#### Stockholm School of Economics

Department of Marketing & Strategy Master's Thesis, 10 Credits

## Video Goes Mobile:

- What Consumers Expect of Mobile Video Services

#### Abstract:

The purpose of this thesis is to explore what factors will affect the usage of mobile video services. As a secondary purpose, based on the above findings, some implications for providers of mobile video services are discussed. The term mobile video services as used in the thesis denote the downloading, streaming and uploading of user-generated on-demand videos. The study is also limited to Swedish consumers and the Swedish market.

By using theories of the Long tail, user-generated content (UGC), adoption of new technologies, mobility and uniqueness and self-expression, hypotheses focusing on factors influencing use of mobile video services are formulated. The study is, furthermore, divided into a pre-study consisting of qualitative interviews, complementing the theories, and a quantitative study conducted with a survey among 250 students. The findings from the quantitative method were analysed with frequency analyses, t-tests, correlation tests and regression tests.

The findings indicate that UGC is very popular to watch, but that only a few upload their own material. The findings also indicate that there are many factors that influence consumers' usage of mobile video services. The most important factors connected to the service offering are the trialability of the service, the functionality of the mobile phones for the service, the ease of use and the reliability of the service. The most important factors connected to value for consumers are the values created by the number of users of the service, the time-efficiency factor achieved through the mobility of the mobile phone and by the community factor. Some important factors that can be communicated by companies are the number of users of the service and the ease of search of video clips through the service. It is also important to increase the consumers' knowledge level of the service.

For the companies on the market, the study indicates that it is important to consider these factors when designing their service offering and marketing activities. The study also indicates that it is important that companies begin to cooperate with other companies on actual "win-win" conditions.

Keywords: mobile video services, UGC, user, adoption, technology

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## **Explanation of technological terms**

3G = The third generation of developments in wireless technology, especially mobile communications. The third generation, as its name suggests, follows the first generation (1G) and second generation (2G) in wireless communications. 3G offers the potential to keep people connected at all times and in all places.

**Community** = A community of people sharing common interests, ideas, and feelings over the Internet or other collaborative networks.

**Digital multimedia broadcasting (DMB)** = A method of multicasting multimedia content to mobile and portable devices, such as cell phones, by satellite or terrestrial services, or a combination of the two.

**Downloading** = The transmission of a file from one computer system to another. From the Internet user's point-of-view, to download a file is to request it from another computer (or from a Web page on another computer) and to receive it.

**Streaming video** = A sequence of "moving images" that are sent in compressed form over the Internet and displayed by the viewer as they arrive.

**Uploading** = A transmission in the other direction of downloading: from one computer to another computer. From an Internet user's point-of-view, uploading is sending a file to a computer that is set up to receive it. People who share images with others on bulletin board systems (BBS) upload files to the BBS.

User-generated Content (UGC) = The creators of content is the users themselves, meaning that the consumers have turned into producers. A deeper analysis of UGC will be discussed in a separate section of the thesis.

**Video/mobile community** = An online platform where users can watch, upload, review and comment the videos which other users have uploaded.

Web 2.0 = A popular term for advanced Internet technology and applications including blogs, wikis, RSS and social bookmarking. Increasingly, users have more input into the nature and scope of Web content and in some cases exert real-time control over it. UGC is a core component in this latest Web development.

## 1 Introduction

Firstly, a background to the thesis topic will be presented. The background description will thereafter be followed by a presentation of the purpose of the thesis, the scope and the limitations. In the very end the expected contribution of knowledge will be discussed.

## 1.1 Background

In 2005, the share of Web users of the European population was nearly 60%, whereof young people were the heaviest users. This figure is expected to continue to grow, driven by increasing connectivity speeds and accessibility, and by 2009 more than three out of four Europeans will regularly go online. (EITO, 2006)

Lately, the Internet has developed in ways that are broader and more profound than increased speed, accessibility and popularity alone. People increasingly use the Internet to fulfil social needs. The increased social usage of the Web is one aspect of many of the recent development which has been labelled Web 2.0. Another core aspect of Web 2.0 is user-generated content. Users of the Internet have turned from passive consumers to active producers. (Arthur D. Little, 2006) According to the Internet rating institute Nielsen//Netratings (060810), Internet sites that are based on user-generated content drive half of US top ten fastest growing web brands.

While improvements in fixed Internet connectivity speed and popularity of the Internet have sky-rocketed, improvements in mobile Internet connectivity speeds and usage of mobile Internet have made progress in terms of capacity and capabilities. Mobile devices have developed from mainly being able to make phone calls and send text messages to include multimedia features, including making and watching video clips and accessing the Web. In 2005, the multimedia phone penetration passed the 50 percent-mark in Europe, and in the same year 45 percent of these multimedia phone users browsed the Internet and/or downloaded an email to their phone at least once a month (AT Kearney/University of Cambridge, 2005).

During the last few months several Internet services have released their online services for mobile phone usage, including video services. One example is YouTube which is the most popular video community on the Web with more than 100 million videos watched every day (BBC News, 2006). In December last year, the company teamed up with the

American carrier Verizon to bring a limited choice of video clips to the mobile phone (YouTube press release, 061128). Another example is the Swedish video community Bubblare.se which since last December offers its users, in beta mode, a few videos to be watched on the mobile phone (Mörner, 061211). A similar mobile video service has been launched by the mobile carrier 3 in the UK. In October 2005, 3 released its SeeMeTV-service where users who upload a clip get awarded one pence for each download from other subscribers (3 Media Center, 051018).

According to Informa Telecoms & Media (2006), the market for mobile communities and user generated content will be worth \$13.1 billion in 2011. This high value will be driven by the high amount of users actively uploading video clips to these services. It is predicted that today's 46 million users who submit video clips to services such as YouTube and SeeMeTV from their mobile phone will increase by more than three times up to 198 million in 2011.

#### 1.2 Problem Area

Different kinds of companies in the telecommunications industry, such as for example carriers and Internet service providers have started to launch different forms of mobile video services. At the same time the preferences of the consumers are still not clear. Thus, since the emergence of the mobile video market is rather new, the market can be characterised as uncertain.

On a technical level the prerequisites for using mobile video service are available. Today the majority of the Swedish population owns a 3g-mobile phone and this number is growing. Despite that people own a 3g-mobile phone and can connect to the Internet to access a wide range of different services, many still mostly only use basic services, such as voice and text messaging. (See Flores (061115) and Computer Sweden (060227)) The increasing importance of mobile video services, the high level of uncertainty on the market combined with the fact that companies are inexperienced and in a test phase of launching their mobile video services is why it is of interest to investigate what consumers expect of mobile video services and the implications on service providers of mobile video.

## 1.3 Purpose

The main purpose of this thesis is to explore factors that will affect usage of mobile video services. Out of these findings implications for providers of these services will be derived.

Our expectation is that the study will cast light on possible success factors that arise when the usage of video services on the Internet take the step from personal computers out to mobile phones, thus when video goes mobile.

The problem will be discussed and analyzed with the help of the following research question:

• What factors will affect the usage of mobile video services?

The expectations will principally be discussed on the basis of:

- 1. factors that are possible for a company to actively influence through designing a certain service offering,
- 2. variables providing value, that are generated through consumers' own activities and
- 3. factors that companies can communicate through marketing and information activities,

Furthermore, the thesis also has a secondary purpose:

• Derived from the results of the research question above, some possible implications for providers of mobile video services will be discussed.

## 1.4 Scope and Limitations

A fundamental limitation of this thesis concerns the meaning of the term "mobile video services". The term is relatively new and can in its broadest meaning comprise everything from different kinds of TV-broadcasts watched on the mobile phone, downloading, streaming and uploading of full-length videos and short video clips to the mobile phone and even mobile video calls. Thus, the focus in this study will be on downloading,

streaming and uploading of user-generated on-demand videos through the mobile phone. Thus, the definition of the term will be downloaded, streamed and uploaded on-demand mobile video services. As used in the thesis, the definition will exclude all other video services that are not accessible, at any moment, through the mobile phone.

The limitation to user-generated video is crucial for the study, since websites based on UGC such as YouTube and Bubblare.se also often illegally contain copyrighted content such as clips from various TV-shows and music videos. With the distribution of copyrighted material via mobile phones other problems have to be considered, which can be avoided with the limitation above.

In addition to the limitation above, the study will in its empirical content focus on the Swedish market and the expectations and opinions of Swedish consumers and companies. Despite this, secondary sources such as reports and case studies from other origin will be used in order to create a broad base for the analysis.

#### 1.5 Expected Contribution of Knowledge

As mentioned earlier, the mobile video service area is new and in its testing phase. Within the field there exist a few reports made by consulting companies about mobile video usage, which to some extent discuss the possible implications for telecom players. Nevertheless, the studies available do not use the perspective of UGC, nor do they have the holistic approach of adoption of usage of mobile video services with implications for service providers. Regarding mobile TV-usage, there exist pilot studies initiated by companies with an interest in mobile-TV (Teracom pressmeddelande, 061213). From the academic field, only one study which investigates the topic of mobile-TV usage has been found. This Korean study from 2006, presents empirical findings about users' perceived use of digital multimedia broadcasting accessed via the mobile phone (Shim et al., 2006). The authors further state that their study is the first kind of research in the area. Thus, it might not be surprising that no academic literature about mobile video usage as such have been found. The lack of previous research of mobile video services thus means that relevant existing theory in the areas, such as technology acceptance and mobile commerce, can be seen as the closest to similar subjects a researcher can access.

Furthermore, theory of user participation, whether it is uploading of pictures or videos, is very limited.

With the limited research at hand, it is sufficient to conclude that there is reason to investigate consumers' expectations towards user-generated mobile video services and its implications on service providers, and this paper serves to fill this gap.

The recent and ongoing development of the area can be described as being in a critical phase. Different competing Internet players, which provide user-generated videos for watching and uploading, try to precede each other with a successful introduction of mobile video services. Gathering information of consumers' expectations will therefore most certainly be of great interest to these Internet service providers when designing and developing their mobile video offering to consumers. In addition to these service providers, there are other players on the market, such as other types of content providers of mobile services, carriers<sup>1</sup> and manufacturers of mobile phones that could benefit from the study.

On a more general level, the study can give a contribution to the understanding of the development of new mobile services and adding new insights to the existing theories of consumers' adoption of new technological services.

## 1.6 Disposition

After this introduction, the methodology is presented. Thereafter, a chapter about the market of the phenomenon of mobile video services is provided. After that, a chapter of theory follows, where hypotheses are generated. These hypotheses are tested in the next chapter of the empirical results of the qualitative and quantitative studies. Finally, implications for services providers are presented, before the end discussion finishes the thesis.

<sup>&</sup>lt;sup>1</sup> Such as TeliaSonera, Telenor 3, etc.

## 2 Methodology

In this chapter an explanation of the choice of scientific method, research strategy and data collection will be provided. In addition to that, we will also motivate the choice of method and discuss the research quality.

## 2.1 Problem Definition and Choice of Area of Study

In order to identify a problem area of research and define a relevant purpose, different types of secondary sources were studied, both from the relevant area of interest and from adjacent areas. These sources consisted of everything from academic reports, newspaper and magazine articles to company homepages and blogs. In relation to the formulation of the problem area and the purpose, the area was also discussed with our tutor.

## 2.2 Research Design

In the area of market research there are two main types of research design, conclusive and exploratory (Malhotra, 2004). Since the research problem is rather new and undefined, the study was in its initial stage carried out with an exploratory research design. This initial part can hence be described as a pre-study creating new insights and an understanding of the problem, before embarking upon the problem further. The insights from the pre-study also functioned as a compliment to the narrow theory available. This research design is also supported by Merriam (1994), who points out that qualitative research can function as a catalyst when generating new theories. Following the exploratory feasibility study, a conclusive research was performed with the aim of verifying and quantifying the findings obtained in the feasibility study.

## 2.2.1 A Mixed Approach – Qualitative and Quantitative

In many studies either a qualitative or a quantitative approach is chosen. The distinction between these, according to Malhotra (2004), also closely follows the distinction between exploratory and conclusive research which as mentioned earlier were used. Therefore, it is also logical that both a qualitative and a quantitative research approach were used in the study. This mixed approach also corresponds with the reasoning of Malhotra (2004) that it is reasonable to view qualitative and quantitative research as complementary to

each other. Also, through using both methods the different weaknesses of both research methods can be avoided. The results acquired with such a mixed approach have a better chance of being more nuanced, hopefully showing a more realistic picture of the examined problem area. There are, furthermore, several ways to combine these research methods (Holme & Solvang, 2001). In this case, the study was started by gathering information from secondary sources and conducting qualitative interviews. Based on theoretical and empirical data, from the quantitative interviews, several hypotheses were developed. These hypotheses were used when creating a model and questionnaire for the survey.

#### 2.3 Data Collection

Accordingly to Malhotra (2004), it is important to gather secondary data before collecting primary data since the collection of primary data, then can be more carefully designed. Also in this study the data collection has followed this sequential order.

#### 2.3.1 Secondary Data Collection

Initially a web search using mainly Google was conducted which yielded results in the form of articles related to the subject from the press, blogs and company homepages. Also, the SSE library catalogue was searched in order to gather academic writings and articles on the subject from scholarly journals.

#### 2.3.2 Primary Data Collection

After the collection of secondary data it was time to collect primary data, both of qualitative and quantitative nature.

First, the qualitative interview questions were designed and a sample of informants was chosen. The interviewed persons are described as informants according to Holme & Solvang (2001). These persons can not represent the actual users, but are still relevant sources due to the expert knowledge they have acquired through their employments in companies active in the telecommunications industry. The sampling technique can furthermore be described as non-probability sampling, mainly based on judgmental sampling with some streaks of convenience sampling and snowball sampling. Since the

area of mobile video services is a relatively new area, companies active in Sweden that have positioned themselves as being innovative and in the forefront of the mobile development where chosen. Representatives at the carriers 3 and Telenor were contacted. Bubblare.se was assessed as a good representative for websites offering user-generated video services and starting to provide mobile video services. Bubblare.se also helped to identify an informant at Samsung that was interviewed. Although Samsung as mobile device manufacturer does not belong to our definition of service provider in chapter 1.3, Samsung's views were included in order to give further depth to the study's analysis. All interviews were semi-structured and lasted for 55-65 minutes.

