit the discussion dynamic, but also led to a higher degree of attendance since several time slots were available.

Before each panel discussion, a schedule, attendance list and a summary introduction to the topic to be discussed was sent to all participants. For seminars 2 and 3, these introductions drew upon the findings from the seminar preceding them. Following each seminar, a brief summary of the discussion was also distributed to the participants.

2. THEORY

2.1. Previous research

The number of research reports written over the years regarding the field of mobile TV is plentiful. Several exhaustive reports on the development, current adoption, and the future of mobile TV have been produced and widely spread. There have also been several reports written on business development, consumer preferences, and potential business network constellations. These are however either directly or indirectly produced by major industry stakeholders, and each of them naturally advocate their own technologies and business solutions. Below is a table of some more commonly quoted reports and summary keywords for each of them.

Steel, 2006 ¹³	Horn, 2005 ¹⁴	Mittermayer, 2005 ¹⁵	Vanjoki, 2005 ¹⁶	Van den Dam, 2006 ¹⁷
Easy channel switching Time shifting Back-to-start facility Interaction Program sharing Additional information	Type of content (small screen, shorter viewing times) Quality of service and usability (service availability, audiovisual quality, channel switching) Added value for mobile users (always connected, program guide, personal VCR) Business model (time-to-market, service offerings, additional revenues)	Wide coverage (e.g., deep indoor, on the go, outdoor) Interactivity Unlimited number of channels Easy to use Support for unlimited number of viewers	Convenience Ubiquity Reachability Security Customization Localization Spontaneity	Availability Program content (complementary to rather than replacing traditional TV) Pricing Easy-to-use devices Content Pricing User-friendliness Business model DRM Technology standards and spectrum allocation

¹³ Steel 2006

¹⁴ Horn 2005

¹⁵ Mittermayr 2005

¹⁶ Vanjoki 2005

¹⁷ Van den Dam 2006

Another producer of reports worth mentioning is the DVB Project, an international industry consortium with more than 270 members. As the organization behind the handheld TV broadcasting standard DVB-H, they continuously monitor the progress and evaluate the performance of mobile TV pilot studies worldwide. It should be noted that these reports in many cases intentionally omit information that has potentially negative effects on the implementation of a DVB-H broadcast network. One example is the DVB-H pilot study in Helsinki, Finland. According to surveys the consumer test pilots were very positive throughout the study. However, when interviews with retailers were carried out in Finland, by one of the authors of this thesis, it became apparent that, before the trial period had concluded, half of the test pilots had handed their handsets back and refused to take any further part, due to poor quality of service, high cost to consumers, and the size of the TV-capable mobile phone they were lent. All survey responses from these testers were omitted in the public report, as well as in the final tabulation of customer satisfaction during the pilot study.

2.2. Consumer value perception theory

2.2.1. Customer value

Several definitions of Customer value are to be found in the literature. According to Mercer, the concept of value entails the benefits that the customer sees in the product, which in theory should be balanced against the price.¹⁸ Other researchers who involve the price perspective are Heskett who argues that customer value can be conceptualized as a comparison of weighted "get" attributes to "give" attributes¹⁹ as well as Buzzell and Gale stating that customer value is operationalized as a ratio or trade-off between total benefit received to total sacrifices, taking into consideration the available suppliers' offerings and prices.²⁰

However, we have chosen not to engage the performance contra price perspective as the price levels and structure of mobile TV services are far from determined. Thus we have chosen to focus on Woodruff's definition of customer value which follows "customer value is a customer's perceived preference for and evaluation of those product attributes, attribute

¹⁸ Mercer 1996

¹⁹ Heskett et al. 1994

²⁰ Buzzell & Gale 1987

performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situations".²¹

2.2.2. Value constellations

Examining the consumer value perception of mobile TV services, we have chosen to relate to the theory of Normann and Ramirez on the subject of value constellations. They emphasize that in a fast-changing competitive environment, the fundamental logic of value creation is also changing. Thus the global competition, changing markets and new technologies are opening up new ways of creating value where companies in a given value chain that before just added value need to reinvent it. This is the logic behind what the authors describe as a value-creating system – where different actors, suppliers, business partners, allies and even customers, work together to co-produce value. The main goal of the constellation is to create an ever-improving fit between competencies and customers through reconfiguring the roles and relationships of actors within this constellation in order to mobilize the creation of value in new forms.²² To exemplify this theory, the authors describe the success story of IKEA who manages to keep costs and prices down by redefining the roles and relationships of the furniture business. An example of this is how the relationship between a furniture supplier and customer is redefined – as IKEA's customers agree to take on certain key tasks traditionally done by manufacturers and retailers, i.e. the assembly and delivery of products to the customers' homes, IKEA offer the products at substantially lower prices. By this, IKEA makes their customers understand that their role isn't to consume value only, but also to take part in the creation of it. Thus, the customers of IKEA become co-producers of the value created in the system. A company's offerings have value to the degree that customers can use them as inputs to leverage their own value creation. As a result, the companies do not profit from the customers themselves, but rather from the customers' value-creating activities.²³

2.3. Service delivery capability theory

In line with the logic regarding value constellations discussed above, we must assume that a network perspective should be applied to the business operations. Thus, the second part of the

²¹ Woodruff 1997

²² Normann & Ramirez 1993

²³ Normann & Ramirez 1993

thesis will focus on what network constellations that might arise on the mobile TV market in order to ensure the delivery of by customer valued services.

An obstacle when developing networks is the fierce competition not only within its own industry, but also the effect of other industries. As the mobile TV industry combines several industries into one market – mobile phones as hardware, software companies, the broadcast industry, TV production field etc. - the market space of mobile TV becomes broad and complex. However, Kim & Mauborgne theorize how companies may overcome this and try to gain from it. They discuss that companies do not only compete with other companies within same industry but with companies in other industries that provide substitute products/services whereas the space between substitute industries provides opportunities for value innovation.

Also, looking across strategic groups offer opportunities for value innovation – a group of companies within an industry that pursue a similar strategy – built on two dimensions, price and performance. Although most companies focus on improving competitive position within a strategic group, many companies have found new market space by looking across strategic groups. Another aspect is to look across complementary product and service offerings, as few products/services are used in vacuum – there are often complementary products that affect their value.²⁴

Kothandaraman and Wilson's research on value-creating networks emphasizes the importance of relationships as a mean to reach superior value and beat future competition. The conclusion of their study is that competition will shift from a firm specific level to a network level. And that the value-creating networks rely on three building blocks which are superior customer value, core capabilities and relationships. The authors link these three blocks by stating that the creation of value is dependent on: 1. the firm's ability to deliver high performance on the benefits that are important to the customers, which in turn is dependent on the core capabilities of the firm, which in the report are defined as "the competency in technology and business processes", and 2. assembling the core capabilities not only within the firm but rather to put together a network of firms to build the optimum set of capabilities, which is defined as the relationships. The quality of the relationships within the network facilitates the creation of value – however, if the inter-firm relationships are complex or problematic, the core capabilities can't be combined in an efficient manner. The firm's value to the network is

²⁴ Kim & Mauborgne 1999

dependent on the extent they bring in diverse core capabilities that are valued by the network – firms want to develop network with those having unique capabilities, and up most, capabilities missing in the own firm.²⁵

Even though we haven't found any theories linking business network constellations directly to the mobile TV industry – we will use the theories of Ford et al. which theorize generally about technology and business networks as mobile TV in one aspect can be seen as a product existing through technological development. The authors state that technological interdependence is a major factor in the dynamics of business networks based on:

- companies establish relationships in order to gain access to the technological resources of other companies within the network
- technology is developed both in the companies themselves as well as in the relationships between companies

They also conclude that each technology is embedded in the network of business relationships through which it is used²⁶

A business network as a whole and the positions of companies within it change as evolution occurs in relationships, technologies and in their distribution in the network. The economic potential of the technology depends on how it can be further developed or combined with other technologies in the wider network. Relationships and technologies define a company's existing position, but are also drivers for changing it. Therefore, the company should try to take advantage of the technological resources and its existing relationships. Also, take advantage of the fact that a single technology might be of no value until it's bundled with other resources.²⁷

2.4. Market systems theory

One can never be sure about the state of the future. When describing a future hypothetical scenario, we believe including a certain level of uncertainty to be of good measure. To cope with uncertainties regarding scenario modeling of hypothetical markets we have chosen to

