

Consumer Preferences towards Commercial Music Downloads

Sven Jöckel, Andreas Will, and Ulrike Nawrath

Technische Universität Ilmenau

ABSTRACT Demand for commercial music download is still marginal compared to the total market volume of the music industry. One reason can be found in the lack of consumer orientation on part of the suppliers. Important attributes of commercial music download platforms that may impinge on the degree of consumer orientation include price, use of DRM, sound quality, repertoire (genres, artists, songs) and range of offer, payment system and pre-listening options. An adaptive conjoint analysis (n = 527) based on consumer preferences towards these attributes was carried out. As a result, eight consumer segments were identified, offering the opportunity for a tailored product and service differentiation based on the varying relative importance of the attributes. Moreover, a significant gap in total utility between existing platforms such as iTunes and the ideal platform could be identified for all consumer groups. Advices for the design of more suitable products are given.

KEY WORDS: audiences, consumers, preferences, music,

The music industry often benefited from technological innovations such as the (digital) CD format. However, the emergence of the Internet and the availability of peer-to-peer (P2P) file transfer are supposed to have caused a decline in global music sales at the turn of the millennium. The illegal copying and distribution of music ("piracy") through the Internet is often blamed for the recession of the music industry in recent years (Premkumar, 2003; Becker & Clement, 2006; IFIPI, 2005).

Still, there are several arguments that speak in favor of a rapid adoption of online distribution models in the music industry: The market volume of the industry is large enough to support substantial online markets. Its consumers are comparatively young and are thus characterized by a high affinity to new technologies. Among the suppliers we find global media groups with solid financial background and investment power. Direct distribution from the record company to the consumer is expected to reduce the distribution and retail costs by as

Copyright © 2007 Journal of Media Business Studies. Sven Jöckel, Andreas Will, and Ulrike Nawrath, "Consumer Preferences Towards Commercial Music Downloads," 4(3):1-19 (2007).

much as 45% (Premkumar, 2003). The product itself fits well for online distribution (digital content, small file sizes). Online music distribution could thus be expected to be a front-runner for the development of markets for digital goods.

Nevertheless, we observe a reluctant demand for online music markets compared to the total market volume for music. Moreover, only a small portion of all downloads are legal ones. In Germany for example, 8.5 Mio downloads out of a total of 475 Mio downloads were legal ones (1.8%) (IFPI, 2005). As for the users, while 37% of German PC users downloaded music files from the internet and 33% copied—in a legal or non-legal way—music files on their computers, only 7% of the PC users actually used commercial download services (ACTA, 2005).

A reason for this reluctance in switching from illegal to legal online distribution may be found in the strategy employed by the music industry leaders (Coridaß & Lantzsch, 2007). Instead of taking advantage of these characteristics of the Internet economy, the “Big Four” (Warner Music Group, Sony/BMG, Universal and EMI) struggled hard to come up with business models that account for the new technological advances the Internet offers (Leyshon et al., 2005; Vaccaro & Cohn, 2004; Altinkemer & Bandyopadhyay, 2000; Friedrichsen et al., 2004). Legal actions against music pirates instead of new, user-friendly commercial download platforms were indeed the answer of the industry to the decline in revenue (McCourt & Burkart, 2003). With Henry Jenkins it can be summed up that the “recording industry has responded to the emergence of peer-to-peer technologies through legal action and name-calling rather than developing new business plans or reconceiving consumer relations” (2004, p. 40).

In order to improve consumer orientation, a better fit between consumer preferences and the supply of commercial music downloads needs to be realized. Thus, platform providers have to acknowledge that a transaction on an online music market will take place, if the consumer is better off after the transaction compared to his respective opportunities (e.g. doing nothing, buying offline, or downloading illegally). Consumers are better off by maximizing their net utility, i.e. the gross utility minus the price minus the transaction costs. Thus, their reluctance might be explained by a combination of three reasons: (1) the gross utility of the product is too little, (2) the price is too high, and (3) the transaction costs are too high.