The material collected during the qualitative interviews in combination with the theory collected served as a base for the formulation of hypotheses and questions to be included in the questionnaire. The questionnaire was then designed with some assistance by Niclas Öhman at the Department of Marketing and Strategy at SSE. The questionnaire consisted of three types of questions, open questions, fixed alternatives and questions where the answer had to be given in an interval scale from one to ten. Open questions were used in order to not restricting the respondents in any way. The fixed alternatives were used when it was judged that it was important to limit the range of different answers. But, also here the question was combined with an open question in order to cover all possible alternatives. The third type of questions, using an interval scale, was chosen since the object of these questions was to measure the respondents' attitudes and intentions (Söderlund, 2005)<sup>2</sup>. An even interval scale between one and ten was chosen in order to force the respondents to have an opinion and to avoid that the respondents placed their answers in the middle. The interval scale is the most common scale to use when attitudes and intentions are measured (Söderlund, 2005).

As the next step the questionnaire was pre-tested on a small sample of representative respondents, totalling ten respondents. Through the pre-test, some problems and mistakes in the questionnaire were identified and changed accordingly (Malhotra, 2004). The

<sup>&</sup>lt;sup>2</sup> The intervall questions were combined with a scenario, which the respondent had to read before answering these questions.

questionnaire was then distributed to a sample of 250 respondents, divided into two groups, i.e. high school students at Malmö Borgarskola and students at Stockholm School of Economics. The choice of respondents here can be denoted as a type o convenience sampling, as mentioned earlier. Still, it is reasonable to believe that the sample is representative since young people often are the heaviest users in similar areas (see chapter 1.1).

#### 2.4 Quality of the Study

#### 2.4.1 Reliability

The reliability of a study means to what extent a scale results in consistent results if repeated measurements are made (Malhotra, 2004). In this thesis the reliability of both the qualitative study and quantitative study has to be considered. The reliability of the quantitative study was ensured through letting the informants read through the interview protocol and correcting eventual mistakes or misunderstandings.

The reliability in the quantitative study was ensured through repeating the questions where it was possible. The reliability was hence ensured through internal consistency. Internal consistency can be measured through inspecting Cronbach's Alpha which is a variable ranging between zero and one (Malhotra 2004). There are several limits to which value Cronbach's Alpha should have. According to Malhotra (2004) Cronbach's Alpha shows unsatisfactory internal consistency reliability if the value is 0.6 or less. Söderlund (2005) argues for a minimum limit of 0.7 for Cronbach's Alpha for internal consistency reliability. The different values of Cronbach's Alpha in this study all lie over 0.8 and even above 0.9 which show that the internal consistency is good. When there are only two questions available that measure the same factor, correlation is used to check internal consistency.

#### 2.4.2 Validity

The validity of a study shows if the study actually measures what it is supposed to measure (Söderlund, 2004). It can also be defined as the extent to which differences in the measurements reflect true differences among objects on the characteristic being

measured rather than systematic of random errors (Malhotra, 2004). The validity in the qualitative study was tried to be ensured through carefully choosing the informant companies.

Validity can be measured by *content validity, construct validity* and *criterion validity*. The content validity in this study has been tried to be ensured through designing the study and questions in a close connection to the theoretical frame. Additionally to that, an interval scale with two extreme values (is not correct at all – it is totally correct) have been used. When the construct validity is measured the correlation coefficient (r) is used. A rule of thumb is that if r lower than 0.1 is the correlation is low and if r is larger than 0.5 the correlation is high. In this study the majority of the correlations are over 0.1 and the tests are significant (Söderlund, 2004). The criterion validity reflects if the measurements perform as expected in relation to other relevant variables (Malhotra, 2004). As a way to try to ensure the criterion validity is to create a scenario in the questionnaire that is free from unwanted associations to brands etc.

The questionnaire was made in Swedish instead of English. Swedish was chosen in order to avoid that the respondents, especially the young high-school students, would fail to understand everything what was asked for. There is a risk that the validity can have been affected by the language translation, but it is judged to be rather small also external persons have checked the language.

#### 2.5 Question Set B: The Consumer Decision Process

The theory about the consumer decision process is included in the methodology chapter with the purpose of explaining the choice and design of questions in the questionnaire. Specifically, in the B-part of the questionnaire, the questions are based on these four steps in the consumer decision process which makes it worthwhile to discuss further.

A common description of the consumer decision purchase process contains different phases following each other. These phases are: need recognition, search for information and pre-purchase evaluation of alternatives and purchase followed by a post-purchase stage. (Blackwell, 2001)



Figure 1. Consumer decision purchase process model

However, since this thesis focuses on a new a new kind of service, most focus will be put on the phases preceding and leading to purchase. Therefore, consumers' expectations on mobile video services will be examined, including if consumers are aware of the service, their attitudes and purchase intentions, which is illustrated in Figure 3 below.



Figure 2. Modified consumer decision purchase process model

Consumers can sometimes satisfy needs on different levels through buying products and services. For a producer it is, therefore, important to know which expectations consumers have, i.e. what will satisfy their needs. But even if a product exists which can solve the consumers' needs, if the consumers are not aware of the existence of the product or service, they cannot get interested and in the end purchase the product. Gaining awareness among consumers is therefore crucial, which is especially important for new products or services. In the next step, when consumers have acquired some fundamental knowledge of the existence of the product or service they collect more information and form attitudes of it. Attitudes consist of what people know about an object and their feelings if it, e.g. if they like or dislike something. Next, attitudes determine purchase intentions, which are the consumer's own subjective judgement of what he or she will buy in the future. Purchase intentions are often followed by an actual purchase, and can, therefore, be used as predictors of future purchases. (Blackwell, 2001)

## 2.6 Explanation of Variables from the Questionnaire part C

In the table below, the questions from part C of the questionnaire and their respective factors which are tested are presented below. To see the entire questionnaire, please see Appendix 10.5

Variable	Explanation of variable		
Cl	The respondents' expectations on if they will have such a service available in their mobile phone.		
C2C3_Index	The respondents' expectations on if they will use the mobile video service described in the scenario.		
C5	The respondents' expectations on if they will begin to use the mobile video service if they got the chance to try it for free.		
C6C7_Index	The respondents' expectations on if the prices of the service will be significantly lowered.		
C8C9_Index	The respondents' expectations on if the service will function well, with the mobile phone they will have.		
C11	The respondents' expectations on if they will afford a mobile phone which functions with the service.		
C12 The respondents' expectations on if there will exist a variety of mobile phones t well with the service.			
C13	The respondents' expectations on if the service will have many users.		
C14	The respondents' expectations on if there will be a high supply and variety of video clips to chose from.		
C15C16C17_Index	The respondents' expectations on if the mobile video service will be easy and convenient to use, both in terms of down- and uploading of video clips.		
C18	The respondents' expectations on if they will have sufficient knowledge to use the service.		
C19	The respondents' expectations on if more information about the mobile video service will be provided, from their mobile carrier.		
C20	The respondents' expectations on how easy it will be to search among video clips.		
C22	The respondents' expectations on if the mobile service will be accessed by just one click on the mobile phone.		
C23	The respondents' expectations on if they will save time, through using the mobile phone.		
C24	The respondents' expectations on if it would feel strange to watch mobile video clips outdoors.		
C25	The respondents' expectations on if their friends would react negatively if they watched mobile video clips in their mobile phone.		
C26	The respondents' expectations on if they would get positive attention from their friends if they watched video clips on the mobile phone.		
C27	The respondents' expectations on if they would get positive attention from their friends if they create and upload video clips with the mobile phone.		
C28	The respondents' expectations on if they would feel cool if they would use the service.		
C29	The respondents' own perception on if they are early users of a new technology.		
C30	The respondents' expectations on if the video service to will be reliable and will work wherever he or she is located.		
C31	The respondents' expectations on if the mobile service would enable them to find a video clips, they otherwise would not be able to get hold of.		
C32C33C34_Index	The respondents' expectations on if the service will be popular and if they will feel some kind of fellowship with other users. ( <i>Community factor</i> ).		
Expert_Index	The respondents' own perception on if they feel they have some kind of expert knowledge.		

#### 2.6.1 Internal Consistency

The mean from the first question connected to the scenario<sup>3</sup>, i.e. if people think they will have such a service available in their mobile phone within a year (C1) is five. This means that the mean lies in the lower range of the middle of the interval one to ten. The following two questions C2, C3, examining if people will use such a service have a lower mean, i.e. around 3. This shows that people think that it is more probable that they will be able to use such a service if they want to, but that many think that they, despite this, will not use it. Since the internal consistency for C2 and C3 can not be checked with Cronbach's Alpha it is tested with correlation. Even if a correlation check is weaker than a check with Cronbach's Alpha it can still be concluded that the internal consistency is sufficient.

Correlation		C3
C2	Pearson Correlation	0.723
	Sig. (2-tailed)	0.000

 Table 1. Correlation between C2 and C3

Cronbach's Alpha for the questions D1 to D8, measuring if the respondents feel they have some kind of expert knowledge, is 0.964 thus well over 0.7, shows that the internal consistency between the two variables is high. This means that since they examine the same factor, they can easily be grouped together showing that there exists reliability in the research questions. The (Expert\_Index), thus, shows a high internal consistency.

Cronbach's Alpha	Cronbach's Alpha on D1-D8	N of Items
0.963	0.964	8

 Table 2. Cronbach's Alpha on Expert\_Index

<sup>&</sup>lt;sup>3</sup> The respondents were asked to imagine a future mobile video service, which makes it possible to download user-generated videos and to upload own videos via their mobile phone. "Föreställ dig en tjänst där du via ditt mobilabonnemang kan hämta ned och titta på korta videoklipp i din mobiltelefon. Dessa videoklipp är det andra användare av tjänsten som har gjort och lagt upp på Internet på olika sidor. Med hjälp av tjänsten kommer du också att t.ex. kunna filma något med din mobil för att sedan direkt kunna ladda upp det på Internet via ditt mobilabonnemang."

Other variables that have been grouped together are C6 and C7, that measure if the respondents think that the prices will be lowered significantly within one year. Also these show a sufficient internal consistency, with a correlation of 0.898.

Correlation		C7
C6	Pearson Correlation	0.898
	Sig. (2-tailed)	0.000

#### Table 3. Correlation between C6 and C7

The mean of the C6 and C7 that lays around 6, is also interesting since it shows that the respondents have a relatively high expectancy that the prices will be lowered significantly within one year. Other variables that have been grouped together that also show a sufficient internal consistency are:

- 1. C8 and C9 that examine if the respondents think that the mobile phone they will own within one year will work well with the service.
- C15, C16 and C17 that examine if the service itself will be easy and convenient to use,

and

3. C26 and C27 that examine if the respondents feel that they will get positive attention from their friends if they will use the service within one year.

Variables	Correlation	Cronbach's Alpha	N of Items
C8 & C9	0.797		2
C26 & C27	0.684		2
C15, C16 & C17		0.914	3

Table 4. Cronbach's Alpha on C15C16C17\_Index correlations between C8 and C9 respectively C26 and C27.

## 3 Background of user-generated mobile video services

In the upcoming part, firstly the theory of the Long tail will be discussed, then the phenomenon of user-generated content (UGC) will be examined and a definition of UGC will be purposed.

#### 3.1 The Long tail

The Long tail theory is presented with the purpose to give the reader an understanding of the evolvement of niche services, including user-generated services in general, and mobile video services in particular.

With increased bandwidth available to cheaper prices, people's usage of the Internet has boomed, which has furthered the development of Internet markets. The result of this is that consumers are able to reach more information and a larger variety of products than before (Brynjolfsson, 2006). With the Internet, the costs of production and distribution can also be lowered, since storage space can be avoided, production can be done on demand and different media have become all-digital. And since people's tastes normally more or less diverge from the mainstream there is always an interest for other alternatives (Anderson, 2004). With the help of the Internet, even small niches will have many likeminded customers, since people outside the local market can get knowledge and reach of the products or services (Brynjolfsson, 2006). This development represents a completely new economic model for the media and entertainment industries, of which we are only seeing the beginning (Anderson, 2004).

The development has been named "The Long tail"<sup>4</sup> and means that the 80/20 rule to all business of models is not longer naturally valid (Wikipedia). As a result of globalization, individual sellers can achieve a greater demand of niche products or services. On the demand side, the increased number of choices for consumers can mean that they get overwhelmed when choices are poorly organized. The Long tail makes it critically important that retailers provide tools to facilitate the discovery of products through active

<sup>&</sup>lt;sup>4</sup> "The Long tail" also informally describes the appearance of an aspect of different statistical distributions, such as Pareto.

search<sup>5</sup>, passive search<sup>6</sup> and combined<sup>7</sup> search (Brynjolfsson, 2006). Improved search possibilities help people to avoid e.g. "bad" content (Anderson, 2004). The Long tail development has also increased people's demand for variety and niche products. This, results in higher incentives for individuals to create and distribute their own material on the Internet, resulting in a growth of UGC on the Internet.

## 3.2 User-Generated Content

The discussion of user-generated content is included as it is a rather new phenomenon which lacks a proper definition. This chapter serves to give the reader a background of the theory and a definition of UGC will be brought forward.