²⁵ Kothandaraman & Wilson 2001

²⁶ Ford et al. 2003. p. 151-152

²⁷ Ford et al. 2003. p. 154-161

rely on the framework described in the article “Strategy under uncertainty” by Courtney et al. The authors map four levels of uncertainty, numbered from one to four; “a clear-enough future”, “alternate futures”, “a range of futures” and “true ambiguity”.²⁸

On the first level, “a clear-enough future”, a singular prediction is made. This forecast does not necessarily have to be an exact calculation of the future but provide a good-enough value for decision-making. The second level, “alternate futures”, entails describing several potential but discrete outcomes. This level would be applied to predictions where the outcome fluctuates greatly, but seems to converge around certain values and the analysis is unable to identify which of these is more plausible. On the third level, “a range of futures”, there are no natural discrete scenarios. As the name implies, all values within a certain range can be regarded as having the same level of probability. Lastly, the fourth level “true ambiguity”, describes predictions where there is no certainty of direction whatsoever.²⁹

The theories applied in the market scenarios section of this thesis have been chosen for how well they fit with the descriptions given by the workshop participants. The discussion resulted in a span of theoretical perspectives on markets, including an Industrial Organization (IO)-, a distribution channel-, and a markets-as-networks perspective, which we do not believe is coincidental. The chronological evolution of the theoretical frameworks named above is in direct relation to the level of complexity of market relationships described. What we find particularly interesting is the fact that the behavior described by the workshop participants for each of the three scenarios can be so neatly categorized as attributable to one of these three perspectives.

The IO-perspective can basically be perceived as micro-economics applied in a strategic marketing context. It describes markets with little interrelations between business units and market conduct is primarily dictated by the industry structure.³⁰

In order to describe the logic underlying the potential market conduct through the IO-perspective, we will be employing the framework proposed by Michael Porter in the article “How competitive forces shape strategy”. The essence of this framework is regarding the nature and degree of competition in an industry as reliant on five forces; the threat of new

²⁸ Courtney et al. 1997

²⁹ Courtney et al. 1997

³⁰ Porter 1981

entrants, the bargaining power of suppliers, the bargaining power of customers, the threat of substitute products or services and the internal jockeying for position among current competitors within the industry. He further describes barriers to entry deterring the threat of new entrants.³¹

Our second theoretical perspective is regarding the market as a set of distribution channels and political economies, as was proposed by Stern & Reve. Unlike the IO-perspective, with companies as separate business units, this perspective regards companies as linked together in distribution channels forwarding the product to the consumer. Like Porter's view on competitive forces, competitors are not portrayed as units in close proximity but rather as an external force threatening the channel. However the perspective differentiates itself from the above by including the customer. The political economy framework is used to describe the interaction between the distribution channel and the channel environment. Both the channel and the environment are described as possessing an economy and a polity with those of the channel dubbed internal and those of the environment as external. The internal economy can best be described as the channel's internal economic structure and processes in forms of arrangement of actors within the marketing channel and decision mechanisms determining the internal terms of trade. One of the key features of this framework is regarding the internal economic processes through a hierarchical power-dependence perspective and which effects this factor might have on the structure and conduct of the distribution channel. As we are not employing a sociological perspective to the future scenarios we will focus on the economic structure and processes, and will as a result not delve into the internal or external polity constructs. The external economy contains not only trade conditions on a larger scope but also the competing distribution channels.³²

A natural extension of this increase in interaction between actors as illustrated in the two perspectives above comes into play in our third and final approach, co-production of value in a markets-as-networks perspective. We will rely on two works, "The markets-as-networks tradition in Sweden" by Johansson & Mattsson³³, and "Designing interactive strategy – from value chain to value constellation" by Normann & Ramirez³⁴. While the distribution channel

³¹ Porter 1979

³² Stern & Reve 1980

³³ Johansson & Mattsson 1994

³⁴ Normann & Ramirez 1994

perspective regards several actors in the production of value, it is still limited in the scope of market relationships as the channels themselves seem to have very few interactions with actors outside of it.³⁵ Johansson & Mattsson choose instead to focus almost exclusively on relationships between actors and completely bypasses the approach of channels as the sole method of forwarding value to the consumer. The network approach is however not without an external context like the distribution channel perspective that faces external forces and processes but regards them in an institutional perspective.³⁶ The perspective also extends the channel approach view of customers from that of being targeted by the distribution channels to them becoming active members of the network itself.

Even though the markets-as-networks approach regards actors as separate entities within the network, we will need to generalize strategies for groups of actors displaying same characteristics. This enables us to employ the Normann & Ramirez value constellation approach³⁷ in a broader sense. Instead of focusing on individual relationships between actors, as proposed by Johansson & Mattsson, or grouping actors in a value chain approach, as proposed by Stern & Reve, we can examine how clusters of actors perform while maintaining the network context. These clusters are from a value creation perspective regarded as value constellations.³⁸ The customer within the network is given the task of configuring these constellations and it is from this configuration and reconfiguration that value is created.³⁹

2.5. Concluding theoretical framework

As described previously in this chapter, our viewpoint places the consumers in the focal point. Their perception of value and active participation in its creation set the basis for other activities in the market.⁴⁰ As consumers do not attribute very specific services with limited functionality much importance, companies must look to market spaces in between specialized products in order to penetrate the market. As the actors focus on core capabilities, relationships must be established bridging these interorganizational gaps in order to create

³⁵ Stern & Reve 1980

³⁶ See Brunsson 1994

³⁷ Normann & Ramirez 1994

³⁸ Ibid pp 54-55

³⁹ See section 2.3. Service delivery capability theory

⁴⁰ See section 2.2.2. Value constellations

value. Technology plays a pivotal enabling role in establishing and sustaining the relationships between actors required of a functional business network of dynamic services.⁴¹

Describing market conduct in markets characterized by varying degrees of actor interdependence requires an application of several perspectives in order to lower the level of abstraction from the market as a whole to strategies employed by individual actors. Our approach follows the increasing degree of actor interaction and cooperation starting with the IO-perspective, then regarding the market as distribution channels within a political economy, followed by consumers as co-producers of value in a markets-as-networks perspective.⁴²

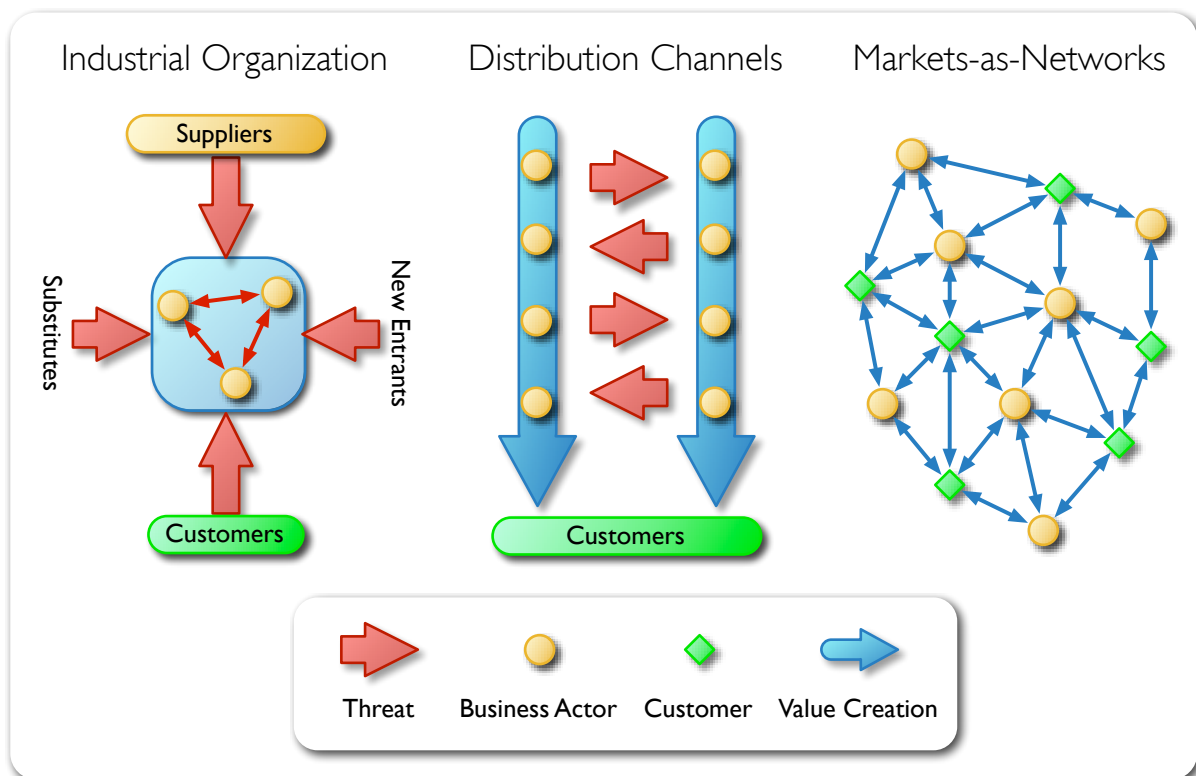


Figure 3 A brief illustration of the IO-, Distribution Channel-, and Markets-as-Networks perspectives on markets and their respective propagation of consumer value.⁴³