A study (Bizer et al., 2006) comparing the main commercial download platforms (Apple iTunes, T-Online Musicload, and Sony Connect among others) currently acting on the German market analyzed these points and revealed a significant lack of consumer orientation. Even if some innovative aspects could be found (e.g. user specific hit lists, music news, or the “artist of the week”), none of the suppliers offers advanced information and search functions (publication date, discography of the artist, collaborative filters, reviews etc.). Additionally, support functions are insufficient and in some cases not easy to find. Community building

is marginal compared to platforms like Ebay or amazon.com. We do not see innovative business models; we do not see suppliers who 'proactively create novel kinds of distributing music' (Tschmuck, 2003). Finally, current models for commercial music download platforms seem to ignore a common principle of setting prices: the orientation towards consumers' willingness to pay (Will, 2005).

Consequently, a better consumer orientation is a necessary prerequisite to overcome the shortcomings sketched above. Within the business model of selling music files, consumer orientation involves one or several of the following points: (1) the delivery of a gross utility superior to the alternatives of buying offline or downloading illegally, (2) a competitive price, and (3) low transaction costs. This leads to a range of questions to be answered: Which of these points are important to consumers? Is there a willingness to pay above zero? Can different types of consumers be distinguished? Do these consumers have different preference structures and which products cater best for them? In order to answer these questions, we analyze consumer preferences of commercial music download platforms. We assume that the preference for a certain commercial download platform can be described as the sum of preferences for certain attributes of the platform and that users do not experience these attributes independent from each other. The first step is to identify relevant attributes of commercial music download platforms. The following section focuses on these attributes and formulates the hypotheses to be tested by our empirical model. Then, we describe the method and design of our empirical study, an adaptive conjoint analysis based on an online survey. In the forth section, we concentrate on the findings of the analysis. As a concluding section, we argue how our results may help to improve existing commercial music download platforms. Our research is focused on the German market. Nevertheless, we expect the results to be equally valid—with some restrictions—for other markets, as the problem of reluctant demand for commercial music downloads is a rather universal phenomenon, and providers such as iTunes act on an international scale.

ATTRIBUTES OF COMMERCIAL DOWNLOAD PLATFORMS

Several studies on consumer preferences for commercial music download platforms in the German market have been carried out, but have not focused on specific preferences for certain attributes and characteristics of commercial music download platforms. Studies either concentrated on statements by industry experts (Frenzel, 2003) or consumer opinions (Buxmann et al., 2005; Walsh & Frenzel, 2004; Walsh et al., 2002; 2003). The aim of our study is to scrutinize, how commercial music download platforms can be designed, so that they fit the existing preferences of potential users better. To answer this question, we are not focusing on the supply side but on the demand side. We are asking the question,

what makes a user decide for a distinct commercial music download service. In order to allow for concrete advices for commercial music download platform providers it is required that we find attributes of commercial music download platforms that consumers base their consumption decision upon and that can be manipulated by the providers. Consumers do not judge a commercial download platform by each of these attributes alone but see the platform as a bundle of attributes that each have their distinct effect on the preference towards this platform. Consumer preferences for a certain attribute may only be seen in relation to other attributes. Each of the attributes will have a partial influence on the preference to use the platform. These partial utilities may then be combined into the total utility of the platform. We further assume that not every individual will have the same preference structure, however, we expect that different groups of users can be distinguished according to their individual preferences for distinct features. As a first descriptive working hypothesis we formulate the following:

H1: The combination of different attributes of commercial music download platforms can explain different consumer preferences for commercial music download platforms.

Based on existing empirical studies and our own study comparing major commercial download platforms (Bizer et al., 2006; Will, 2005), six major characteristic of commercial music download platforms could be identified: price of title, use of Digital Rights Management (DRM), sound quality, range of repertoire and offer, payment system and pre-listening option.