## 3.2.1 Background Information

The border between producers and consumers has blurred as consumers today have access to the instruments of creating their own content. Powerful computers and user-friendly applications have opened up for the individual amateur to do what once only the professionals could do. (Anderson, 2006) Thus, there is a new architecture of participation and a movement of the power from producers to consumers. This phenomenon is often referred to as user-generated content (UGC). UGC is shifting the way information, news and multimedia content work in the global community. Although, UGC has been a hot issue in the worldwide community for more than a year now, a unified view of what this phenomenon actually constitutes still lacks.

## 3.2.2 Definition Approach

To find out what UGC actually means and stands for one can have a look into the meanings of the words that build up the very term "user-generated content". Firstly, the definition of UGC depends on whom one considers to be the *user* in generating the content. There are experts that claim that the user is an individual, either as a private person or a person at a job function connecting a brand to the content, who creates a piece of content. User-generated, thus, speaks simply about the person creating the content, which means that anybody can be a user, including individuals in a job function at a

<sup>&</sup>lt;sup>5</sup> Active search tools – e.g. Google.

<sup>&</sup>lt;sup>6</sup> Passive search - e.g. recommender systems.

<sup>&</sup>lt;sup>7</sup> Customer reviews, blogs and online communities.

company producing content. (Evans, 2007) Another view is, however, that the user is the end-consumer as opposed to individuals working at traditional media producers, licensed broadcasters, and production companies. (Wikipedia)

Secondly, one can have a look into the word *generated*. Users' creation of content can either be newly produced or primarily influenced by the users. This creation of content by users can further be described as something that "sufficiently mashes up, edits, remixes, changes, or adds significant value." (Klive, 060823)

Finally, regarding the term *content*, it can be widely discussed what the content that users create and share is about. According to a YouTube trend report UGC is "everything that has been uploaded without commercial / marketing / promotional purpose in mind" (Sharbi, 060802). In this context, content can include everything from copyrighted TV-shows and movies to home-made video clips. This definition does not fully apply to the view of content that has been generated by the users, in terms of users themselves producing or primary influencing the content. This way of creation of content can include the creation of a totally new brand of material i.e. home videos etc. Therefore, content can also be something that users themselves are owners<sup>8</sup> of.

#### 3.2.3 Proposed Definition

From the discussion above there are four distinct forms of UGC that can be derived. Newly produced content is often owned by the user himself. With a similar approach, material that is primary influenced and changed by the user is made up by copyrighted content. Thus, there seems to exist two different alternatives of generated content. As there are two different kinds of users generating content, the total number of forms of UGC sum up to four.

<sup>&</sup>lt;sup>8</sup> Although it can be discussed whether a home-made video clip which is spread on the Internet has a specific owner or not, we assume that the original creator of the content is he owner of the material.

User Generated		Content	of UGC	1. End-consumer producing new own contnent which the user is owner of           2. End-consumer influencing & changing existing copyrighted & user-owned content
Individual at a job function	Newly produced & Changed	User- Copy- owned righted	Diffe Forms (	3. Individual at a company producing new copyrighted content           4. Individual at a company influencing & changing existing copyrighted & user-owned content

Figure 3. Four different forms of UGC

In order to further limit the width of the thesis, when we speak of UGC, we will refer to the first form as indicated in figure 1: "End-consumers producing new "own" content which the user is owner of". This form of UGC can be referred to as the core of UGC since it is partly in line with the definition cited in Wikipedia, which is a UGC-service itself.

Moreover, it can be said that although UGC-services are immensely popular on the Internet today, it is only a minority of users that contribute and upload their own material. Although 12% of all US Web activity is spent on participatory sites, only 0.16% of all visits to YouTube are by users seeking to upload videos for others (Hitwise, 070417). This number goes hand in hand with the theory of the 3 C's of social media by Calacanis (2006). The author breaks up users of social media into:

- 1. Creatives (representing 1% of all users) -the users who actively add material.
- 2. Contributors (representing 19% of all users) –the users who add comments and votes.
- 3. Consumers (representing 80% of all users) –the users who just ride on the work of the first two groups.

# 4 Factors influencing adoption of user-generated mobile video services

Based on the previous purchase stage in the consumer decision process, the theory of adoption can be seen as a focus of the purchase stage which is crucial in order to understand the underlying factors of users' adoption to mobile video services.

Adoption of new technologies is a broad area which in this section will be partly covered by exploring the role of the consumers and the reasons for resistance on a general level. Then, the discussion will continue on a more detailed level with elements driving adoption in order to reveal the factors that influence the adoption of mobile video services.

Even if a product or a service seems to have perfect characteristics it is not certain that consumers will adopt and use the product or service. If, or when, a product fails when introduced on the market, the revenue and plow-back into future research is threatened. In order to reduce the risk of the new product to fail it is important for companies to understand the adoption behaviour of consumers. (Malhotra & Segars, 2005).

## 4.1.1 Groups of Consumers

Adoption is a process evolving over time, following the development of the technological path. It is also reasonable to believe that consumers follow this development in different ways. Consumers can, hence, be seen as being part of different adoption populations characterized by different levels of resistance, influencing the adoption process of an innovation in different ways (Ram & Sheth, 1989). Understanding the different groups of consumers can be very helpful when designing the offering and marketing of a new product or service, since these groups traditionally value different characteristics of an offering.

One common way to divide consumers is to divide them into five groups of adopters: *innovators, early adopters, early majority, late adopters* and *laggards* (Malhotra & Segars, 2005). *Innovators* is the group that normally accepts a higher degree of innovation disruption and uncertainty and is therefore the first group to adopt a new innovation. The innovators are followed by the group of early adopters that is a group

that normally influences the adoption pace the most, since they spread the word to the other population groups. The early majority adopt an innovation after careful considerations. The group of late adopters is normally very slow at adopting innovations and normally does so, due to some external demands or economic requirements. Laggards are suspicious of innovations and are, therefore, also the last ones to adopt a new product or service. (Malhotra & Segars, 2005) Innovators and early adopters make up the early market since they possess more knowledge than other groups and care less about the price. These groups are also less dependent on other people's opinions about products and are more interested in the benefits of the product or service. These characteristics make these groups lead consumers or influencers of the market. If this group does not adopt the new innovation the mainstream of consumers will not either. (Best, 2005) Based on this theory of different groups of adopters it can be interesting to find out if there is any difference in adaptation among groups regarding user-generated mobile video services. Thus, we ask the following hypothesis:

H1. Persons, who define themselves as experts, belong to the group of early consumers and are more likely to adopt the mobile video service early.

#### 4.1.2 Consumer Resistance

When introducing an innovation, it is important to be aware of the barriers created by consumers' experiences that result in adoption resistance. Awareness of these barriers helps to design an offer which eliminates or reduces the barriers, consequently, reducing the resistance for the innovation (Ram & Sheth, 1989). Innovation resistance occurs due to the change or discontinuity created by the innovation and conflicts with the consumer's belief structure. The reasons for resistance can, more precisely, be divided into the two groups, *functional* and *psychological* barriers, where high barriers lead to high innovation resistance. Functional barriers consist of usage, value and risk barriers. Usage barriers are connected to the degree of change required o consumers' regarding their routines and habits when using the product. The value barriers have to do with the degree of extra value an innovation offer, compared to the cost. The risk barriers consist of economic risk, physical risk, functional risk and social risk. Psychological barriers consist of tradition barriers and image barriers. Tradition barriers arise when an innovation requires

the consumers to change their traditions and image barriers arise when a product or service gets linked to an unfavourable association (Ram & Sheth, 1989). Consumer resistance can be shown in various forms. Specifically for the new phenomenon of mobile video services, consumer adoption barriers due to risks of economical, traditional and social nature the most interesting to look at. Therefore, the following hypotheses will be tested.

H2. The intentions to use mobile video services are negatively influenced by the economic risk of buying a mobile phone with such possibilities.

H3. There exist tradition barriers regarding watching video in the mobile phone outdoors.

H4. There exist social barriers associated with watching video in the mobile phone outdoors.

#### 4.1.3 Elements Driving Adoption and Use

Through formulating the Unified Theory of Acceptance and Use of Technology (UTAUT), the authors attempt to combine and summarize eight widely used models<sup>9</sup> to one that covers more factors influencing the adoption process of innovations in organizations (Venkatesh et al, 2003). The model itself consists of four determinants of user acceptance and usage behaviour leading to behavioural intentions and in the end use: performance expectancy, effort expectance, social influence and facilitating conditions. Then, there are four key moderators influencing the four determinants above. This can be compared to the individual user characteristics in the Input-Process-Output model by Sarker & Wells (to be described below). In the UTAUT, performance expectancy means the degree that a person thinks that the new technology will help him or her to attain gains in job performance<sup>10</sup>. Effort expectancy is the degree of ease associated with the use of the system<sup>11</sup>. Social influence is the degree to which a person believes that other persons think he or she should use the technology<sup>12</sup>. Facilitating conditions are defined as

<sup>&</sup>lt;sup>9</sup> The models studied by Venaktesh are TRA, TAM, MM, TPB, C-TAM-TPB, MPCU, IDT and SCT. See appendix 10.1

<sup>&</sup>lt;sup>10</sup> Associated factors from other models to this determinant are perceived usefulness, relative advantage, outcome expectations etc.

<sup>&</sup>lt;sup>11</sup> Associated factors from other models to this determinant are perceived ease of use, complexity etc.

<sup>&</sup>lt;sup>12</sup> Associated factors from other models to this determinant are social factors, social norms etc.

the degree that a person thinks an infrastructure is present in their environment to support the use of the technology<sup>13</sup>. Based on the theory above the two following hypotheses are brought forward:

H5. People will not use mobile video services because they are perceived as complicated and complex requiring a high level of effort.

**H6.** People will not use mobile video services because the facilitating conditions are few.

Even though it can be argued that the Unified Theory of Acceptance primarily provides an acceptable foundation for the understanding of the acceptance of new technology, it is still focused on organizations. Therefore, it is reasonable to broaden and deepen the theoretical framework through studying further models, which are more closely associated with the adoption processes on the consumer market and of mobile devices.

The model used in Malhotra & Segars (2005) describes several attributes that drive adoption rate. One of these attributes is *trialability*. Trialability includes the possibility for consumers to try the new innovation, before taking the risk of actually purchasing it. In order to find out if trialibility affects the usage of user-generated mobile video services, the next hypothesis which is asked is:

## H7. If people get the chance to try the service their intentions of buying the mobile video service will increase.

Also Sarker & Wells (2003) mention a similar theory, "Technology Acceptance Model and Diffusion of Innovation framework", including six key elements driving adoption. The elements in this case are *ease of use and usefulness*, *relative advantage*, *compatibility, complexity, communicability* and *trialability*. In order to achieve a deeper understanding of the adoption process of mobile devices particularly a new framework of the process was developed. This framework is structured as an Input-Process-Output where only the first part, inputs, is discussed in the text below. The reason for this is that it is partly covered in other parts of the theory, but most of all, since the scope of this

<sup>&</sup>lt;sup>13</sup> Associated factors from other models to this determinant are perceived behavioral control, facilitating conditions and compatibility.

thesis is on what is needed to make consumers to start using the service. *Inputs consist of factors such as* individual user characteristics, communication and task characteristics, technology characteristics, modality of mobility and the surrounding context.

Individual characteristics are for example *age*, *technology* and *cultural origin*. All these influence how and when people use their mobile devices and to what extent. Technology self-efficiency also influences how easy people find it to use mobile technological devices and switch between different devices. Another factor connected to consumers is the context in which they live. The economical situations of consumers, such as budget limitations, the cultural fit of the society to the technology are two important examples of contextual factors influencing the adoption of technology. Derived from this model, the price factor regarding adaptation of mobile video services can be interesting to find out more about. Hence, we come up with the subsequent hypothesis:

#### H8. Price is a relevant factor for consumers when using mobile video services.

The two most important elements sorted under the term technology characteristics are the interface characteristics and the network capabilities. The study showed, that it was of highest importance that the interface of the device had a very logical structure so that the services were easy to access. This is in tune with the results of Malhotra & Segars (2005) who mentioned that the complexity should be low, not to impede on the adoption. Also Lee & Benbasat (2003) identify the interface as an important factor of adoption. The network characteristics, such as the reliability and network coverage were an important factor promoting usage. The reason for this is that low coverage and bad reliability reduce the sense of freedom associated with the modality of mobility<sup>14</sup> of mobile devices. Hence, poor reliability and coverage reduces the extra value added by the modality of mobility of mobile phones in comparison to a fixed connection. The communication and task features associated with mobile phones also contribute to the added value created for the consumers. Hence, mobile phones allow consumers to access different kinds of

<sup>&</sup>lt;sup>14</sup> A more comprehensive discussion of modality of mobility will follow in chapter 2.5.

information when having only a short period of time. Derived from the theory of modality of mobility, the following hypothesis is interesting to investigate further:

H9. High reliability and coverage are important factors for the acceptance of mobile video service usage.

## 4.1.4 The Mobile Interface

Lee & Benbasat focus on the mobile interface as an important factor of adoption of mobile commerce, which is defined through dividing the interface into seven design elements: The 7 C:s are content, customization, context, community, communication, connection and commerce. Through analyzing these elements an effective mobile commerce can be achieved. The context has to do with how Web sites are developed regarding functionality and aesthetics. In order to encourage usage it is important that consumers easily and without much concentration can reach different functions of the service. Therefore is it good to have a menu with a few levels and with as many choices per level as possible. The content, i.e. the offering, appeal etc. is of course also important. The community has to do with the interaction between users, including interactive and non-interactive communication. The interaction between people can sometimes often increase people's satisfaction of the service. Customization means consumers' abilities to tailor the interface in order to fit their needs and personal profile. Communication includes the possibilities of different types of dialogues between different sites and the users, in both directions. Connection is about "the extent of formal linkages between different sites". The consumers should however always be able to access the starting page easily. Commerce has to do with the interfaces related to the sales of the site, such as a shopping cart, order tracking and offering a secure payment method. Based on the theory of the importance of the mobile interface, it is interesting to find out how mobile interface affects mobile video usage. Thus, the next hypothesis will be:

# H10. It is important that the mobile video service is easily accessed through the interface.

#### 4.2 Mobility

Mobility as such, is a core element of mobile video services in comparison to video services accessed via a stationary device, which makes it relevant to investigate further.