⁴¹ See section 2.3. Service delivery capability theory

⁴² See section 2.4. Market systems theory

⁴³ Based on Porter 1979, Stern & Reve 1980, Brunsson 1994, and Normann & Ramirez 1994

3. CONSUMER VALUE PERCEPTION

3.1. Introduction

New media services are introduced and launched constantly and its success is determined by the fit between the consumer value perception and the performance of the service. Mobile phones have existed for a long time, thus both producers of mobile phones and mobile services have had a long time to understand and adjust to consumer preferences. However, even though the handheld hardware does not represent a new type of medium, the availability of TV-services through the device implies a new form of delivery which value proposition needs to be clarified.

Delivery of TV-content through the traditional TV-sets follows a traditional pattern where content is produced in order to fit linear TV-schedules. Although new type of services such as on-demand content and new type of devices, mainly digital video recorders enable consumers to control *when* to take part of certain TV-content, the traditional way of TV-broadcasts in pre-set schedules still exist.

Mobile TV takes the flexibility one step further and allows the consumer to decide *where* to take part of the service. However, whether the dimension of *where* added to a TV service identical to the one of traditional TV-sets is enough for the success of the service is questionable. Consequently, we need to search for what determines the consumer value perception regarding mobile TV.

3.2. The consumers' view of mobile TV

In the eyes of the consumers, an identical image of the mobile TV service does not seem to exist. Consumers interviewed all define and put different values into the service of mobile TV. Except from regular linear broadcast TV which represents that of the traditional TV sets, the consumers also request extended services such as a 24h catch-up service of for examples series and they also refer to the ability to choose when to start a specific piece of content (plain on-demand service).⁴⁴

⁴⁴ Focus Group 1, pp 1-3

Apart from the type of content supply, also the amount of content is discussed where some emphasize the importance of not supplying too much content through mobile TV as there will be difficulties for consumers to handle to extensive amount through search functions and other filters.⁴⁵

The ability to choose on-demand instead of broadcast TV seems quickly to be a condition for accepting mobile TV. Consumers highlight the need of entertainment at their command when it comes to the mobile window – mainly as they expect themselves being on-the-go instead of in their home environments, thus the importance of timing. They want to be able to trust that they can choose to start watching a specific piece of content when for example starting a bus trip and doesn't want to rely on a pre-set broadcast TV-schedule. Another obstacle is the consequences of broadcast mobile TV if temporarily losing the signal. As the reliance on TV-signal when it comes to mobile TV doesn't even come close to the level of regular TV, the need of pausing and playing on the mobile device becomes apparent.⁴⁶

However, the consumers do not seem to believe they need to choose either broadcast or on-demand. They rather seem to believe the two different ways of viewing complement each other, hence doesn't substitute each other at all. They argue that people have different TV-viewing habits and although the majority reasons that more and more will realize the convenience of on-demand viewing, there will always be a critical mass audience that will appreciate and take part of broadcast linear TV-schedule viewing.⁴⁷

Except from the obvious pros regarding on-demand instead of broadcast, consumers also agree that on-demand doesn't necessarily need to be superior – as one of the main needs that TV fulfill is time consumption and that in many situations consumers still prefer to be “fed” TV instead of choosing what, when and where.⁴⁸

The opinions of the Industry professionals are not united regarding the structure of the mobile TV service – whether it will be broadcast or on-demand that co-exist on equal terms, one mode that dominate the other etc. Some argue that both will co-exist, hence not substitute one another while others argue that given a certain timeline, broadcast mobile TV will come first

⁴⁵ Focus Group 1, pp 1-3

⁴⁶ Focus Group 1, p 8

⁴⁷ Focus Group 2, p 3

⁴⁸ Focus Group 2, p 5

while on-demand will develop a dominating growth in the future. This argument relies on the definition of mass market which will shift from one generation to another within a near future – and that the new mass market generation will demand on-demand content and not broadcast.⁴⁹ The main argument why broadcast mobile TV will not grow big in the future is that the concept of broadcast TV even when it comes to regular TV-viewing is eroding in same pace as the growth of digital video recorders (DVRs, or personal video recorders) is accelerating. However, another argument why broadcast always will exist is the belief that consumers need to be presented content in order for them to be able to choose and seek content later on. Supposedly, the same argument is used to explain why people who possess a DVR do not always use the record and play function when watching TV.⁵⁰

Hence, the definition of mobile TV from the consumer point of view is widespread – where it doesn't necessarily need to be broadcast according to a linear TV-schedule as the perception of on-demand TV via the mobile screen also is classified as mobile TV. However, consumers agree that downloading clips from the Internet onto their mobile device does not represent mobile TV.⁵¹

3.3. Value of the service

The consumers' perception of mobile TV extends from being both a complement and a substitute to regular TV. The first mentioned refers to when being on-the-go, when waiting for something/someone etc while the substitute refers to being able to access channels that are not available in the home supply of TV.⁵² Also, the mobile window could also substitute the laptop window in the home environment – simply when there are not enough screens for the household members. Also, using mobile TV in the bedroom and/or in the kitchen while cooking in the absence of regular TV sets are mentioned as examples of the usefulness of the mobile device as a TV window at home.

However, the small size of the screen and the fact that the quality of all TV services are dependent on a clear signal will, accordingly to the focus group participants, result in mobile TV devices not replacing the one in the living room. When being on-the-go, mobile TV

⁴⁹ Workshop 2007-02-19, session 1, p 2

⁵⁰ Workshop 2007-02-19, session 2, p 3

⁵¹ Focus Group 2, p 2

⁵² Focus Group 1, p 2

mainly seems to substitute regular news papers. The “news”-genre constitutes the most attractive genre to consumers along with TV series. Music and sports are also popular genres although movies would rather be watched on a regular TV.

The focus group participants confirm the willingness to pay for mobile TV services. However, the opinions differ greatly regarding billing options and as to how the service should be delivered. There are two main discussions covering whether mobile TV services should or should not be included in the mobile subscription fee. The participants who prefer the mobile TV fee to be included in the subscription fee argue that they do not like the concept of paying additionally in order to access TV services through the mobile phone. Linked to this discussion some participants also questioned whether or not any costs for mobile TV services should be included in the regular TV bill. However, those who do not believe in the inclusion of these costs argue that those without ability nor wish to take part of the services should not need to pay the same amount as those who do – where the solution should be that the mobile TV fee should be on top of the subscription fee.

The other discussion regarding payment methods concerns whether the fee should be fixed or flexible. The consumers believe most of the services within communication and telecom drive towards a fixed fee model (internet, fixed phone, mobile phone etc) and that a fixed fee also reduces the perception of paying additionally for the service. However, the participants are also open to a combined system where both a subscription based monthly fee co-exists with a pay per content unit model.

The willingness to pay for mobile TV services is higher regarding on-demand content rather than broadcast TV. The main argument being that in order to be willing to pay for mobile TV, the consumer need to have the opportunity and flexibility to take part and adjust the service according to their needs and situation. If mobile TV would exist as broadcasted TV only, thus making available existing content where the mobile phone just represents a new window there is a very low price elasticity. On the other hand, on-demand services where the consumers may choose their own content that fits their own schedules the willingness to pay for the service is extremely higher.

Generally, consumers are against ads regarding mobile TV. Mainly due to the need of an advertising pause that can occur in an home environment, doesn't fall through in same manners on-the-go. However, if the existence of ads would imply the service becoming free

of charge for consumers, the opinions are shifting. Parallels are quickly drawn with the business model of SVT – that is, consumers believe that payment of a mobile TV subscription fee should imply the right to ad-free content. Thus, the existence of advertising and the subscription fee are regarded as substitutes.