Commercial download platforms differ from peer-to-peer based “pirate” platforms by charging users for downloading a title in exchange for legally owning the right of use for the title. The provider sets a price for the download of a title or for a bundle of titles. Pricing thus becomes the first and probably the most obvious characteristic of a commercial download platform (Buxmann et al., 2005; Friedrichsen et al., 2004). One of the advantages of commercial platforms compared to illegal ones is that they offer legality in exchange for a price. We see this rivalry between free (illegal) and commercial platforms as an essential aspect of online music distribution.

Our own study (Bizer et al., 2006; Grimm, 2005) analyzed the effects of DRM on commercial music download platforms. By copy-protecting their intellectual property, the entertainment industry has constantly reacted to the threats of illegal copying (Chiang & Assane, 2002; McCourt & Burkart, 2003; Gillespie, 2006). However, different DRM formats are on the market each granting the user different rights. Restrictive DRM may allow the usage only on a single computer or device whereas more open DRM systems may only regulate the number of

copies. Again, this characteristic can be manipulated by the provider in deciding for a certain DRM system or granting the users more rights.

A further instrument to differentiate the product of a commercial music download platform is the quality of the sound. Different sampling rates can be used for digital music files. Good sound quality however stands in a negative relationship with download speed. The better the sound quality, the larger the file and the longer the download time. As a study by Buxmann et al. (2005) states that for 82% of the participants (n = 2260) the quality of the sound file is very important, we may expect that sound quality is essential for all users. Still, we may assume that for users with a high interest in music sound quality will be more important than for users with less interest.

People with a high interest in music may also demand more rare and specific music tracks. They will probably prefer music that the average “mainstream” user may not want to listen to. Due to very low copying and storage costs, online distribution gives the provider the opportunity to generate revenue even from titles that are only rarely demanded. Commercial music download platforms may differentiate their offer both in the number of titles and the variety of titles and genres they offer. iTunes for example advertises its huge library of titles, however, a Jazz fan may be better catered for by a download platform that specializes exclusively on Jazz and offers a selection of rare mixes or live recordings of a limited number of bands. Studies by Buxmann et al. (2005), Frenzel (2003) and Müllensiefen & Schlumbohm (2004) have included this attribute on part of the provider.

Two further attributes will be integrated in our model: payment method and pre-listening options. As users have to pay for a product, the transaction process is a further characteristic of commercial music download platforms that will have some effects on the attractiveness of the platform and can be manipulated by the provider. Payment systems are usually discriminated into micro (under € 5) and macro (€ 5 and more) systems. The use of micro-payment systems such as Firstgate Click and Buy or macro-payment-systems as direct debit or credit card may have direct effects on the preferences of certain commercial download platforms. The possibility to listen to parts of a song before buying a title is seen as an essential signaling function for the user. Digital music, as any other media product is an experience good, whose value can only be stated after usage. In an empirical survey on commercial music downloads, 80% of the participants (n = 1439) expected to be able to listen to parts of the song before downloading it (Friedrichsen et al., 2004). Providers can differentiate their offer to listen to a song before downloading it both in terms of time and quality. With iTunes for example, 30sec clips in full quality are available whereas Musicload only offers song clips in reduced sound quality.

As a result, we can concretize hypothesis 1:

H1a: The combination of the six attributes price, use of DRM, sound quality, range of offer and repertoire, payment system and pre-listening option can explain different consumer preferences for commercial music download platforms.