Sarker & Wells (2003) discuss the key factors that affect the use and adoption of handheld devices which offer both voice and data features. In their Input-Process-Output model, modality of mobility is one cornerstone in the Input block. Travelling, wandering and visiting are the three different ways on how to look upon the essence of mobility. Travelling can be seen as a person that is going from one place to another in a vehicle. Wandering on the other hand is defined as more of local mobility, meaning that a person is spending much time walking around. Finally, Sarker & Wells describe visiting as a person who spends some time at the new location he or she arrives to.

#### 4.2.1 Mobility's Advantages

In the second step of Sarker & Wells' Input-Process-Output model, under the assessment of experience category, Sarker & Well explore the nature of efficiency about mobility. Mobility has an obvious advantage of being reachable anywhere and at any time. For people who are travelling, wandering or visiting, mobility may be beneficial in terms of improved coordination and elimination of waste time. Individuals using a mobile phone are able to fill time, carrying out activities such as phoning, chatting etc between the time slots of different activities. Mobility can also be seen as a "killing" of time, that a user wants to keep himself entertained in a free time slot. The third way of using mobility is to "shift" time, instead of checking the email inbox later, this can instead be done now on the mobile phone. Mobility thus enables users to take care of various social and business activities throughout the day, instead of postponing everything to the moment of when one has returned to the work station.

Further exploration of the efficiency of mobility can be seen in the discussion about interface design for mobile commerce by Lee & Benbasat (2003). The mobile setting is comprised by spatiality and temporality. Spatiality means that users can carry around and use their mobile devise anywhere. Temporality implies that users can access their mobile

services instantly, even when engaged in a different activity. The theory of modality's advantages is something that is worthwhile to examine if it also applies for mobile video services. Therefore, the subsequent hypothesis is brought forward:

#### H11. Using mobile video services makes the user more time-efficient.

#### 4.3 Uniqueness and Self-expression

The theory of uniqueness and self-expression is discussed in order to explore some of the underlying psychological factors of the usage of mobile video services.

#### 4.3.1 Needs of Uniqueness

Snyder & Fromkin (1977) discuss the theory of uniqueness and it is from this theory the concept of consumers' need for uniqueness derives. The need to see oneself as being different compared to other people is aroused and competes with other motives that threaten the self-perception of uniqueness. Individuals tend to boost their self esteem and reduce negative affect through self-distinguishing behaviours. These expressions of uniqueness take different forms. Material expression is one valued difference since it lowers the risk of hard social penalties (Snyder, 1992). Individuals might fulfil their desire to be unique in a variety of ways, and therefore they are likely to vary in their ways of satisfying their uniqueness motivation through consumer behaviours and possessions. For example, the fulfilment of uniqueness desire are possession displays (Belk, 1988) and style of interpersonal interaction (Maslach et al, 1985) Consumers' need for being unique is more distinct from being independent or individual as these two needs may serve various motivations (Maslach et al, 1985). In social psychology there is a need labelled "uniqueness motivation". People at times strive after psychological tendencies that go into the opposite direction, a need to maintain or enhance their uniqueness and therefore behaving in a way that helps them to achieve this very goal. (Tian et al., 2001) In terms of consumer behaviour and product adaptation, people may want to be perceived as differently in comparison to others by using products that are recognized as unique. In the same way, people want to try out new products and services in order to establish social differentiation. (Fisher & Price, 1992)

The theory of uniqueness makes it relevant to investigate if the need of uniqueness has an impact of the adoption of user-generated mobile video services. Hence, the below hypothesis is tested:

H12. A driving force for watching mobile video services is that consumers want to watch something unique.

#### 4.3.2 Needs of Unique Mobile Data Services

Hong et al (2006) goes into depth on how mobile data service (MDS) fuels the desire for uniqueness. The first question to answer is: What are the factors that affect users' decisions to adopt or reject MDS? Much research, as partly indicated in the theory discussion above, factors such as perceived risks/benefits, ease of use and social pressure influence user's adoption behaviour of a new IT product or service. Much of previous research also focuses on the organizational work settings. With increased mobility, MDS has become much more than just a tool to improve job-related tasks. MDS is also used to satisfy personal desires such as entertainment and socializing, e.g. playing games and chatting. MDS is reducing the clear separation line between work and play. An important factor that influences MDS, is the desire to be unique and feel special among others. Similarly, people may use MDS in a way to distinguish themselves from others. MDS is often used in public, with the intention to make other people see it. Today, there are several different MDS such as ring tones and visual displays that boost users' self by being different from others. With the help of new mobile technology, such as 3g, new more attention-drawing services that help users stand out from their peers are becoming available. (Hong, 2006)

In a study, about MDS adoption in Korea, respondents were asked questions measuring the level of uniqueness motivation, together with the degree of intention to use MDS. The result of the survey was that uniqueness motivation had a strong positive correlation on intentions to adopt MDS, in all of the three mobile service categories communications, information, content and entertainment services. According to the test results, one of the driving forces behind potential users' MDS adoption decisions is uniqueness. (Hong, 2006) Thus, it makes it interesting to see if uniqueness is a driving force not only for MDS, but also user-generated mobile video services. Therefore, is the following hypothesis tested:

H13. Consumers use mobile video services since they want to feel unique and distanced from others.

## 5 Qualitative study – Service Providers' Perspective

In this section the most important findings from the interviews with the different mobile service providers will be presented. In order to enhance the reading a summarizing table of what is discussed is placed in the appendix Out of the additional findings about adaptation of user-generated mobile video services which were not found in the theory about adaptation factors, two new hypotheses are generated in the end.

## 5.1 Mobile Service

All interviewed carrier companies offer their consumers different kinds of services where the customer can connect himself to the Internet via the mobile phone. The usage of Internet services also seems to have increased due to better mobile phone capabilities, better connectivity speeds and a maximum cost per day for surfing on the mobile Internet. Bubblare.se, the Swedish answer to YouTube with approximately 1.5 million views of video clips per month, offer its users a limited selection of videos in its mobile beta version.

#### 5.2 Awareness of Mobile Video Services

During the meetings with the different companies, the informants agreed upon that the awareness of mobile video services among consumers is increasing. The carries 3 and Telenor differed to some degree in their success of marketing their mobile services. 3 is today seen as an innovator of the latest mobile services, including video. Telenor, on the other hand, has had to put more focus on marketing the recent acquisition of Vodafone by Telenor. This will, however, change during the second half of 2007 since the company once again wants to become known as an innovator of new mobile services. The mobile device manufacturer, Samsung, gave an interesting insight that it is the heavy usage of Internet which will drive the awareness of mobile video services. Although Bubblare.se's initial beta version has got positive feedback from expert users, the majority of their users are still unaware of the service. This may also be due to the fact that Bubblare.se has not marketed the service to a high degree.

#### 5.3 Price

Regarding the price of mobile video services, several different topics were brought up. 3 has tried to form a fair payment model for using mobile video services. By having a fixed rate for watching different forms of videos, the company hopes consumers will get more attracted to start using mobile video services. Telenor presents a similar opinion, by saying that prices for their mobile services must become lower and more transparent. The company's new tariff of maximum 9 SEK per day, no matter of how much the user surfs on the mobile Internet, is one step into this direction. Samsung sees a problem with pricing in the sense that carriers hinder easy and efficient modes of payment for services, for example payment for videos via the subscription contract. From Bubblare.se's perspective all costs to use the mobile service goes to the carriers and it is paid per kilobyte. This is something that many users are unaware of, which can lead to a too expensive mobile video experience for the user.

#### 5.4 Current Problems

Most of the interviewed companies mean that the main current problem for mobile services in general is the copyright issue. The legal structure around copyrighted material, when applied on mobile services, is very complicated due to many different legal demands from artists, content owners, distributors and mobile carriers. Another problem, which Telenor, Samsung but also Bubblare.se mentioned, is the lack of a common video standard and interface. Furthermore, Bubblare.se is of the opinion that the change of users' behaviour to embrace and start using the mobile service is an important problem. The companies agree upon that the interface of the service is significant, concerning e.g. content and connection. One especially important aspect is that the service can be easily assessed, which can be compared to Lee & Benbasat (2003), for example through being "one-click-away" expressed by 3. Furthermore, 3 expressed the importance that users easily can search among the videos.

#### 5.5 View on UGC

UGC in general was something that all companies were very aware of. They were also following the development of the phenomenon closely. Despite their interest in UGC,

none of the interviewed carrier companies, or Samsung, today consider to launch a solely user-generated mobile video service. On the other hand both 3 and Telenor offer their customers user-generated material, in combination with other services. Bubblare.se is, however, willing to develop an UGC-service themselves. They, still, do not know how it will be designed, only that it will be basic and easy to use. It is, however, necessary that there is a high supply and variety of videos available.

#### 5.6 Cooperation Possibilities

Cooperation between different players in the telecommunications and media industry is something that all of the interviewed companies consider as being necessary and are willing to do. Many did, however, stress the importance of a "win-win"-situation and that there exists a mutual fit between the values of both cooperating companies. Bubblare.se did however stress that they, themselves, foremost want to try to achieve the advantages that cooperation could give them.

#### 5.7 Future Challenges

Although all interviewed telecommunications players thought that the interest for mobile video services will increase after time, there are some barriers for the real development to take place. The two operators together with Bubblare.se meant that the main challenge is the behaviour of the consumers, their beliefs and attitudes. Consumers have to embrace the capabilities of today's powerful mobile phones and start seeing them as something more than only a tool for calling, sending text messages and other basic services. This goes hand in hand with Samsung's view that it is difficult to convey the message to change consumers' attitudes and that the services exist. Bubblare.se also believes that the importance of co-operation increases. The reason for this is that the copyright issue will become a greater barrier than it is today, due to many different actors who want to control the content. Based on the new findings presented by the interviewed companies that supplement the theory about adoption, the following two hypotheses are brought forward:

#### H14. A high supply and variety of videos is important.

H15. It is important that people easily can search among videos.

## 6 Quantitative Study – Consumers' Expectations

In this part of the thesis the results of the qualitative study will be presented. With the help of the statistical tool SPSS the data was analyzed. The chapter starts out with a discussion of the scope of the results, i.e. for which areas the results are valid. The first part, called background data, is based on the first question set of the questionnaire (The A- and B- parts, whereof the B-part deals with mobile video services in general)). The second part will be based on the future scenario of user-generated mobile video services (representing the C-part of the questionnaire). In the second part, the hypotheses which were generated in the theory section earlier will be tested and analyzed. At the very end, a regression analysis is made in order to group the different factors into three criteria.

#### 6.1 Generalization of the Results

Since the major part of study has explored mobile video services with only UGC, a reasonable question to ask, before any results can be presented and analysed are for which areas the results are valid. The findings in chapter 5.2 (parts A and B of the questionnaire) are examining usage patterns of e.g. mobile video services. The results from this part are therefore automatically valid for mobile video services in general.

The findings in chapter 5.3 and 5.4 are based on the results from the questions in part C in the questionnaire. Part C of the questionnaire started out with a scenario which the respondents had to consider when answering the questions in this part. The scenario stated that the respondents should consider a mobile video service with user-generated content when answering the questions. It is however likely that many of the respondents despite the scenario limiting the results to UGC, still, have answered the questions with mobile video services in general in mind. This means that some of the respondents have answered the questions with mobile video services in general. Therefore, it is reasonable to ask for which area the results are valid. Our opinion (see discussion below) is that the respondents' answers are more or less the same no matter how if they have answered the questions with mobile video service with UGC in mind as intended or with mobile video services in general in mind. Thus, it is reasonable to believe that the results are valid for both types and can, hence, be said to be valid for mobile video services in general.
Because videos are user-generated instead of "copyrighted" does not mean that consumers' expectations of the service will be lower or higher than for mobile video services in general. Only a factor, such as the picture quality, may cause the results to differ between user-generated videos and other types of videos. If people know that a video is not professionally made they may accept a slightly inferior picture quality than otherwise. For many respondents it may also be hard to separate their requirements for mobile video services of UGC from their requirements for mobile video services in general. On their computers people often watch professionally made video as well as user-generated videos. In their mobile phones people would most certainly also watch videos of both types. This reasoning is supported by the fact that most services offerings from carriers, that are present today and that will be obtainable in the future, will offer a mix of UGC and other content. Following from the discussion it is reasonable to believe that answers the respondents have given represent a minimum requirement level for both types of mobile video services.

The focus of the study is on mobile video services. Despite this, it is also reasonable to think that some factors from the results of the study can be generalized to products and services that have similar characteristics and fill similar social functions, such as other mobile services.

#### 6.2 Background Data

The background questions show that all 250 respondents, divided into 145 high-school students and 105 university students, who filled in the questionnaire own and use a mobile phone.

#### 6.2.1 Mobile Internet Usage

One of the initial questions shows that 42 percent of the respondents have used their mobile phone to connect to the Internet. This can be regarded as a relatively high proportion since out of the multimedia phone owners in Europe, who represent 50 percent of all mobile phones users, only 45 percent of these have browsed the Internet. The reason for this high proportion may be the chosen young population, which can be expected to adapt such services faster than older consumers (compare to chapter 1.1). The

most popular services used in such cases are to obtain access to music, instant messenger, ring tones and different search engines etc. (See Figure 4). Other services which the respondents have mentioned are accessing news, Lunarstorm and the sl.se-home page.