3.4. Analysis

There is no doubt that the value-creating system of mobile TV differs from the system of regular TV. Even though the two markets involve to a high extent identical actors, the competitive environment in terms of technology and changed market conditions differs. Thus the traditional value chain of regular TV, where a consumer turns to a TV operator, who either owns his own distribution infrastructure or turn to the owners of them and also negotiate directly with the TV channels, who in their turn sign contracts with content producers and owners, needs to be revalued and reinvented due to the lack of traditional patterns. Hence, the value produced for and perceived by consumers in the market of regular TV differs from the product that consumers value and demand regarding mobile TV. Consequently, the roles and relationships between both the consumers and producers, but also *in between* the producers and their different competencies need to be reconfigured and constellations need to be revised⁵³. Otherwise, there is a substantial risk that the consumers' demands cannot be met.

The main difference from consumers' perspective regarding mobile TV services compared to the regular TV service is the willingness to move from a passive viewer into a more active one, engaging in more activities around the service in order to create a more demand-based personalized window of content. This change in demand might rest on the fact that the device itself – the mobile phone – represents a far more personal item than the TV set in people's living rooms. Thus the personal affection of the device itself is reflected in the services the device provides and also in its content. Another reason is the "stress", or pressure put into the situations when consumers regard themselves using the mobile TV service. Being on-the-go way to or from different geographical places, sitting in waiting halls etc represents situations far different from the relaxed environment in people's living rooms, thus the pressure from the situation itself is reflected in the type of service and content that consumers request in their mobile phones at those situations.

⁵³ Normann & Ramirez 1993

It is clear that consumers' ability to take part of the mobile service stretches along a line that goes from passive at one side, representing plain linear scheduled broadcast TV with low payment willingness – the other extreme of completely on-demand TV where the consumer actively searches and chooses content, decides when and where – and which is also connected to a higher price elasticity. As neither the consumers nor the industry professionals seem to argue for a “either or” situation – the scale of passively to actively involved consumers and services may exist on equal terms – opening up possibilities for consumers to decide themselves.

The above-mentioned scale of consumers' co-production of the mobile TV service is coherent with Normann & Ramirez theory on value creating constellations.⁵⁴ Hence, the supplier of mobile TV services needs to look beyond the traditional view of service production and distribution where there's a producer on one side producing a service to be consumed by the consumer. Instead, the suppliers are able to create a better fit and optimize the perceived value when adopting the mindset where the service is developed mutually by the traditional “producer” and consumer together. This is also confirmed by the discussion regarding the willingness to pay for mobile TV services as the consumers to a higher extent value and are ready to pay for an on-demand service rather than a broadcasted one.

3.5. Conclusion

Consumers' ability to effect and participate in the creation of mobile TV services is what determines the consumer value perception of mobile TV offerings. This variable – level of co-production of the mobile TV service - can be dotted along a line stretching from a low to high grade of consumer involvement. In a case of low involvement, the production of the mobile TV service is undertaken mostly by the service provider – assuming a ready-made product to be delivered in a fixed shape to the consumer. An example of this is mobile TV as a streamlined pre-scheduled product – much similar to the regular broadcast TV. The consumer has the flexibility to switch between channels, but cannot choose exactly what to watch and when. However, in a case of high consumer involvement – the consumer actively takes part in the production of the mobile TV service. Thus the provider does not deliver a ready-made product as the production and the delivery itself blends together. In this scenario, the concept of pre-scheduled channels is eliminated and replaced by pieces of content that the consumer

⁵⁴ Normann & Ramirez 1993

chooses amongst. Consequently the consumer has the freedom to choose exactly what to watch and when.

4. SERVICE DELIVERY CAPABILITIES

4.1. Introduction

The grade of consumer involvement in the creation of mobile TV services is what determines the consumer value perception. Thus, in order to meet consumer demand in a satisfactory manner – mobile TV services need to incorporate flexibility in its creation regarding consumer involvement. Whether this will succeed depends on the ability to identify and control crucial service delivery capabilities.

It is vital to first recognize the *who*, in order to identify *what* controls the service delivery capabilities. This however, becomes equally if not more complex to clarify in the mobile TV market than the one of regular TV as there are many actors, each specialized on specific tasks involved in the value chain. We have chosen to define the actor types according to five categories which is displayed in the figure below; content producers, aggregators (i.e. TV channels, or online versions such as YouTube or Google), TV operators (i.e. Boxer, ComHem, Canal Digital), infrastructure owners (i.e. TeraCom for terrestrial infrastructure) and mobile network operators (i.e. Telia, Tre, Tele2 etc).

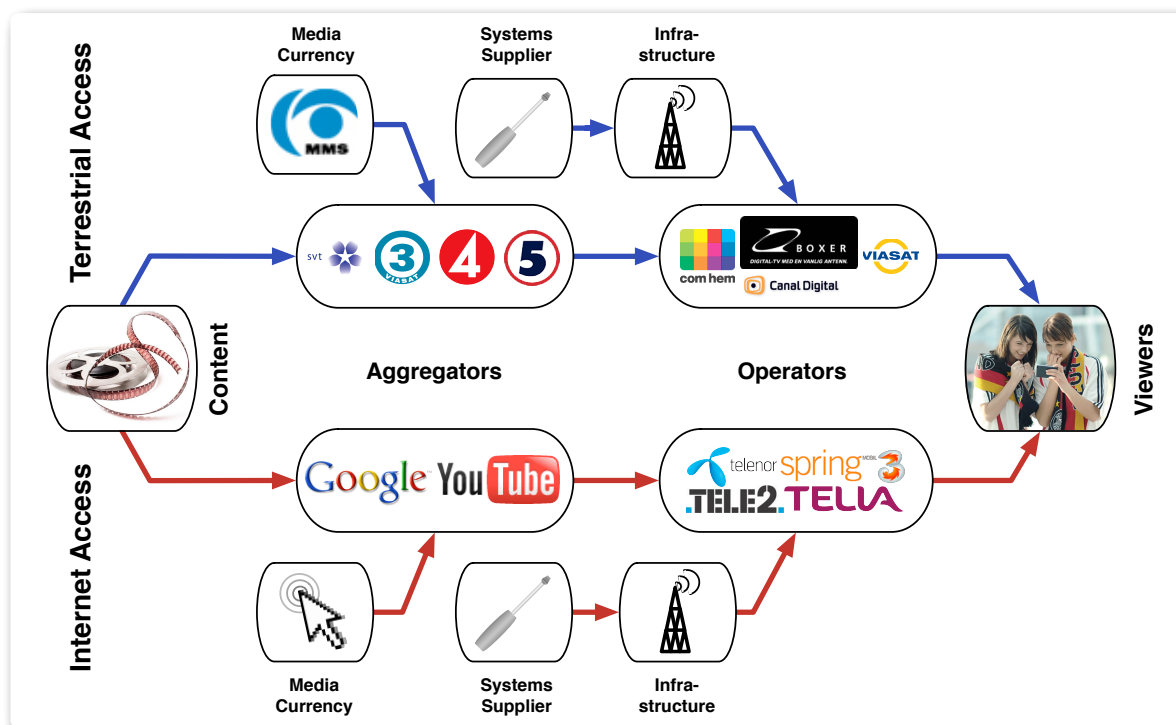


Figure 4 An illustration of a hypothetical value-creating network for mobile TV.

As the mobile TV market does not have a mature structure as regular TV, the conditions between the actors and consumers have not been set and stabilized regarding service delivery and payment. As in all markets, each and every one of these actors strives to achieve a close customer relation and preferably a potential billing relation.