METHOD AND DESIGN

Hypotheses 1 / 1a acted as a guideline for our research design. Based on the analysis of consumer preferences (Kroeber-Riel, 2003: 269ff; Nieschlag et al., 2002: 609ff., Hammann & Erichson, 2000: 374ff.), an adaptive conjoint analysis (ACA) was performed. An ACA can be seen as a combination of compositional and decompositional models to account for consumer preferences. In compositional methods, the utility of certain attributes is directly measured whereas in decompositional approaches the utility of individual attributes is deduced from the total utility of the product (seen as a combination of different attributes) (Hermann et al., 2003; Green & Srinivasan, 1978; Omre, 2003). In an ACA participants are asked to state both the importance of certain attributes and give an evaluation of bundles of attributes (partial and full models). The use of software packages allows the application of an ACA that does not confront the user with all possible combinations of products but limits them to the most plausible ones according to the individual utility values. The result of an ACA can be used in combination with cluster analysis to segment a market into different target groups according to their individual preferences.

In order to carry out an ACA, different characteristics for each of the attributes need to be found. We took care that each of the attributes is relevant for the product, can be manipulated by the provider and is independent from other attributes. Each characteristic of these attributes needs to be realizable. It must be mutually exclusive and provide a real alternative for the user. The range of different characteristics within an attribute must be reasonable (Backhaus et al., 2003; Omre, 2003).

For the attribute price per song, four characteristics were used: €0.39, €0.69, €0.99 and €1.29. These characteristics account for the most common price models (€0.99) and open the range both to the upper and lower range. Higher prices for song downloads seem not to be realizable. Three DRM systems were compared: Model A allowed the file to be played on a maximum of three computers, to be burnt 10 times and be copied on portable devices. This model is comparable to the WMA-format. Model B—similar to the AAC-format—was more relaxed, allowing the file to be burnt for an unlimited number of times while being used on 5 computers and on any portable device. Model C (MP3) was the least restrictive, with no limits on the number of computers the file could be used with, the times it could be copied and the transferred on portable devices. These models accounted for the most common DRM systems

ranging from DRM-free MP3 to WMA and AAC formats used by iTunes and Musicload. To account for different sound qualities, the use of objective sampling rates was rejected as users could not evaluate these figures and the sound quality with identical sampling rates differed in respect to the format used. Radio-, Near-to-CD- and CD-Quality were used as characteristics of the attribute sound quality. The offer and repertoire of the platform was described by three categories: Specialized on a specific genre with an extensive offer of titles comparable to a special record store (Specialized), an extensive range of genres and an average range of titles comparable to a general retailer (Wal-Mart), an extensive range of both genres and titles (Universal). For the payment method three characteristics were employed, covering all existing models: Payment by credit card, payment by direct debit or credit card, and an offer of different payment forms (credit card, Firstgate etc.). Three forms of pre-listening were deduced: listening to the whole track in full quality, listening to 30 seconds in average quality, listening to 30 seconds in high quality.

Table 1: Summary of Characteristics

Price	DRM	Sound Quality	Range of Offer	Payment Method	Pre-listening Option
€ 0,39	MP3	CD	Universal	Diverse Payment Methods	Full length
€ 0,69	AAC	Near-CD	Specialized	Direct-Debit and Credit-Card	30sec. high quality
€ 0,99	WMA	Radio	Wal-Mart	Credit Card	30sec. average quality
€1,29					

To carry out an ACA, participants were first asked to evaluate each characteristic for each attribute by ranking the characteristics. Then, the relative importance of the attributes was calculated by asking the participant to state, how important the difference between the characteristics they preferred best and the least preferred characteristic was. These two steps can be seen as compositional approaches. Step 1 and 2 resulted in prior utilities for the attributes. In the third step, decompositional elements are integrated. They are used to confront the users with concrete stimuli in form of combinations of attributes with distinct characteristics. Participants had to decide which of two products they would prefer. This step results in so called pair utilities. In the last step, the user is asked to state the likelihood to use a concrete stimulus. In our model, we used all six attributes as stimuli. The whole process resulted in partial utility values for each of our attributes. Socio-demographic factors, experiences with commercial and non-commercial music download, music preferences and interest and the importance to

act legally while downloading were gathered. Attributes such as ease of use and additional services that were not deemed fit for the conjoint analysis, were integrated in the questionnaire using Likert-style rating scales.