Figure 4. Mobile Internet usage

#### 6.2.2 Online UGC video services – Viewing Habits

The percentage of respondents who have accessed a user-generated online video service via their computer is 80.9 percent. The fact that 8 out of 10 people are using a video service where users have contributed with their own material shows the immense popularity of this kind of video service. To further explore the popularity of user-generated online video services we asked our respondents how many times per week they use it and for how long time they watch these video clips per occasion. What can be said here is that the difference between the individuals who access online video services and the time they spend watching these videos, differs considerably between the majority of normal users and a few extremely heavy users. The range of frequency of accessing the services and how many minutes spent are 100 times and 59 minutes respectively. As a

median, individuals access online video services three times a week and spend ten minutes every time watching videos. This user pattern does thus not only mean that the service is very popular but also that users access the service frequently and spend some time watching several videos. This seems to go hand in hand with the immense popularity of YouTube, seen on the Web today.

#### 6.2.3 Consumer-Decision Model for the Mobile Video Service

Four questions, based on the modified consumer decision purchase process model in chapter 2.5, where asked in order to find out the differences between:

- the share of respondents being aware of the fact that it is possible to download video clips via the mobile phone,
- 2. the share of respondents having a positive attitude of the service,
- 3. the share of respondents having the intention to use the service

and

4. the share of respondents that are already using it.

As illustrated in the figure 5 below, half of the respondents drop off in the first two stages. Almost eight out of ten respondents say that they are aware of mobile video services, but only about four out of ten think that the service seems to be of interest. Half of these, answer that this is a service which they consider start using, whereas only 3.2% state that they already use this service today.



Figure 5. Percent of respondents giving a positive answer at the different stages of the modified consumer decision purchase process model

Although the share of respondents who consider mobile services interesting and fun to use is 40.9 percent, only a fraction of the respondents actually use it (3.2 percent). There is thus a big gap between interested individuals and actual users, which implies a large share of potential users of mobile video services.

#### 6.2.4 Difference by Age & Mobile Internet Usage

A t-test was made between respondents who have connected to the Internet via their mobile phone and those who have not. The following three stages regarding

- 1. if they are aware of the existence of user-generated mobile services,
- 2. their intention to start using the service,
- 3. if they already today are using the service

showed that there exists differences between the two groups. This means that respondents who have ever tried to access the Internet on their mobile phone are more likely to be aware of the service, having higher intention to use it and actually using the service. Another t-test showed that there is a significant difference in the answers between high school and university students that can be seen for the respondents regarding all four stages:

- 1. if they are aware of the existence of user-generated mobile services,
- 2. their attitude towards the usage of the service,
- 3. their intention to start using the service,
  - and
- 4. if they already today are using the service.

High school students are more likely to know about the service, have an interest in it, intention to use it, and use the service today. For all these questions the significance ranges between 0.001 and 0.088 which indicates that the two different samples differ from each other. It is not the difference in education level difference as such which is interesting to look at, but rather the age of the participants. The average age of the tested high school students are 17.3 years old whereas the age of the university students are 22.2 years. Hence, it seems as if that the younger potential users are more positive towards mobile service than their older peers.

#### 6.2.5 User-Generated Content – Characteristics

On the question if a person has created his own material or mashed consisting material and uploaded this on a web site, the number of respondents was only four persons. With this low number, representing 1.6 percent of all respondents, it is hard to analyze the driving forces behind this behaviour which was also asked for in the study.

This finding does, however, go in line with the theory of the 3 C's of social media by Calacanis (2006). The results from the study are almost identical to this theory. The findings in the study show a share of creatives of 1.6 percent compared to 1 percent in the theory and 78.5 percent consumers compared to 80 percent in the theory. The findings thus confirm the theory. The great majority of individuals are passive, preferring to watch user-generated videos, and only a very few enthusiasts are active by contributing with self-made videos on the Internet.

## 6.3 Test and Analysis of Hypotheses

### 6.3.1 Analysis of Hypothesis

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Signinficance (sig.)	Correlation	Mean
High supply and variety of clips to choose from (C14)	0.003	0.244	6.52

The data shows a moderately positive and significant correlation between if people think that they will use the mobile video service described in the scenario (measured in the C2C3\_Index<sup>15</sup>) and if they think there will be a high supply and variety of video clips to choose from. The mean which lays on 6.52, can therefore be regarded as relatively high, also supports this notion.

#### H14. A high supply and variety of videos is important. ACCEPTED

That the mean of the C2C3\_Index is low even though the respondents feel that there will be a high supply of video clips available may indicate that this characteristic is a kind of hygiene factor. This could mean the service at least has to offer the consumers a high supply and variety of different videos in order for them to use or to consider usage of the mobile video service. This conclusion also agrees with the results from the qualitative interviews, where the interviewed company representatives said that a good offering had to include a high variety of clips, and the theory of the Long tail.

<sup>&</sup>lt;sup>15</sup> The notation C2C3\_Index will be used next. Please note that all tests from now on are based on the future scenario of user-generated mobile video services.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
How easy it is to search among video clips (C20)	0.000	0.326

Also, the data shows that the correlation is both significant and moderately positive. Hence, in order for people to use the service, they feel it is important that they can easily find different video clips (Brynjolfsson 2006).

#### H15. It is important that people easily can search among videos. ACCEPTED

It may be reasonable to think that the easiness of searching among video clips is also a hygiene factor, since the absence of this factor will destroy the value of the service. This, because it will be hard for people to find what they search for and hence can get annoyed and not use the mobile video service.

Respondents feel they have some kind of expert knowledge (Expert_Index)	Signinficance (sig.)	Correlation
People see themselves as early users of a new technology (C29)	0.000	0.599

The correlation between if people see themselves as early users of a new technology and respondents feel they have some kind of expert knowledge is both strong and significant. The result shows, in accordance with the theory of groups of consumers in chapter 4.1.1, that people are early consumers also have more knowledge than groups that adopt an innovation later.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents feel they have some kind of expert knowledge (Expert_Index)	0.001	0.203
People see themselves as early users of a new technology (C29)	0.000	0.599

Regarding C2C3\_Index and the Expert\_Index, the data shows that there is a significant and a weakly positive correlation. The correlation between C2C3\_Index and if people see themselves as early users of new technology is also significant and moderately positive. Hence, people that believe they know more about mobile phones and services also are more inclined to believe that they will adopt the mobile video service.

H1. Persons, who define themselves as experts, belong to the group of early consumers and are more likely to adopt the mobile video service early. ACCEPTED

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents feel that the service will function well with the mobile phone they will have within one year (C8C9_Index)	0.000	0.351
Respondents feel that they will afford a mobile phone which functions with the service (C11)	0.003	0.185
Respondents believe that there will exist a variety of mobile phones that function well with the service (C12)	0.006	0.173

The correlation between if the respondents feel that the service will function well with the mobile phone they will have within one year, and C2C3\_Index is moderately positive and

significant. The correlation between if the respondents feel that they will afford a mobile phone which functions with the service, and C2C3\_Index is weakly positive and significant. And the correlation between if the respondents believe that there will exist a variety of mobile phones that function well with the service, and C2C3\_Index is weakly positive and significant.

These three results indicate that the economic risk of buying a mobile phone is not a major obstacle if the respondents think they will use the service or not.

Respondents think they will have a mobile phone that will offer the possibility of using such a service (C1)	Significance (sig.)	Correlation
Respondents feel that the service will function well with the mobile phone they will have within one year (C8C9_Index)	0.000	0.477
Respondents feel that they will afford a mobile phone which functions with the service (C11)	0.000	0.257
Respondents believe that there will exist a variety of mobile phones that function well with the service (C12)	0.001	0.202

This indication is also supported by the significant (0.000; 0.000; 0.001), the moderate and weakly positive (0.477; 0.257; 0.202) correlations between C8C9\_Index, C11, C12 and C1, which examines if the respondents think they will have a mobile phone that will offer the possibility of using such a service.

The results, contradictory to the theory (Ram & Sheth, 1989), show that the economic risk does not matter that much for the consumers' decision to buy a new mobile phone that works with the service. The study does not provide an explanation for this result, but a reason may be that the young generation of today may be used to changing mobile phones in accordance with today's fast-paced mobile phone market. This may mean that consumers, to some degree, have accepted that new and better mobile phones may come up quickly after a purchase and that prices may decline fast. Since people have accepted

and become used to that new and better models emerge, they do not postpone a new purchase significantly. Another reason may also be that many people now see mobile phones more as "articles of consumption" that are changed approximately every second year. These factors may be the reason for the reduced effect of the economic risk connected to buying a new mobile phone, resulting in a rejection of the hypothesis. This matter, however, has to be examined further.

H2. The intentions to use mobile video services are negatively influenced by the economic risk of buying a mobile phone with such possibilities. **REJECTED** 

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
If people think it would feel strange to watch mobile video clips outdoors (C24)	0.14	Negative & Weak

Since the correlation between future usage (C2C3\_Index) and if people think it would feel strange to watch mobile video clips outdoors (C24) is not significant (0.14), no conclusions can be drawn about if the hypothesis H3 is to be accepted or not. It may, however, be added that even if the result had been significant the correlation would had been negative and weak. This would have meant that H3 would have been rejected.

# H3. There exist tradition barriers regarding watching video in the mobile phone outdoors. NOT SIGNIFICANT

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think their friends would react negatively if they watched mobile video clips in	0.12	Negative & Weak

their mobile phone (C25)		
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Since the correlation between C2C3\_Index and if people think their friends would react negatively if they watched mobile video clips in their mobile phone is not significant, no conclusions can be drawn about if the hypothesis H4 can be accepted or not. If the results would had been significant the correlation, also in this case, would be negative and weak. This would have meant that H4 would have been rejected.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents would get positive attention if they used the service in different ways (C26, C27)	0.000/0.001	0.237, 0.219
If they would feel cool if they would use the service (C28)	0.000	0.243

However, when the hypothesis H4 is tested with three other similar variables from the questionnaire, the significance is low enough, making a conclusion about the hypothesis H4 possible. There exist weakly positive and significant correlations between C2C3\_Index and the statements that the respondents would get positive attention if they used the service in different ways or if they would feel cool if they would use the service. This indicates that there is no significant level of social barriers connected to be found that limit people from using the service.

# H4. There exist social barriers associated with watching video in the mobile phone outdoors. **REJECTED**

A possible reason for the result can be related to the country, Sweden, in which the study has been executed. The Swedish population became accustomed to the usage of mobile phones very early. Hence, people in Sweden probably do not have a significant level of social prejudices about the usage of mobile phone services that prevent people from adopting new services. Another reason for the result may the formulation of the research questions that only measure one aspect of social barriers. Despite this shortage in the research questions the result is judged as being reliable.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think that the mobile video service will be easy and convenient to use, both in terms of down- and uploading of video clips (C15C16C17_Index).	0.000	0.316
Respondents think they will have sufficient knowledge to use the service (C18)	0.000	0.378

There is a significant and moderately positive correlation between the C2C3\_Index with the answer that the respondents think that the mobile video service will be easy and convenient to use, both in terms of down- and uploading of video clips (C15C16C17\_Index). The data, thus, indicates that users think that mobile video services will not be complicated to use, i.e. they think the service will be easy to use. The same conclusion can be drawn for respondents' perceived level of knowledge (C18) which is on a 0.000 significance level correlates by 0.378 with the intention to use the mobile video service.

Accordingly to the theory, low effort expectancy means that users are more likely to accept the mobile video service if it is easy to use.

# H5. People will not use mobile video services because they are perceived as complicated and complex requiring a high level of effort. **REJECTED**

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think that more information from their mobile carrier will be provided (C19)	0.0023	0.127

The correlation between C2C3\_Index and that the respondents think that more information from their mobile carrier will be provided (C19) is weakly positive. Although this correlation is low, the data indicates that respondents think that they will receive more information from their mobile carrier which will influence their decision to use the service positively. This result can be interpreted as that the information that consumers have available today is not adequate.

Venkatesh's UTAUT-model covers different determinants of user acceptance and usage behaviour and is used to analyse the adoption process of innovations in organizations. Due to the acceptance of the hypothesis above it seems as if this part of the model also can be applicable on new services for individuals.

# H6. People will not use mobile video services because the facilitating conditions are few. ACCEPTED

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think that they would use the service if they got the chance to try the service for free (C5)	0.000	0.386

The respondents' answer on the question about the free trial of mobile services (C5) has a significant and moderately positive correlation with the C2C3\_Index. Thus, it seems that if mobile phone users get the chance to try out the mobile service for free their intention to purchase it increases.

That trialability has a positive correlation with the adoption of mobile video services means that consumers seem to welcome the opportunity to reduce risk of using a new kind of service. That trialability increases adoption is also supported by the theory (Malhotra & Segars, 2005). It is, however, important to acknowledge that a company that

offers its customers a free trial period not only has the opportunity to win new customers, but also takes a risk, due to the costs related to the free trial period.

# H7. If people get the chance to try the service their intentions of buying the mobile video service will increase. ACCEPTED

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think that the prices of the service will be significantly lowered within one year (C6C7_Index)	0.003	0.186

Regarding C2C3\_Index and the C6C7\_Index, which is examining if people think that the prices of the service will be significantly lowered within one year, the data shows that there is a significant and weakly positive correlation.

H8. Price is a relevant factor for consumers when using mobile video services. ACCEPTED

As any other product or service, price plays a crucial role for a consumer's attitude towards it and the same seems to apply for the mobile video service. In our case, where the respondents consist of only students with normally no actual income, the result is not surprising.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think the video service to be reliable and to work wherever he or she is located (C30)	0.000	0.27

The correlation between the question if the respondents believe the video service to be reliable and to work wherever he or she is located (C30) is significant and moderately positively correlated to C2C3\_Index. This can be interpreted as that it is important that the reliability and coverage is high in order for customers to use the mobile video service.