4.2. Billing Potential for Mobile TV

According to industry professionals, there is no doubt that there will be a willingness to pay for mobile TV services from the consumers' perspective. However, which actors that are given to have the customer relation, thus being in billing connection to the customer is not agreed.⁵⁵ Some argue that mobile TV should be considered as regular TV but in a new device, thus that the consumer shouldn't need to pay several companies for same content in different screens. This belief aims to argue that the TV operator should either include mobile viewing in their TV fees, or put an add-on fee for the mobile screen – but that there's no doubt about that the mobile TV revenue should be collected by the TV operator.⁵⁶ On the other side, the fact that mobile TV distribution is highly dependent on the distribution network – which is an infrastructure owned and supplied by mobile operators, some industry professionals claim that's the group that is entitled to collect the mobile TV fee.⁵⁷

The common belief however is that someone will end up paying even if it ends up “free of charge” for the consumer.⁵⁸ However, all agree that there will never be a situation totally “free of charge” – at best, the customer would need to agree to commercial breaks and sponsoring in order to escape from a traditional payment fee.⁵⁹ Other ways to get around a traditional fee structure but where the consumer would need to “pay” in terms of time or attention would be extensive product placement, sponsoring or advertiser-funded productions.⁶⁰

Industry professionals agree the conflict causing the complex payment and revenue-sharing issue is the difficulty to separate the distribution from the content⁶¹ with regards to the lack of

⁵⁵ Workshop 2007-02-19, session 1, p 8

⁵⁶ Workshop 2007-02-19, session 1, p 10

⁵⁷ Workshop 2007-02-19, session 2, p 4

⁵⁸ Workshop 2007-02-19, session 1, p 15

⁵⁹ Workshop 2007-02-19, session 1, p 13

⁶⁰ Workshop 2007-02-19, session 2, p 8

⁶¹ Workshop 2007-02-19, session 1, p 14

industry standard pricing of mobile data traffic which in turn the mobile TV content is highly dependent on.⁶² Some further argue that the success of mobile TV is dependent on fixed price for the data traffic which in turn should consequence in transparent cost control from the consumers' perspective.⁶³ Another issue strengthening the fact of complex revenue-sharing transparency is to solve the cost between the mobile operator and service developer, i.e. the TV operator. A third problem might be to solve the difficult clearances of rights if the service developer isn't the content owner.⁶⁴ Either way, a common conclusion seems to be that as all mobile services are controlled and delimited by the mobile operator, this will also be the case for mobile TV where the probability is high that the mobile TV services will be subventioned by the mobile operators data traffic cost.⁶⁵

4.3. Who controls the customer?

Even though content producers seem to be positioned in the far end away from the consumer, with the aggregator and operator in between, they emphasize that payment willingness and thus a potential consumer relation is to be found in the value in terms of content the mobile TV service delivers in addition to what regular TV brings. This is presented in the focus group as a concept of "snack size" where content through mobile TV is adapted to the format with the aim of keeping the buzz alive between episodes broadcasted through regular TV service. The key of the concept is to create a value for the consumer in terms of content that cannot be accessed without, thus is unique for mobile TV. This is however only valid for those types of content where there is to be found a higher awareness and loyalty to the content brand rather than a specific channel brand.⁶⁶ According to an interview with Eva-Lotta Almkvist the content producers are aiming at a direct relation with the consumers, however are prevented by the operators who act like gatekeepers. In order to come around this obstacle it is necessary to commit to technical investments which no content producer is great enough to do. Eva-Lotta also describes a potential situation where the market conditions are controlled and set by the operators who in exchange for distribution will claim operator exclusivity.⁶⁷ Thereby, the

⁶² Workshop 2007-02-19, session 1, p 4

⁶³ Workshop 2006-11-30, session 2, p 13

⁶⁴ Workshop 2006-11-30, session 2, p 23

⁶⁵ Workshop 2006-11-30, session 2, p 25

⁶⁶ Workshop 2007-02-19, session 1, p 6

⁶⁷ Interview with Eva-Lotta Almkvist, 2006-04-20

value chain of content producer – mobile network operator – consumer will potentially be able to push out both the aggregators as well as the TV operators. However, opponents to this idea argue that as the mobile operators are burden with huge investment costs in the distribution network, they will not be able to undertake the effort and costs associated with content negotiations and purchases.⁶⁸

The possibility that the traditional TV operator, such as Boxer, ComHem and Canal Digital who packages TV channels into products directly communicated to the consumer, will undertake a similar role in the mobile TV market is threatened as the probability that the mobile network operator will strive to keep the direct relation with the consumer, thus aim to offer also the mobile TV product directly.⁶⁹

The existence of multiple actors in the value chain of the TV market and the mobile operator in addition, along with the absence of given business practice paves the way for various potential business models to be implemented. However, even though the number of actors brings flexibility, it also renders complexity in finding suitable business models. As said during one of the focus groups – “three parties instead of two complexes the business logics by six – five parties brings sixteen possible solutions...”. The respondent also stresses the importance of finding *simple* business models, as the risk of breaking rather than making increases the more complex business models that the market aims for.⁷⁰

4.4. Analysis

Ford et al. defines the word technology as “...an ability based on scientific knowledge that can be used for commercial purposes”.⁷¹ In our study we apply the package of crucial assets or knowledge for delivery of a mobile TV service as a technology. This package includes distribution network as well as content, delivery devices and consumer relations. In order to succeed in the delivery of a mobile TV service that consumers find attractive, each and every type of actor involved need to establish relationships in order to access the technological resources that they are not in control of, with the aim of creating an optimal package that enables a successful service delivery. The economic potential of the service is dependent on

⁶⁸ Workshop 2006-11-30, session 2, p 27

⁶⁹ Workshop 2006-11-30, session 2, p 27

⁷⁰ Workshop 2007-02-19, session 1, p 14

⁷¹ Ford et al. 2003, p 152

how well the actors manage to establish relationships in order to complement the resources of others to create a product with superior value for the consumers. All actor types control a crucial piece of technology in a mobile TV service – distribution network, content, the billing relation etc, but if they don't manage to cooperate and complement each other in creating an optimal service delivery, the mobile TV service will fail to attract consumers. Thus, the unique resources of each group – a superior traffic net, exclusive content, personal consumer data will lose its value standing alone.

If the actor types manage to complement rather than trying to control each others resources and competencies by establishing relationships it will come one step closer to finalize the conclusion of Kothandaraman and Wilson's research on value-creating networks.⁷² The mobile TV service will reach superior value and stand better chance in the competition of substitute products. Thus instead of defining the competition between the actor types within the mobile TV market, the focus might shift one level to emphasizing the competition between substitute services and products. However, in order to create this scenario, the different actor types need to come together and not only share the same vision, but also the same strategy. Instead of putting all focus on the competition between themselves, the cooperation and working out the dependency between them will lead to creating a high-valued service that stands a better chance in the competition with substitute products and services. However, the cooperation between the actor types is complicated by the conflict of interests, or rather sharing the interest of striving to reach the ownership of consumer relation.

This can be further linked to the theories of Kim and Mauborgne which also emphasizes the advantages of focusing less on improving the competitive position within the mobile TV market only whereas their conclusions show that by looking across strategic groups new market space is to be found that can be competitive with substitute products and services. But in order to create new market space between the existing ones of TV, mobile entertainment etc, the actor types once again need to admit the dependency to each other and cooperate by trying to complement each others capabilities.

⁷² Kothandaraman & Wilson 2001

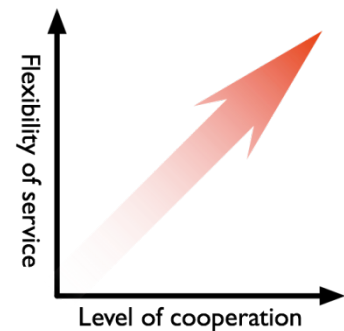
4.5. Conclusion

The level of cooperation between industry actors and the coordination of unique capabilities and technologies determines the service delivery capabilities of the distribution network. This variable dictates that the consumer value perception is dependent on how well the companies manage to coordinate the resources and technologies within the company with other companies and create strategic groups – or networks.

5. THE MARKET SYSTEM

From the above discussions it can be concluded that the consumer value perception of mobile TV offerings is inherently tied to the distributors' service delivery capabilities. Without the content being delivered in the way consumers actually want it to be delivered, the value of it is severely diminished. Likewise, for the distributors to be able to dynamically deliver content in a format that allows the consumers to tailor their experience, and as content distribution rights require a large amount of negotiation, there must be a highly cooperative climate within the industry.

This perspective on the market was shared by the expert panel consulted during the workshops, and many inferences were made comparing the interplay of these variables with the emergence of what is referred to as the web 2.0 economy, where the integration of services from several actors has come to play a pivotal role in the creation of the customized online user experience.⁷³



When summarized in the graph above, the mapping seems simple. These two variables do however hold some very specific properties that must be kept in mind when discussing their effect on market structure and the business models employed by various actor types.