# H9. High reliability and coverage are important factors for the acceptance of mobile video service usage. ACCEPTED

The main idea by watching a video on the mobile phone is to take advantage of what mobility offers. Therefore, if the reliability and network coverage is insufficient the extra value of the mobile video service is lost in comparison with a fixed connection (Lee & Benbasat 2003). In this way, it can be argued that high reliability and coverage is a hygiene factor, which was also supported by the qualitative interview of Telenor.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think that the mobile service can be accessed by just one click on the mobile phone (C22)	0.004	0.185

The correlation test between the question if the mobile service can be accessed by just one click on the mobile phone (C22) and C2C3\_Index the result showed a weakly positive correlation on a significant level. Hence, it seems as it to some extent does matter how easy the mobile video service is accessed through the mobile interface. If the service is more easily accessed the probability of usage is higher.

# H10.It is important that the mobile video service is easily accessed through the interface. ACCEPTED

In order to promote new technology it is important to reduce user barriers to the largest extent as possible. One way to make new users adopt and start using mobile video services is to offer them an attractive, easy and user-friendly interface. In accordance with the argumentation of H2 being a hygiene factor, user-friendly interface also can be seen as a hygiene factor.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think that using the service will help them save time (C23)	0.000	0.401

The correlation between C2C3\_Index and if they think that using the service will help them save time (C23) is significant and moderately positive. Thus, there seems to be a strong tendency that respondents believe that using the mobile service will make them more time-efficient.

#### H11. Using mobile video services makes the user more time-efficient. ACCEPTED

With mobile video services it seems that users can shift time by entertaining themselves by watching a movie clip on their mobile phone when they are on the run. Thus, users, according to the theory of mobility, have the chance to become more time-efficient.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think that the mobile service would enable them to find a video they otherwise would not be able to get hold of (C31)	0.007	0.170

The correlation between C2C3\_Index and if the mobile service would enable the respondents to find a video they otherwise would not be able to get hold of (C31) is

weakly positive on a significant level. Therefore, there is an indication that consumers believe that they will be able to watch something unique by using the mobile service.

# H12. A driving force for watching mobile video services is that consumers want to watch something unique. ACCEPTED

Since the users to a different extent have created the movie clips themselves it is something unique and it is not sure that the specific video is available on any other online video site. This uniqueness attracts niche user tastes and thus the mobile video service is a factor affecting the usage of the mobile video service.

Respondents think that they will use the mobile video service described in the scenario (C2C3_Index)	Significance (sig.)	Correlation
Respondents think they would get positive attention if they watched videos on their mobile phone (C26)	0.01	0.237
Respondents think they would get positive attention if they uploaded videos from their mobile phone (C27)	0.01	0.219
If they would feel cool if they would use the service (C28)	0.01	0.243

On the questions if respondents feel cool (C28) and by watching (C26) or uploading (C27) mobile videos are positively appreciated among their peers, the correlations are weakly positive on a significance level of 0.01 for all. These results indicate that consumers use mobile video services in order to feel unique and to distance themselves from others.

H13. Consumers use mobile video services since they want to feel unique and distanced from others. ACCEPTED

For individuals it is often important to show that he or she is unique, no matter if it is new products or services. This also applies to mobile video services which seem to differentiate users from others.

#### 6.4 Summarizing Discussion of the Hypotheses

The tests and analyses of the hypotheses show what expectations consumers have on mobile video services based on UGC. In addition to that, the analysis indicates that four of the factors are hygiene factors of mobile video service usage. The first factor that seems to be a hygiene factor is the supply and variety that the service provides its users. The second factor that seems to be a hygiene factor, upholding the value of the service, is the ease of use regarding the search among video clips. The third hygiene factor is the reliability and the coverage of the service and the fourth is having a user-friendly interface. Other factors that were found to influence the usage positively and which a company can influence were the trialability of the service, the ease of use of the service, the reliability and the coverage of the service, the facilitating conditions and a lowered price. Other factors that also influence the use positively are the chance to achieve timeefficiency created through the mobility of the mobile phone, the chance of watching something unique and the feeling of being unique when using the service. The test of hypothesis three (H3) also indicated that persons that feel they have some kind of expert knowledge also belong to the group of early consumers, which are more likely to adopt the service early.



Figure 6: Factors affecting mobile video usage

However, the correlation tests of the hypotheses do not answer the question of which respective factors that are the most important. In order for increased knowledge of this mutual preceding to be gained, the factors were divided into three groups and tested in a regression analysis.

### 6.5 Importance of Different Factors

The parameters measured in the survey can be divided into three different groups. These groups are:

- 1. Factors that companies actively can influence through designing their service offering.
- 2. Factors, which arise indirectly through the consumers' own activities, and that provide consumers with extra value.
- 3. Factors of information or marketing which companies can communicate.

#### 6.5.1 The Service Offering

Initially, all variables<sup>16</sup> that were judged as being possible for a company to actively influence through designing the service offering were included in a regression analysis. After some runs of the regression test, all variables<sup>17</sup> that where not significant were removed. Especially notable is that the C6C7\_Index, denoting if people think that the prices of the service will be significantly lowered within one year, was not significant. There could be several reasons for this result and this would therefore be interesting to examine further. One apparent reason is that consumers in general do not see the price as a decisive factor for adopting the service. This could for example mean that the price has to be lower, in order to get people to use the service more, but that the price is not a factor determining if people initially will decide to use the service. The reason for this could be that people feel that the prices already now are on a moderate level and that other factors are of a greater hindrance for the adoption. A risk is, of course, that the respondents have

<sup>&</sup>lt;sup>16</sup> C5, C6C7\_Index, C8C9\_Index, C11, C12, C14, C1511617\_Index, C20, C22 and C30 were initially included. Please see Appendix (Chapter 10.5).

<sup>&</sup>lt;sup>17</sup> C6C7\_Index, C11, C12, C14, C20 and C22 were removed from the model. Please see (Chapter 10.4).

not answered totally truthfully since people do not always want to acknowledge the importance of the price of a purchase decision. This problem is, however, probably not present in this case.

	Unstandardized Coefficients		Standardized Coefficients	Т	Sig.
Expectations on	В	Std. Error	Beta		
(Constant)	-,599	,440		-1,363	,174
Free trial (C5)	,207	,041	,283	5,042	,000
Functionality (C8C9_Index)	,174	,042	,233	4,134	,000
Ease of use (C15C16C17_Index)	,211	,062	,194	3,405	,001
Reliability (C30)	,139	,057	,138	2,416	,016

a Dependent Variable: C2C3\_Index

Table 5. Results from the regression analysis – variables that can be part of the service offering, influencing the use of the service (C2C3\_Index)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,535(a)	,286	,275	1,82654	2,043

a Predictors: (Constant), C30, C8C9\_Index, C5, C1511617\_Index

b Dependent Variable: C2C3\_Index

#### Table 6. Model summary, $R^2$ of the model (service offering)

The variables that were significant in the model were C5, C8C9\_Index, C15C16C17\_Index and C30. Among these variables is C5, if people would get the opportunity to try the service for free, the factor that influences the dependent variable C2C3\_Index the most. One objection against C5 being the variable that influences the future usage (C2C3\_Index) the most, is that the respondents give this answer due to possible personal gain, thinking they would get the service for free. The risk for this, in

this case, should not be high, since the survey was conducted independently from any company and the possibility of getting the service for free is not present.

The importance of C5 was then followed by factors denoting if the service will function well with their mobile phone, the ease of use of the service and the reliability of the service (See Table 5). All of these can be seen as being of the same type, related with the functionality of the service. That the ease of use of the service turned out to be significant and influence the use of the service is not surprising, since several of the adoption theories, among these Venkatesh (2003) and Malhotra & Segars (2005), mention that this factor is important.

#### 6.5.2 Value for Consumers

Also in this case all variables<sup>18</sup> that represented factors that were judged to provide consumers with extra value were initially included in the regression analysis. What is notable for these variables is that the value arises mainly from the activities of other users. These variables can hence only, to a small degree, be influenced by a service provider, e.g. through marketing activities. Next, after running the regression analysis all variables<sup>19</sup> that were found not to be significant, were removed.

In the case of C14 this result could mean that people may think that there today are many different content service providers present, that provide a great variety of videos, meaning that you could access a special clip at several places. The variables that were significant in the model were C13, C23 and C32C33C34\_Index. From these the variables C13 and C32C33C34\_Index show that there exists some kind of community effect that creates added value for the consumers.

<sup>&</sup>lt;sup>18</sup> C13, C14, C23, C2627\_Index, C28, C31 and C32C33C34\_Index were initially included. Please see Appendix (Chapter 10.4).

<sup>&</sup>lt;sup>19</sup> C14, C2627\_Index, C28 and C31were removed from the model.

	Unstandardized Coefficients		Standardized Coefficients	Т	Sig.
Expectations on	В	Std. Error	Beta		
(Constant)	,695	,344		2,022	,044
Nr of users (C13)	,245	,059	,248	4,176	,000
Time-efficiency (C23)	,240	,064	,242	3,728	,000
Community (C32C33C34_Index)	,219	,079	,173	2,772	,006

a Dependent Variable: C2C3\_Index

 Table 7. Results from the regression analysis – variables that provide consumers

 with extra value, influencing the C2C3\_Index

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	,497(a)	,247	,238	1,87471	2,005

a Predictors: (Constant), C32C33C34\_Index, C13, C23

b Dependent Variable: C2C3\_Index

Table 8. Model summary,  $R^2$  of the model (value for consumers)

### 6.5.3 Information and Marketing

All variables<sup>20</sup> that initially were chosen as factors that companies can communicate through marketing and information activities, were in this case found to be significant. Here, C18 is the factor that influences the dependent variable C2C3\_Index the most, which shows that is important that the consumers feel that they have the right knowledge of the service. Therefore, it is important that the consumers get more information of how to use the service and a clear view of which the prerequisites for usage are.

<sup>&</sup>lt;sup>20</sup> C13, C18, C19 and C20 were chosen to be included in the analysis.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Expectations on	В	Std. Error	Beta		
(Constant)	,634	,431		1,471	,143
Nr of users (C13)	,267	,062	,273	4,341	,000
Knowledge level (C18)	,272	,056	,337	4,853	,000
Information to be added (C19)	-,156	,062	-,177	-2,533	,012
Ease of Search (C20)	,114	,065	,124	1,745	,082

a Dependent Variable: C2C3\_Index

 Table 9. Results from the regression analysis – variables that companies can influence

 through marketing and information activities, influencing the C2C3\_Index

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,497(a)	,247	,234	1,87350	2,009

a Predictors: (Constant), C20, C13, C18, C19

b Dependent Variable: C2C3\_Index

Table 10. Model summary, R<sup>2</sup> of the model (information and marketing)

Notably, the variable measuring if people believe that more information will be provided from their mobile carrier (C19) influences the dependent variable, people's expectations of their use of the service (C2C3\_Index) negatively. Earlier results have shown that there exists a positive correlation, even if weak, between the expectations. The model regarding this variable is therefore uncertain. Any extensive conclusions about this result should therefore not be done. However, if the negative result would be correct, several reasons for these results are possible. One reason may be the formulation of the question, which influences the answers of the respondents in an unpredicted direction. There could also be other behavioral reasons for the negative result. The consumers may feel that the

information the have available today is not adequate. Hence, the consumers may feel receiving new information about the service within one year may be too late, resulting in a negative effect. The respondents may also have a negative attitude towards receiving loads of information from their carriers, which could influence the result.



Figure 7. Important factors affecting mobile video usage

## 7 Implications for Mobile Video Service Providers

Categorized into the three different groups based on the regression analysis above, the implications for mobile video service providers will be analyzed and discussed. The findings derived in the qualitative interviews will be used in order to give further depth to the conclusions. In this chapter, the implications of UGC will be discussed, followed by the final section of what happens next.

### 7.1 Potential for Mobile Video Services

Mobile phone usage and Internet usage plays a large role in young consumers' everyday life. Regarding usage of the mobile Internet, as many as 42 percent of the consumers have connected to the Internet via their mobile phone. The most popular services accessed are entertainment services, such as music and ring tones whereas mobile video is the least used service today, only 3.2 percent of all users have used this service. The popularity of mobile video will probably increase in the very near future. The reason for the purposed increase is the immensely popular video services, such as YouTube and Bubblare.se which can be seen on the Internet today. Nearly 80 percent of the respondents watch video clips on an online user-generated video service site, at least once every week. The popularity of the service online shows the potential for this kind of video service when it takes the step out to also include videos for mobile phones.

As shown in the results of the modified consumer decision purchase process model, there is a large share of the consumers that have a positive attitude of the mobile service and these could, thus, be seen as potential users of the service. Although 20 percent of the respondents answered that they intend to start using the mobile service, only 3.2 percent do so today. With this in mind, there seems to be a group of consumers that would be fairly easy to approach and turn into active consumers. Furthermore, twice the size of this group is positive towards mobile video services, meaning that the group of potential users could be even larger.

Furthermore, the most potential consumers seem to belong to the younger group of consumers and the ones who already are familiar with the mobile Internet. Among the respondents that are high-school students, a general more positive attitude towards the mobile video service can be noted. Respondents that have accessed the Internet via their mobile phone are not only more aware of the service itself, but also declare a higher

intention to start using it, and are of course more likely of actually using the service in comparison with the respondents who have not accessed the Internet via their mobile phone.

These findings also go hand in hand with the interviewed companies' opinions that consumers today are aware of mobile video services and that the heavy usage of online video services will drive the usage of mobile vide services.

### 7.2 Service Offering

The results from the previous chapter indicate that there are many different factors that influence the usage of mobile video services. Four or these can be regarded as hygiene factors. These have to be present in the service offering, in order to encourage usage in the first place, such as a wide variety of videos to choose from, a user-friendly search function and interface, high coverage and reliability. Next, there are others that seem to be slightly more important. But as a whole it can be said that there does not exist one right way to design a mobile video service offer. It is more important not to miss out on the hygiene factors and then try to design a service offer that appeals to the specific target group of the service provider.