5.1. The paradox of infinite cooperation

The range of cooperative efforts is from “low” to “high”. The lower bound can never be “zero”, as a certain level of cooperation between actors will always exist, at the very least in the form of sales and delivery of goods or services from one party to another. Neither has the level of industry cooperation the potential to be infinite; Should infinite cooperation occur there is paradoxically no longer any cooperation as no distinction can be made between the entities cooperating and as a result the venture is regarded as occurring within a larger firm.

⁷³ Discussed in Workshop 2007-05-04

5.2. The paradox of static flexibility

The paradox occurs when the highest possible flexibility of delivery is both demanded and met. As the content would be made available to consumers at the same time the production of it is finished, the consumer can without trouble watch the content in a linear fashion, as if she was watching a static broadcast with no flexibility whatsoever. Any change in consumer preference towards more linear consumption would thus go unnoticed, as the demand for it instantly would be sated, and as a result the model of variable interplay would be broken.

It should be noted that the level of flexibility described is the level demanded by consumers, not necessarily the flexibility at which the industry is capable of delivering. It is here assumed that the firms involved are capable of delivering content with little or no technical problems. As such, the delivery method chosen is simply regarded as a strategic choice.

5.3. The scenario modeling process

When discussing the effects of the variables on business models, we have chosen to model scenarios after three hypothetical fields of each of the two variables, and subsequently to investigate the behavior of the actors in these hypothetical scenarios in order to form our conclusions. These three levels should be considered to be unattainable extremes – the plotted scenarios are not to be considered true when constructing strategies, but rather as pointers to potentially important factors.

5.3.1. The three levels of cooperation

The cooperation variable has been divided into “low”, “medium”, and “high”. At the low level no cooperative effort stretches across time, with interaction between actors instead being limited to agreements made on a deal-by-deal basis, and no cooperative research efforts are made, except for leasing patents and suchlike. At this cooperative level the actors conduct all consumer studies individually, with none of them sharing their results. When cooperation is regarded as isolated practices, mergers and acquisitions between companies are expected to be frequent, since the only method of expanding the portfolio of services or attaining a competitive advantage through economies of scale is by inorganic growth. Since all deals are made individually, the profit margin of each deal is considered rather than their collective future potential, whereby attaining cost benefits requires the acquisition of others.

The “medium” level symbolizes an alliance-driven market network. Multiple actors unite as collective bodies in their efforts to satisfy the demand of the end consumer and potentially provide benefit to each other in terms of joint research, content delivery, sales, and infrastructure investments. The cooperation is limited to being within the alliances; In between these, competition is fierce and can be likened to the interactions between economic superpowers. Parallels can be drawn with the Japanese keiretsus, which are massive corporations whose subsidiaries are engaged in extremely varied activities, or with the Cold War of the late 20th century, during which alliances exhibiting fierce competition were formed, yet most countries maintained their own nationality.

In a market with a “high” level of cooperation, any business arrangement can be made. There is no corporate politics dictating whom to do business with, and capital as well as intellectual property can move freely between actors. All companies are reliant on each other to produce the optimal mixture of activities from which the product most demanded by the consumer can be derived. Revenue sharing is seen as perfectly natural, even across distant steps of the value chain, e.g., advertisement revenues might finance infrastructure research.

5.3.2. The three levels of consumer co-production

The scale of consumer co-production is divided into the levels “low”, “medium”, and “full”. It should be noted that the level of consumer co-production refers to that demanded by consumers, and that it therefore is the de facto market standard. This is based on the assumption that consumer demand regulates the design of the product offerings given that the actors are economic-rational entities.

“Low” co-production indicates a linear distribution of content, similar to traditional TV. The user can only choose which content track to watch, and cannot rearrange the content sequence of a specific track (just as a TV viewer can switch between channels but not alter the sequence of programs being broadcast). This distribution method enjoys large economies of scale when the content is delivered through a dedicated broadcast network technology, such as terrestrially broadcast transmission (or transmissions via satellite). The “medium” level indicates consumer appreciation of both a linear feed as well as on-demand content, whereas the “full” level is reserved for those cases where consumers have no desire for linear distribution and instead consume any content they wish at any time.

6. MARKET SCENARIOS

In order to maintain a meaningful discussion during the workshops and for the participants to share how the variables would affect the business practices from their individual perspectives, we had to plot three scenarios along the variable interplay vector, even though the variables are continuous, and from those descriptions extrapolate what this entails for the value-creating network in each of these three futures. As a result, the hypothetical scenarios might be perceived as uncertainty of the second level even though they are of the third⁷⁴.

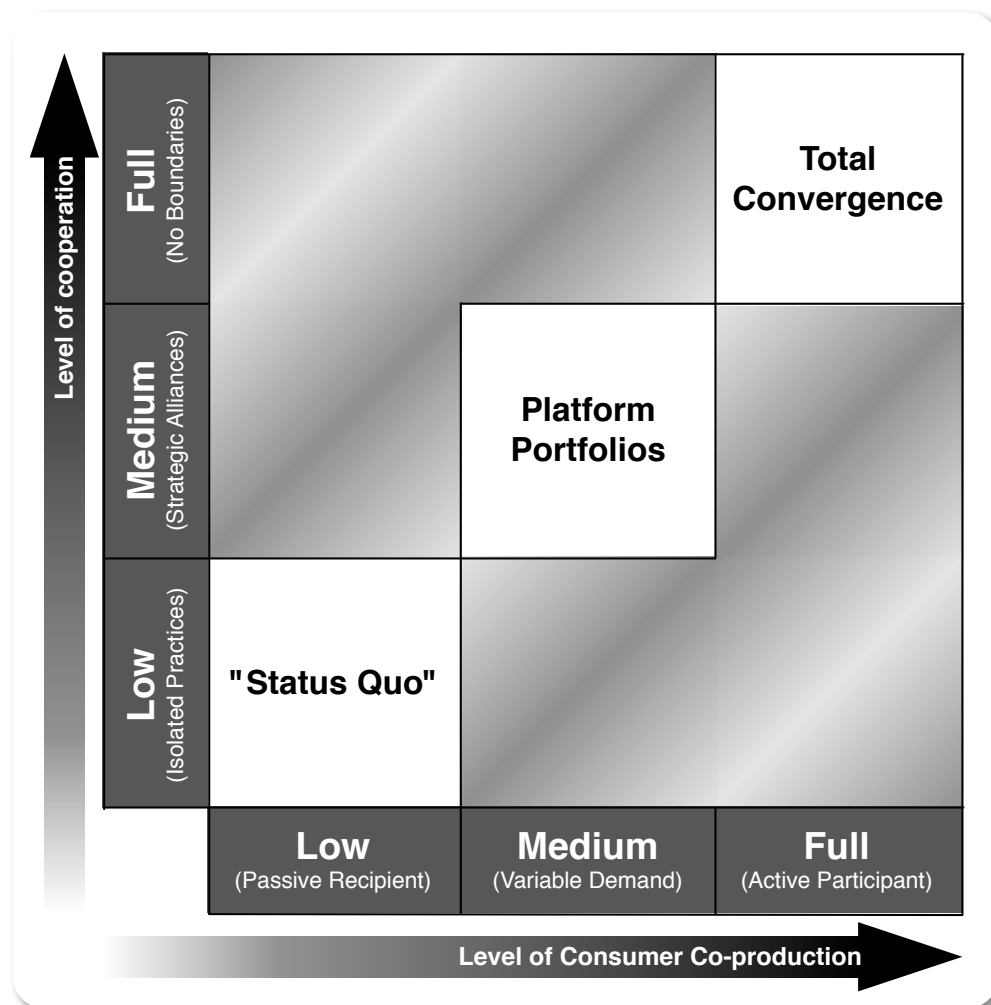


Figure 5 The three scenarios mapped according to the variables

The workshops in which these scenarios were discussed were held during the spring of 2007. As such they might not reflect current market situations but might provide a perspective on how the market has evolved since.

⁷⁴ Courtney et al. 1997

6.1. Status quo

The status-quo scenario is characterized by a low level of cooperation between actors, and consumers demanding linear programming, the kind you would expect in a traditional broadcast TV context. The name “status quo” was applied to this scenario as its main characteristic as, according to the workshop participants, it held a large similarity to the current state of the Swedish television market. The behavior of market actors in this scenario can best be characterized through Porter’s five forces⁷⁵, as there is very little interaction between the giant corporate spheres of the current media landscape. The panel described the market as pockets of diverging corporate interests with very little overlap between them and the consumer, from a strategic point of view, regarded as a passive receiver.⁷⁶

As the large traditional media organizations had video production capabilities in place they received the first-mover advantage into the mobile TV market and were then able to set standards and rules governing the market into play. This would lead to the number of actors within the industry to be relatively few. Several barriers to entry would protect the incumbent position and remove the threat of new entrants to the market.⁷⁷ As the large organizations have the potential to utilize content produced for other media in the mobile context they would receive large benefits from the sizes of their organizations, which also in turn generates synergies across platforms and economies of scale⁷⁸.

There is also a product differentiation barrier to entry as the mobile TV medium in this scenario would be very similar to the traditional TV. As a result the brands available on the traditional platform and by the consumer identified as “real” TV brands would have clear marketing benefits in attracting consumer attention. Parallels can be drawn to the attempt by Swedish newspaper Aftonbladet to start a television channel on the terrestrial broadcast network which failed. The notion of consumers separating brands according to their medium of origin is supported by our pre-study consumer focus groups, as they regarded Swedish

⁷⁵ Porter 1979

⁷⁶ Discussed in Workshop 2007-05-04

⁷⁷ Porter 1979

⁷⁸ Ibid

Public Service' web TV solution as "real" TV, while that of Aftonbladet was considered a video article.⁷⁹

Another barrier to entry is the restricted access to distribution channels⁸⁰. Those media conglomerates that contain an MNO, for instance the Kinnevik sphere that contains both MTG and Tele2, would have a natural link to the consumer and could through internal pricing agreements regulate the cost of others to access their mobile network.

The final potential barrier in play is the government regulation of the broadcasting spectrum. As licensed for access and transmission through different frequencies are determined by the National government, large corporations with a first-mover advantage would be able to procure large blocks of the spectrum before other smaller operators are able to act. Historical evidence supporting this include the issuing of 3G licenses, which in many countries was formatted as an auction in which the highest bidder was awarded the license which benefited large organizations with telecom experience.⁸¹

As our approach to the market entails regarding the nature of consumer demand as exogenous, our observation of the different scenarios do now allow for a shift in demand without leaving the scenario we are examining. Hence, although there is a threat of emerging substitute products⁸² these cannot be taken into account.

This scenario also entails a high level of vertical integration for the distribution of mobile TV, as a result many of the actors involved are nearly self-sufficient in terms of products and services vital to their operations. Thus, the bargaining power of suppliers can be seen as severely limited. The one type of supplier whose bargaining power is high enough to have an impact on the industry would be foreign producers of hit content. As the aggregators currently do not possess mobile broadcast rights for content produced by others than themselves, acquiring those rights would be very costly and yet vital to attract consumer attention.⁸³ Smaller independent actors, including domestic content producers, would need to specialize heavily creating a market position for themselves with a core competence that makes them

⁷⁹ Focus group 1, p. 2

⁸⁰ Porter 1979

⁸¹ Åkerman, "Operatörer tvekar om auktion på 450-bandet"

⁸² Porter 1979

⁸³ Discussed in Workshop 2007-05-04

indispensable, preferably they should serve content to a variety of aggregators, thus lowering the bargaining power of their customers⁸⁴ and raising the price of an eventual buy-out.

The customer can be seen as two-fold. The customer is in this case not always the consumer but rather the one paying for the consumption to a certain degree, i.e. the advertiser. The advertising market has a fairly high concentration with a few media agencies representing the bulk of advertising expenditure.⁸⁵ As such the bargaining power of advertising customers is comparatively high, the effect of which is further accentuated by the absence of an established media currency for the mobile window.

Even though a consumer might pay for mobile TV access, the consumer base has a very low concentration and as their role as a passive audience is maintained, their bargaining power is severely limited.

In order for the aggregators to strategically position themselves and their offerings, they would be required to either merge or integrate themselves with an MNO to streamline billing processes, gather audience data and enable value-added services to advertisers e.g. in the form of individually targeted or interactive advertising.

6.2. Platform Portfolios

The platform-portfolios scenario is based on an adaptive content delivery method and a selective alliance-driven market approach. Actors would seek horizontal integration in order to distribute their content and services to consumers regardless of chosen platform, hence the name “platform portfolios”. Since there is a demand for both linear and on-demand programming, the market structure will be similar to that of the distribution network pictured in figure 4, albeit structured in several distribution channels⁸⁶. The distribution of mobile video content in this context would require both a dedicated broadcast platform as well as an interactive on-demand service. Due to the MNOs controlling the only interactive link to the audience, they would possess an immense power base, which results in other actors in the market finding MNO-relationships very attractive seeking to integrate them into their distribution channel.

⁸⁴ Porter 1979

⁸⁵ Föreningen Sveriges Mediebyråer

⁸⁶ Stern & Reve 1980

Unlike the high level of vertical integration found in the previous scenario, the platform-portfolios scenario would most likely be characterized by a large amount of horizontal integration in order to combat the influence exerted by the external economy⁸⁷ and for individual actors to counteract the increased influence of the MNOs. This integration would likely not be of a merger nature between larger actors, but rather of an alliance type enabling similar units within different media houses to be part of the same distribution channel. Smaller independent content producers would however be integrated into larger actors in attempts to maintain competitiveness and strengthen their position within said alliances.

Which actor that should possess the aggregator role within the distribution channel would be a topic of much discussion. At the time of the workshops this role was predominately held by the MNOs who often used coercive pricing strategies to effectively block consumers' access to other content. The panel concluded that this was not the optimal solution as actors with a longer and more experienced background in media aggregation, e.g. traditional TV channels and video aggregators on the web, possessing a higher level of expertise and competence – a notion that was shared by the participants representing network operators.⁸⁸ However, it cannot be certain that MNOs would be prepared to relinquish that power and the resulting conflict could make the marketing channel inherently instable and result in decreased competitive viability.⁸⁹

The establishment of distribution channels in the market enables another dimension of ad revenue sources. The actors within the channel are given the potential to utilize cross-promotional marketing tools that enables generating traffic amongst the platforms present in the channel structure⁹⁰. For example, a news broadcast transmitted on a linear schedule could make reference to on-demand services by other actors in the distribution channel providing more information on a particular story. This does however increase the complexities involved in issues concerning revenue sharing. In conjunction with the previous discussion on power held by the MNOs, and as the MNOs effectively have the power to regulate the flow of traffic regardless of attempts by other channel members, they would most likely receive a substantial portion of potential profits. This goes well with the proposition by Stern & Reve that “The

⁸⁷ Stern & Reve 1980

⁸⁸ Discussed in Workshop 2007-05-04

⁸⁹ Stern & Reve 1980

⁹⁰ Ibid

greater the proportion of a relative power possessed by any channel member, the greater the proportion of profits that member will receive.”⁹¹

As there are two platforms through which content can be distributed to consumers, through linear transmissions or on-demand services, audiences will have the opportunity to choose between subscribing to either of these services or both, or potentially to be charged separately for each on-demand clip. This mirrors how the IO- and distribution channel perspectives differ in terms of how they regard the role of the customer, in the first mentioned as a passive receiver of the product made available by the company, or as having, and wanting, a choice in how the product is consumed.⁹²

6.3. Total Convergence

In the Total Convergence scenario the customer is a highly active participant in the value creation process and the cooperation between industry actors is at the highest possible level.⁹³ “Total Convergence” refers to the blending of media prevalent in a market of these characteristics. The flexibility of service delivery blurs the borders between what we traditionally deem as TV, web, or mobile media. The workshop participants regarded this as a description of a “digital utopia” as the experience for the consumer would be highly customizable and that actor relationships were to be essential when designing suitable business strategies and services. This argumentation closely resembles those of the value-creating networks and the markets-as-networks perspectives.⁹⁴ Parallels were also drawn to the expectation of the new economy in the late 90’s.⁹⁵

As opposed to the previous scenarios, the total convergence scenario fosters entrepreneurship and business creativity. There are almost no barriers to entry in this scenario as the value creation process for the entire business network is regarded as a whole.⁹⁶ Due to the consumers demanding a large flexibility of content served no business actor can on their own cater to these needs. As such, actors regard themselves as linked activities in the value-

⁹¹ Ibid. p 60

⁹² See Porter 1979, Stern & Reve 1980

⁹³ See sections 5.3.1. and 5.3.2.