The hygiene factor, that there is a wide variety of videos offered, can be a possible hassle for mobile video service providers, due the current problem of copyright protection they express. As consumers tend to like to be able to choose from a large variety of videos the copyright-issue is probably not often regarded. Consumers' view about copyright protected content could, however, be interesting to investigate further. Nevertheless, the copyright-issue is a never-ending story which can be seen on the Internet today, and regarding mobile videos it is also something that the industry most probably must solve itself.

According to theory, budget restrictions play a role. The results do, however, indicate that price is not the primary obstacle regarding if the service will be adopted initially. It may, however, be so that the importance of price grows at the same time as the service becomes more mature. However, it seems that offering the consumers a free trial period of the service is a good way of helping them to get to know the service, in order to

encourage and guide them into using it. This result in combination with the finding that the price of the actual mobile phone does not seem to be a major obstacle for adoption indicates that the economic risk that is present, in this case, is connected to the service subscription. A free trial period lowers the uncertainty of the service and accordingly also this economic risk.

The finding regarding price corresponds to some extent with what the interviewed companies believe. It is not the price itself that is the deciding factor when a consumer decides to adopt the service, but rather functionality of the service and the extra value it provides the consumer. Furthermore, the qualitative interviews showed that the transparency of the purchase amount and payment processes have to be improved. Also the finding about the reliability of the service was brought forward as a future challenge by the service providers.

After the trialability factor, the functionality of the mobile phones for the service and the ease of use of the service itself, stand out as the most important factors influencing mobile video usage. Thus, these two factors should also be carefully considered when the service offering is designed by the mobile video service providers.

#### 7.3 Value for Consumers

The interactions and activities of users of the service provide other users of the service with extra value. Also, the fact that the service has many users indirectly creates extra value. In other words, there is a community effect that must be taken into consideration. For mobile video service providers this implies that they have to work not only on trying to increase the usage of the mobile video service, but also to enhance the community factor by including community features into the service.

Furthermore, it does seem as using the services could give the consumers some extra value through making users stand out from the "crowd". This implies that the service providers could try to communicate that the ones using mobile video services are special and unique in comparison to the ones not using the service. Another factor, which adds value to the service, is that users are time-efficient when watching videos on the mobile

phone. Time-efficiency can thus, as well, be communicated by service providers in order to enhance the value achieved among the users.

#### 7.4 Information and Marketing

As shown above, the fact that the mobile video service is the most popular and used, creates extra value for the consumers. It may, therefore, be relevant for service providers to communicate their service as the most popular and most used one, meaning that the service can give its users value that others do not have.

Consumers' knowledge level about mobile video services is insufficient and must be improved. As pointed out earlier, the majority of the consumers are aware of mobile video services, but less than half see the benefit of them and even less have the intention of start using them. It can, hence, be argued that consumers in general are reluctant to start using the service. This could, however, be overcome if the service providers communicate and market all aspects of mobile video services. Another factor which could be communicated to potential users is that the service offers a user-friendly search function, where the user easily can find many different videos.

### 7.5 UGC

The study shows that there are only a small percentage of all users of UGC-services that upload their own content, but there are many that use and download UGC. One reason for this discrepancy can be a resistance towards new phenomena in general, and towards UGC in particular. It seems that it is only the enthusiasts that take their time to share their videos to others. On the other hand, as both interviewed carriers said, UGC will be combined in different forms of services. Bubblare.se, on the other hand, will most probably start their own UGC-service.

The low participation of content creation may have many different reasons, which could be interesting to investigate further. However, it is reasonable to believe that the more individuals embrace all the mobile phone's capabilities, the more will active participation by uploading videos via the mobile phone most probably increase. Furthermore, the findings indicate that there are no actual social barriers that could hinder the adoption process. On the other hand, as the interviewed companies say, one of the future challenges is to change the consumers' behaviour to embrace all the mobile phone's capabilities.

### 7.6 What Happens Next?

Based on the findings in the study, it is clear that user-generated mobile video services have a great potential. The implications of the findings of the study are many, and they are in many ways complex. The reason for the complexity is that the measurements that have to be considered to increase mobile video usage both have a direct and indirect affect on different telecommunications players. As indicated in the study, most companies are open to cooperate with others, yet they seem to be reluctant to give up their traditional role in the industry. The study has shown that there are many factors that have to be considered for service providers and it may be hard for one company to achieve them all. It is for example not enough that carriers and content providers cooperate, but for example, also manufacturers of mobile phones have to be involved. The complexity can be illustrated by the fact that it is hard to reach a good level of functionally between the mobile phone and the services without such cooperation. It is reasonable to think that this kind of cooperation can be achieved when a "win-win-situation" is not only talked about, but actually practised among players in the industry.

## 8 End Discussion

#### 8.1 Criticism of Own Work

A possible criticism against the study is that the selection of factors affecting mobile video usage that were examined was not the right one and that more factors could have been included. Our judgement is, nevertheless, that a relevant selection was achieved with the help of the theoretical base combined with the qualitative interviews, based on the scope of the thesis in mind.

The reliability of the study was judged to be good. It can be pointed out that not every question in the questionnaire was repeated in order to ensure reliability through internal consistency, but in these cases the questions were judged to be clear, without the risk to cause misunderstandings. To keep down the length of the questionnaire was also judged as being more important.

The qualitative study is based on a limited number of interviewed companies. It could have been beneficial for the study to not only have a higher number of informants, but also company representatives belonging to other sectors in the telecommunications industry. However, due to the limitation constraints of the thesis, companies representing only the most relevant sectors in the telecom industry were chosen. Another possible measure to improve the methodology could have been to use focus groups of both actual and potential users of mobile video services. This was however neglected, since a quantitative survey was judged to be a better complement to the qualitative interviews.

A way for us to overcome the limited research in the field of mobile video services and its relating theories has been to search the Internet where for example blogs have been accessed. It can be discussed whether blogs are academically reliable or not, but the information acquired from such sources, have always been questioned and compared to other sources on the Web, before actually using it in the thesis.

#### 8.2 Further Research

The study and its results have revealed several interesting issues that can be subject to further interesting studies. The study shows, that there is only a small percentage of all

users of UGC that upload their own content. But their underlying reasons for uploading their own material are not clear.

Another interesting issue is what type of community features that users would like to be present in the mobile video service. Should the design of these be the same as in online video community services on the Internet, or do users demand for other new community features?

In the study there are also several findings that are not explained by the theory. The results, for example, indicated that the economic risk connected to buying a new mobile phone is reduced. The reasons for that can be examined in future studies. The same is valid for the importance of the price on people's adoption.

Finally, another interesting area to examine could also be how a successful cooperation between different companies in the industry could be organized in order to create a successful mobile video service.

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# 10 Appendix

# 10.1 Summary of the Adoption Theory

Factor	Author	Implications
Needs Compatibility Relative advantage Value added Performance expectancy Perceived usefulness	Malhotra & Segars (2005) Sarker & Wells (2003) Ram & Sheth (1989) Venkatesh (2003) From (TAM/TAM2) in Venkatesh (2003)	Quantifies the ability of the innovation to actually meet the needs of the customers providing them with additional value.
Physical risk	Ram & Sheth	The risk that the customer will get hurt when using the innovation.
Functional risk Reliability	Ram & Sheth Sarker & Wells	Performance uncertainty that the innovation/mobile will work as promised.
Economic Risk Cost Budget restrictions	Ram & Sheth Sarker & Wells	Includes the cost of the innovation in relation to that the prices will decrease later. Cost of usage of a service.
Behavioural Compatibility Cultural fit of the society Tradition risk	Malhotra & Segars Ram & Sheth	The level of disruptiveness that the innovation brings to existing values and belief structures. Resulting in high or low perceived behavioural change required by consumers.
Complexity Fase of Use	Malhotra & Segars Sarker & Wells	How easy it is to use the new
Trialability	Malhotra & Segars	The possibilities consumers have to try the new innovation and experimenting with it before actually purchasing it.
Social factors Social Risk Image	Sarker & Wells Ram & Sheth	Risk that other will not approve of one using the innovation. The product is linked to a certain association.
Uniqueness Customization	Lee & Benbasat (2003)	If the product allows personalization.
Communicability Community	Sarker & Wells Lee & Benbasat – part of the interface	Is about interaction between users, the number of interacting participants, the immediacy of response and volume of communication.
Interface	Lee & Benbasat Sarker & Wells	Different interface characteristics.
Modality of mobility Sense of freedom	Sarker & Wells	Relative advantage of mobile phones.
Network coverage	Sarker & Wells	That the service can be used everywhere.
Facilitating conditions Perceived Behavioural control	Venkatesh (2003) From TPB/BTPB, C-TAM-TPB in Venkatesh (2003)	The factors in the environment supporting the use of a technology.

# 10.2 Summary of the Qualitative Results

Company/ Factor	3	Telenor	Samsung	Bubblare.se
The customer's awareness of mobile video services	• Customers are aware of services due to high focus of promoting 3 as an innovator	• Customers are not so aware of the services due to focus on other marketing activities	High awareness of video services on the Internet will drive the usage of mobile video services	<ul> <li>Service has not really been marketed.</li> <li>Among the majority of the users the awareness of the service is still low</li> </ul>
Price	• A try for a fair payment model has been developed	• Prices for using mobile services are for consumers not clear and low enough	• Payment process is insufficient due to clash of interests between players	• Many users are unaware of the fact that it is the carriers that gets paid per kb downloaded
Current problems	Copyright     protection	• Many different types of standards	<ul> <li>Copyright protection</li> <li>Many different types of standards and interfaces</li> </ul>	<ul> <li>Lack of standard format &amp; interface</li> <li>Will take time to build up the user behaviour of the mobile video service</li> </ul>
View on UGC	• Yes, not UGC as a service, but in combination with other services	• Yes, not UGC as a service, but in combination with other services	• No plans to release an UGC-service	• Wants to develop an UGC-service but don't know how it will look like
Cooperation possibilities	<ul> <li>Positive as long as focus on its core service and;</li> <li>Value must be added by co-operations with strong brands and services</li> </ul>	<ul> <li>Positive to a few close co- operations</li> <li>Must be a win-win solution</li> </ul>	• Positive, but must find a win-win solution	• Not impossible but want to achieve the advantages themselves which a co-operation could include
Future Challenges	• Change of consumers' behaviour to embrace all the mobile phones capabilities	<ul> <li>Reliability of service must be sufficient</li> <li>Change of consumers' behaviour to embrace all the mobile phones capabilities</li> </ul>	<ul> <li>Resources for surveillance of the content which is uploaded</li> <li>Marketing of the services to consumers</li> </ul>	<ul> <li>Will take time to build up the user behaviour of mobile video services</li> <li>Copyright protection</li> </ul>
# 10.3 Summary of the Hypothesises

Hypothesis	Result	Correlation	Significance
		( <b>C</b> )	(Sig)
H14. A high supply and variety of videos is important.	The hypothesis H14 is accepted. A high supply of videos and variety is important.	0.244	0.003
H15. It is important that people easily can search among videos.	The hypothesis H15 is accepted. It is important that the search function for video clips is good.	0.326	0.000
H1. Persons, who define themselves as experts, belong to the group of early consumers and are more likely to adopt the mobile video service early.	The hypothesis H1 is accepted. Experts and innovators are more likely to adopt the service.	0.203; 0.265	0.001; 0.000
H2. The intentions to use mobile video services are negatively influenced by the economic risk of buying a mobile phone with such possibilities.	The hypothesis H2 is rejected. The economic risk of buying a new mobile phone does not influence the intention to use mobile video services.	0.351; 0.185; 0.173	0.000; 0.003; 0.006
H3. There exist tradition barriers regarding watching video in the mobile phone outdoors.	Any conclusions for H3 can not be done.	-	Not significant
H4. There exist social barriers associated with watching video in the mobile phone outdoors.	The hypothesis H4 is rejected. Hence it seem as there are not any social barriers delimiting people from using mobile video services.	0.237; 0.219; 0.243	0.000; 0.001; 0.000
H5. People will not use mobile video services because they are perceived as complicated and complex requiring a high level of effort.	The hypothesis H5 is rejected. That the service is easy to use seems to be related to the usage of the mobile video services.	0.316	0.000
H6. People will not use mobile video services because the facilitating conditions are few.	The hypothesis H6 is accepted. People need more information.	0.127	0.0023
H7. If people get the chance to try the service their intentions of buying the mobile video service will increase.	The hypothesis H7 is accepted. This means that if people have the chance to try the service their intentions to buy the service increase.	0.386	0.000
H8. Price is a relevant factor for consumers when using mobile video services.	The hypothesis H8 is accepted. The price of the service matters for the decision to use the service.	0.186	0.003
H9. High reliability and coverage are important factors for the acceptance of mobile video service usage.	The hypothesis H9 is accepted. This means that it is important that the service is reliable.	0.27	0.000
H10. It is important that the mobile video service is easily accessed through the interface.	The hypothesis H10 is accepted. It is important that the service can be easily accessed.	0.185	0.004
H11. Using mobile video services makes the user more time-efficient.	The hypothesis H11 is accepted. The users feel that using the service will make them more time-efficient.	0.401	0.000
H13. Consumers use mobile video services since they want to feel unique and distanced from others.	The hypothesis H13 is accepted. Using the service may actually make people feel unique.	0.243; 0.237	0.01
H12. A driving force for watching mobile video services is that consumers want to watch something unique.	The hypothesis H12 is accepted. A reason for using the service is that people can find unique video clips.	0.170	0.007

# 10.4 First Run of the Regression Tests

Model		Unstand Coeffi	lardized cients	Standardized Coefficients	т	Sig.
		В	Std. Error	Beta		
1	(Constant)	-,762	,555		-1,373	,171
	C5	,210	,044	,286	4,819	,000
	C6C7_Index	,057	,053	,064	1,084	,280
	C8C9_Index	,151	,046	,200	3,244	,001
	C11	,042	,047	,054	,885	,377
	C12	-,112	,068	-,110	-1,643	,102
	C14	,074	,069	,075	1,073	,284
	C1511617_Index	,144	,084	,132	1,709	,089
	C20	,060	,068	,065	,875	,382
	C22	,015	,052	,018	,295	,768
	C30	,134	,061	,132	2,195	,029