⁹⁴ Johansson & Mattsson 1994, Normann & Ramirez 1993

⁹⁵ Discussed in Workshop 2007-05-04

⁹⁶ Normann & Ramirez 1994

creating network⁹⁷ rather than as separate competing entities. The content itself can both be niched and mainstream with consumers determining what is market worthy and what is not. As a result, the products can be regarded as differentiated, and therefore not in direct competition, although they could be regarded as substitute products, as they all infringe on the time consumers can spend on these services. Should a start-up arise serving content attractive to consumers, i.e. providing value to the consumer experience, it will instantaneously be part of the network value creation process.⁹⁸

By letting users themselves choose which content to watch, as well as when to watch it, the aforementioned activities involved in TV distribution are shifted to the consumers. This does however not merely affect the audience, but the advertisers as well.

Customized advertising, tailored to the individual viewer, would most likely be the largest source of revenue for the market. These ads would themselves be highly flexible, enabling advertisers to control the ad content displayed for each individual viewer. There would also be large amounts of cross-promotion between different content-serving value constellations⁹⁹ within the market network. These promotional strategies would not simply have the purpose of generating ad revenues, but also to serve as guides to the consumers as to where they find content suiting their preferences. As the amount of on-demand content available to consumers increases, this filtering activity becomes increasingly important for consumers, as the plethora of content becomes more difficult to navigate.

It is not only the content that the customers would be able to customize, they would also to a large extent be able to tailor their methods of paying for it. Should a consumer not want any advertising, that could be arranged for a certain price. On the other hand, should they want a service as cheap as possible, they would either limit themselves to user-generated content or accept a higher amount of advertising. The customers would also determine not only *what* they pay for but also *how*. Payment plans could include several payment options, such as subscriptions for a certain time period, pay-per-view or sequential billing over time.¹⁰⁰

⁹⁷ Normann & Ramirez 1993

⁹⁸ Normann & Ramirez 1994

⁹⁹ Normann & Ramirez 1993

¹⁰⁰ Discussed in Workshop 2007-05-04

Conversely on the business side, the actors involved in the production could determine *to whom* the customers pay. There are currently several actors on the web specializing in co-billing systems for multitude of actors, i.e. Paypal. In a mobile context the MNOs would be the likeliest candidate as they have the ability to monitor which content is consumed and already have consumer-billing systems in place. These co-billing systems would also enable bonus systems to be developed, where ordering goods or services online with your mobile device could generate bonus points attributable to premium content, lower calling rates or even cash.¹⁰¹

¹⁰¹ Ibid

7. SUMMARIZED CONCLUSIONS

The following section will present our results in a summarized form. As we have three research questions, this section will be organized accordingly.

1. What determines the consumer value perception of mobile TV offerings?

The main characteristic defining the consumer value attribution process is the level of demand for services enabling consumer co-production. Our definition of co-production in a mobile TV context centers on the ability of the consumer to tailor their experience by themselves assembling the service. This can best be exemplified as viewing on-demand video clips through the mobile web.

2. What determines the mobile TV service delivery capabilities of the distribution network?

The service delivery capabilities of the distribution network are determined by the level of cooperation between industry actors, as well as their coordination of unique capabilities and technologies.

3. Which generalized market scenarios can be described according to these factors?

The continuous nature of the two variables, level of co-production and level of cooperation, creates an infinite amount of potential scenarios. In order to provide an overview of general trends of market conduct generated by these variables, we have described three potential markets; Status-quo, Platform-portfolios, and Total convergence.

The main theme found in the answers to the three questions above is the theme of interaction; interaction between consumers and industry actors, as well as interaction between the industry actors themselves. It has also appeared that the higher the degree of interaction within the market network, the higher the potential of profits will be. We have also observed how decision-makers within the industry unintentionally describe markets characterized by varying levels of actor interaction as near perfect templates of applied academic market theories. This would indicate that the three theories applied can all be seen as valid given certain market conditions, albeit with varying levels of descriptive applicability.

8. CONCLUDING DISCUSSION

The introduction of new media technologies is often regarded by their inventors as instantly attractive to consumers. The sense is that “if you build it, he will come”¹⁰². Our analysis provides a much more complicated perspective. Not only must a service be of value to consumers, it must also fit with the consumers’ already existing constellation of services. To create this fit, relationships with other actors must be explored and consumers’ demand for *how* the service is utilized must be taken into account.

In the case of mobile TV services, time has revealed that the new patterns of consumer behavior for video content on other platforms have carried over into the mobile space. The demand for broadcast video technologies has faded drastically since this study was performed and has been replaced by a still increasing demand for on-demand services through content providers such as YouTube. As a result, in order to cope with the fluctuating demand of the consumers, the business network has gone through a number of revisions and reconfigurations; MNOs have to a large extent shifted from the role of content aggregator and instead moved towards being a pipeline of information enabling users themselves to formulate their value propositions, smaller content producers have been given the opportunity to disintermediate the value network and approach the consumer directly without passing through traditional aggregators should the consumers know what they are searching for. However, the aggregators, in the form of various mobile websites, still carry out an important function as recommenders and organizers of content. As the business models have propagated from the web to a mobile context, so have the revenues. Google’s targeted advertising system has enjoyed a seamless transition to the new market space as the technology involved is identical to that of its origin. Even though the workshop participants in our study regarded the total convergence scenario as the least probable, it appears that consumer demand holds a massive power in the reconfiguration processes of business networks and has managed to break down the seemingly impenetrable walls between different corporate spheres.

¹⁰² Robinson 1989, Costner K. 00:04:25,08

8.1. Possible critique of the study

When the study was performed, we had an underlying assumption that there would be some form of future demand for mobile video services which might have made our investigation biased. With the same logic the interviews, focus groups, workshops and surveys might have attracted those already pursuing an interest for the service, which in turn might have skewed the results favorably.

8.2. Suggestions for Future research

Our conclusions spawn several questions suitable for future research. We have described the consumer value creation process from a strategic management perspective. Thus, we have not looked at the mechanics of the psychological processes associated with an active consumer co-production of value. We believe a further investigation into consumer behavior would be highly valuable as it has the potential to effectively integrate the consumer decision making- and strategic value constellation framework, and thereby create a coherent level of abstraction suitable for analysis of strategic marketing within the markets-as-networks tradition.

We also suggest further investigation into the time period between when the study was conducted and the time this thesis was published. During this time period, there was major reorganization and fluctuation in consumer demand within the business network and we would find an analysis of this reconfiguration process highly interesting in terms of how the altered consumer demand propagated through the network and the effect this had on sense-making processes of industry actors. In line with this we also suggest a comparative study between this business configuration process, with little or no legal dispute, and the current reconfiguration process within the entertainment industry to combat copyright infringements.

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Pontus Bergdahl, CEO, MMS

Peter Siljerud, Analyst, Kairos Future

Peter Holmström, Strix

Thomas Hedqvist, Analyst, Xlent Strategy

Jon Guthed, Project manager, 12snap Lokomobil

Maria Wiss, Business developer, Kanal5

Mark Jefford, Ericsson

Workshop 2006-11-30, session 2

Anette Bohman, Director Mobile Services, TV4

Mattias Viklund, Post- och Telestyrelsen

Jonas Hagblom, Radio- och TV-verket

Weje Sandén, Bonnier Magazines

Aurelian Bria, KTH

Workshop 2006-11-30, session 3

Henrik Pålsson, Ericsson Consumer Lab

Patrik Höljö, TeliaSonera

Johan Wahlberg, SVT

Carl-Axel Gustavsson, Kulturdepartementet

Anders Willmes, Interactive TV Arena

Jens Häger, Xlent Strategy

Björn Johansson, SVT

Pär Sundberg, OTW Television

Workshop 2007-02-19, session 1

Joakim Jardenberg, Helsingborgs dagblad

Tomas Hedqvist, Xlent Strategy

Jon Guthed, 12snap Lokomobil

Jens Häger, Mediavision

Fredrik Lagerman, Svenska Spel

Peter Cederholm, Karat

Morris Packer, Bonnier Group

Workshop 2007-02-19, session 2

Magnus Lindgren, OTW Television

Helene Albrektsson, TV producer, Story

Carl Jeding, Näringsdepartementet

Maria Wiss, Kanal 5

Anette Bohman, TV4

Bonnie DeSouza, MTG New Media

Workshop 2007-05-04

Joakim Strandqvist, Teracom

Jonas Palmkvist, Tre

Morris Packer, Bonnier Group

William Milisic, Nokia

Joakim Jardenberg, Helsingborgs dagblad

Peter Holmström, Strix

Gunnar Slott, SVT

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