First run of the regression test of the group of variables connected to the service offering

a Dependent Variable: C2C3\_Index

#### Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	,548(a)	,300	,270	1,84032	2,088

a Predictors: (Constant), C30, C6C7\_Index, C11, C5, C22, C14, C8C9\_Index, C20, C12, C1511617\_Index b Dependent Variable: C2C3\_Index

# First run of the regression test of the group of variables creating value for consumers

Model		Unstanc Coeffi	lardized cients	Standardized Coefficients	т	Sig.
		В	Std. Error	Beta		
1	(Constant)	,285	,445		,641	,522
	C13	,182	,075	,184	2,430	,016
	C14	,100	,070	,101	1,423	,156
	C23	,251	,065	,253	3,847	,000
	C2627_Index	,047	,067	,049	,703	,483
	C28	,038	,068	,042	,559	,577
	C31	-,048	,062	-,048	-,773	,440
	C32C33C34_Ind ex	,189	,097	,149	1,952	,052

a Dependent Variable: C2C3\_Index

#### Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	,508(a)	,259	,237	1,87840	1,974

a Predictors: (Constant), C32C33C34\_Index, C14, C31, C23, C2627\_Index, C28, C13 b Dependent Variable: C2C3\_Index

#### First and last run of the regression test of the group of variables related to information and marketing

Model		Unstand Coeffi	lardized cients	Standardized Coefficients	t	Sig.
		В	B Std. Error			
1	(Constant)	,634	,431		1,471	,143
	C13	,267	,062	,273	4,341	,000
	C18	,272	,056	,337	4,853	,000
	C19	-,156	,062	-,177	-2,533	,012
	C20	,114	,065	,124	1,745	,082

a Dependent Variable: C2C3\_Index

#### Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	,497(a)	,247	,234	1,87350	2,009

a Predictors: (Constant), C20, C13, C18, C19 b Dependent Variable: C2C3\_Index

10.5 Questionnaire

# Mobila videotjänster

# Enkätundersökning



Vi är två studenter från Handelshögskolan i Stockholm som skriver slutuppsats om mobila videotjänster. Denna enkätundersökning är en viktig del av vår uppsats och vi uppskattar därför verkligen er hjälp med att fylla i enkäten så noggrant som möjligt. Era svar kommer att behandlas anonymt. Enkäten beräknas ta max 8 minuter att genomföra.

# Tack på förhand!

#### Emil Ponnert och Zora Rodriguez

2210 Thesis in Marketing and Strategy, VT-07 Stockholm School of Economics Inledningsvis tänkte vi ställa några frågor om dina Internet- och mobiltelfonvanor. Därefter kommer du få läsa ett kort scenario om mobila videotjänster och utifrån detta får du svara på några frågor.

A. Bakgrundsfrågor		
1. Äger du en mobiltelefon?	□ Ja	□ Nej
2. Hur ofta talar du i din mobi Ange genomsnittligt antal gånge	<b>Itelefon under en</b> er per vecka	vanlig vecka? antal gånger/vecka
3. Hur lång tid varar ett genor Ange tid för ett genomsnittligt sa	<b>nsnittligt samtal?</b> amtalm	n/samtal.
<ul> <li>4. Hur många textmeddelande uppskattningsvis?</li> <li>Ange genomsnittligt antal sms.</li> </ul>	en (sms) skickar o	<b>lu under en vanlig vecka</b> n/vecka.
5. Hur många timmar om dag en PC eller Mac?	<b>en uppskattar du</b> ar timma	att du använder Internet på
6. Har du någon gång kopplat up använder?	pp dig på Internet v	ia den mobiltelefon som du
□ Ja □ Nej		
<u>Om du har svarat JA på frågan fortsätt med fråga 8 på nästa si</u>	<u>ovan, vänligen fort</u> ida.	sätt med fråga fråga 7 annars
7. Vilken/vilka Internettjänst/er alternativ är möjliga.)	har du använt via d	in mobiltelefon? (Flera
Video (tittat/laddat ned/laddat	ddat upp)	
□ Musik		
Ringsignaler		
□ Epost		
□ Instant messanger(tex MS	SN)	

□ Annat, nämligen:\_\_\_\_\_

#### 8. Hur många gånger i veckan går du in på Internet och tittar på videoklipp som andra användare har lagt upp, t.ex. på sajter som YouTube, Bubblare.se?

Ange genomsnittligt antal. \_\_\_\_\_antal gånger/vecka.

<u>Om du svarat att du inte använder tjänsten på fråga 8 hoppa över fråga 9 och fortsätt till avsnitt B.</u>

#### 9. Hur länge tittar du på sådana videoklipp per gång?

Ange genomsnittligt antal minuter. \_\_\_\_\_antal minuter/gång.

## B. Mobila videotjänster

- 1. Känner du till att det idag går att ladda ned videoklipp från Internet via mobiltelefonen?
- □ Ja □ Nej
- 2. Är det något som du tycker verkar vara användbart och kul att göra?
- □ Ja □ Nej
- 3. Är detta en tjänst som du har tänkt använda?
- 🗆 Ja 🛛 🗆 Nej
- 4. Är det t.o.m. så att detta är en tjänst som du redan idag använder?
- 🗆 Ja 🛛 🗆 Nej

<u>Om du har svarat JA på fråga 4, var god svara på nedanstående frågor. Annars gå vidare till avsnitt C på nästa sida.</u>

- **5. Hur ofta laddar du ned videoklipp till mobilen?** Ange genomsnittligt antal gånger i månaden.\_\_\_\_\_ gånger/månad.
- 6. Har du någon gång skapat eget innehåll, dvs gjort en egen film eller ändrat/mixat annat existerande filmmaterial och laddat upp på Internet?
- □ Ja □ Nej

Om du har svarat JA på ovanstående, vänligen svara på fråga 7.

### 7. Varför valde du att skapa detta innehåll?

Ange orsak (gärna flera orsaker):\_\_\_\_\_

# C. Scenario om mobila videotjänster

Föreställ dig tjänsten nedan och svara på frågorna genom att ringa in den siffra som bäst stämmer med din uppfattning.

Föreställ dig en tjänst där du via ditt mobilabonnemang kan hämta ned och titta på korta videoklipp i din mobiltelefon. Dessa videoklipp är det andra användare av tjänsten som har gjort och lagt upp på Internet på olika sidor. Med hjälp av tjänsten kommer du också att t.ex. kunna filma något med din mobil för att sedan direkt kunna ladda upp det på Internet via ditt mobilabonnemang.

		Stämm mycket dåligt	er							S	tämmer mycket bra
1.	Jag tror att jag inom ett år kommer att ha en sådan tjänst i min mobiltelefon.	1	2	3	4	5	6	7	8	9	10
2.	Jag tror att jag inom ett år kommer <i>använda</i> en sådan tjänst i min mobiltelefon.	1	2	3	4	5	6	7	8	9	10
3.	Jag tror att jag inom ett år kommer att <i>ladda ned och</i> <i>titta</i> på videoklipp i min mobiltelefon.	1	2	3	4	5	6	7	8	9	10
4.	Jag tror att jag inom ett år kommer <i>skapa och lägga</i> <i>upp</i> egna filmer på Internet via min mobiltelefon.	1	2	3	4	5	6	7	8	9	10
5.	Om jag fick möjlighet att prova tjänsten gratis skulle jag börja använda den inom ett år.	1	2	3	4	5	6	7	8	9	10
6.	Jag tror att priserna på tjänsten kommer minska mycket inom ett år.	1	2	3	4	5	6	7	8	9	10
7.	Jag tror att tjänsten kommer bli mycket billigare inom ett år.	1	2	3	4	5	6	7	8	9	10
8.	Jag tror att den mobiltelefon jag har inom ett år kommer att fungera bra för att <i>titta på</i> videoklipp.	1	2	3	4	5	6	7	8	9	10
9.	Jag tror att den telefon jag har inom ett år kommer att fungera bra för att <i>lägga upp</i> videoklipp.	1	2	3	4	5	6	7	8	9	10

	Stämme mycket dåligt	er							S	tämmer mycket Bra
10. Jag tror att de	0									
mobiltelefoner som fungerar med tjänsten kommer vara för dyra för mig att köpa inom ett år.	1	2	3	4	5	6	7	8	9	10
11. Jag tror att jag har råd att köpa en mobiltelefon som fungerar med tjänsten inom ett år.	1	2	3	4	5	6	7	8	9	10
12. Jag tror att det inom ett år finns ett stort urval av mobiltelefoner som fungerar bra med denna tjänst	1	2	3	4	5	6	7	8	9	10
13. Jag tror att det inom ett år kommer vara många som använder tjänsten.	1	2	3	4	5	6	7	8	9	10
14. Jag tror att det inom ett år kommer att finnas ett stort urval av videoklipp att titta på.	1	2	3	4	5	6	7	8	9	10
15. Jag tror att tjänsten inom ett år kommer att vara lätt att använda.	1	2	3	4	5	6	7	8	9	10
16. Jag tror att tjänsten inom ett år är smidig att använda vad gäller <i>nedladdning</i> av videoklipp.	1	2	3	4	5	6	7	8	9	10
17. Jag tror att tjänsten inom ett år är smidig att använda vad gäller <i>uppladdning</i> av videoklipp.	1	2	3	4	5	6	7	8	9	10
18. Jag tror att jag inom ett år kommer ha tillräckligt stor kunskap om tjänsten för att kunna använda den.	1	2	3	4	5	6	7	8	9	10
19. Jag tror att jag inom ett år kommer få mer information om sådana tjänster från min mobiloperatör.	1	2	3	4	5	6	7	8	9	10
20. Jag tror att det inom ett år kommer vara lätt att hitta bland videoklippen med hjälp av mobilen.	1	2	3	4	5	6	7	8	9	10
21. Jag tror att tjänsten inom ett år kommer att vara <i>komplicerad</i> att använda.	1	2	3	4	5	6	7	8	9	10

	Stämmer mycket dåligt								S	tämmer mycket bra
22. Jag tror att tjänsten inom ett år kommer att gå att nå via en knapptryckning på mobilen.	1	2	3	4	5	6	7	8	9	10
23. Jag tror att jag genom att använda tjänsten inom ett år kommer att spara tid.	1	2	3	4	5	6	7	8	9	10
24. Jag tror att det inom ett år skulle kännas konstigt att titta på videoklipp i min mobil utomhus.	1	2	3	4	5	6	7	8	9	10
25. Jag tror att mina vänner skulle reagera negativt om jag tittade på videoklipp i min mobil.	1	2	3	4	5	6	7	8	9	10
26. Jag tror att jag skulle få positiv uppmärksamhet från mina vänner om jag <i>tittar</i> på videoklipp i min mobil inom ett år.	1	2	3	4	5	6	7	8	9	10
27. Jag tror jag får positiv uppmärksamhet från mina vänner om jag inom ett år <i>skapar och laddar</i> upp videoklipp via min mobil.	1	2	3	4	5	6	7	8	9	10
28. Jag skulle känna mig häftig om jag om jag inom ett år använder tjänsten.	1	2	3	4	5	6	7	8	9	10
29. Jag brukar vara först med att använda ny teknik.	1	2	3	4	5	6	7	8	9	10
30. Jag tror att tjänsten är pålitlig och fungerar varthän jag befinner mig inom ett år.	1	2	3	4	5	6	7	8	9	10
31. Jag tror att jag skulle kunna få tag på video via tjänsten som jag annars ej skulle kunna gå tag på.	1	2	3	4	5	6	7	8	9	10
32. Jag tycker att det är viktigt att tjänsten inom ett år är den populäraste bland mina vänner.	1	2	3	4	5	6	7	8	9	10
33. Jag tycker att det är viktigt att tjänsten inom ett år är den populäraste i Sverige.	1	2	3	4	5	6	7	8	9	10
34. Jag tror att jag kommer att känna en gemenskap till de som använder tjänsten.	1	2	3	4	5	6	7	8	9	10

# D. Kunskap om mobiltelefoni- och tjänster

Utgå från dig själv och svara på frågorna nedan genom att ringa in den siffra som bäst stämmer med din uppfattning.

		Stämmer mycket dåligt								S	tämmer mycket bra
1.	Jag kan mycket om mobiltelefoner.	1	2	3	4	5	6	7	8	9	10
2.	Jag är något av en expert på mobiltelefoner.	1	2	3	4	5	6	7	8	9	10
3.	Jämfört med andra kan jag mycket om mobiltelefoner.	1	2	3	4	5	6	7	8	9	10
4.	Mina vänner brukar ofta fråga mig om råd när det gäller mobiltelefoner.	1	2	3	4	5	6	7	8	9	10
5.	Jag kan mycket om mobiltelefontjänster.	1	2	3	4	5	6	7	8	9	10
6.	Jag är något av en expert på mobiltelefontjänster.	1	2	3	4	5	6	7	8	9	10
7.	Jämfört med andra kan jag mycket om mobiltelefontjänster.	1	2	3	4	5	6	7	8	9	10
8.	Mina vänner brukar ofta fråga mig om råd när det gäller mobiltelefontjänster.	1	2	3	4	5	6	7	8	9	10

# E. Avslutning

Avslutningsvis följer några frågor om dig själv.

- 1. Jag är 🗆 Man 🛛 🗆 Kvinna
- 2. Jag är\_\_\_\_\_ år gammal.
- **3.** Jag är studerande □ Ja □ Nej
- 3.1. 
  □ Jag är studerande på gymnasium 
  □ högskola/universitet

**4.** Jag har en egen inkomst (inkl. extrajobb)

□ Ja □ Nej

## Tack för din medverkan!