A software package was used to conduct the ACA. An online version of the questionnaire was implemented as this allowed an easy integration of the ACA tool. The link to the online survey was posted on the website of several music magazines (mp3.de, rockhard.de, visions.de, joy.de). The aim of the survey was explorative. First results on user preferences should be gathered. We focused on persons with a high affinity to online music. As most of these users are under 40 years, we limited our sample to persons from 14 to 39 years, seeing these as the core target group of online music distribution. Due to self-selectivity our sample is by no means representative of online users, however we were able to reach a diverse range of music interested Internet users. Compared to the average music interested internet user as found in representative surveys (ACTA, 2005), our sample is skewed towards male (78%) users, people in their twenties (70%) and well educated users (87% A-Level).

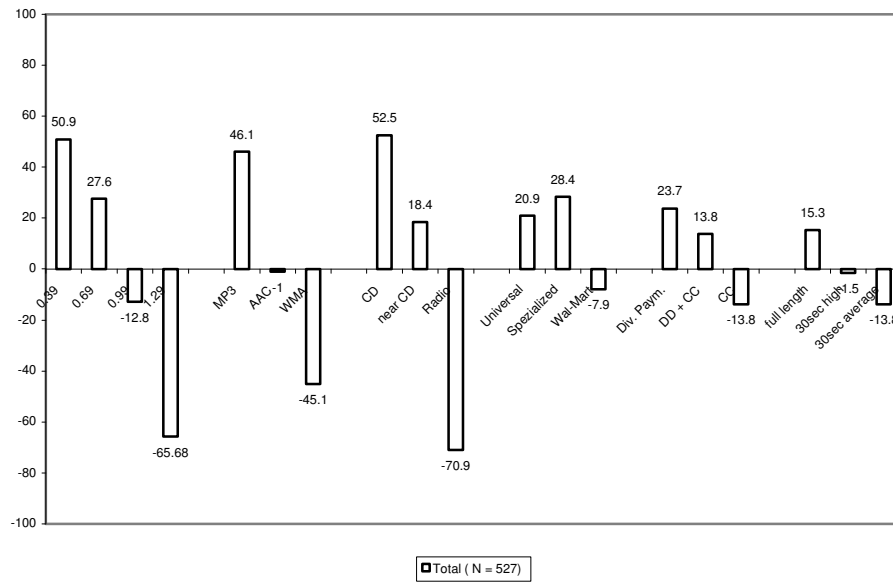
After eliminating incomplete questionnaires ($n = 611$), participants with inconsistent answering behavior or the wrong age ($n = 43$), 575 valid questionnaires were considered for the analysis. For the cluster analysis that grouped the users on the basis of their partial utilities for each of the attributes, 33 participants had to be removed from the sample, as the correlation between their total utility values and the likelihood of usage as directly indicated by them was considered too low. A single linkage procedure was carried out to identify individuals that differed strongly from the rest of the sample. The sample had to be reduced to 527 participants. Using a complete-linkage procedure our sample was grouped into eight clusters, based on heterogeneity of 16.5. The homogeneity of the clusters was based on their F-Values for each of the partial utilities. All clusters are considered as rather homogeneous.

Results

Consumer Clusters

Figure 1 gives an overview of the zero-centered, calibrated partial utilities (“zero centered diffs”) for each of the characteristics. As expected, sound quality seems to be very important for the users. The partial utility of a sound file in CD-quality is even higher as the score for the lowest price. Radio quality scores even lower than the highest price of € 1.29. With respect to DRM, a restricted DRM system is not preferred by the consumers. The same holds true for a platform that only offers credit card payments. The two platform options that offer a more extensive repertoire score better than the option with a Wal-Mart like offer.

Figure 1: Zero-Centered, Calibrated Partial Utilities ACA



Original Data, 100= high partial utility; -100 = no partial utility

Table 2: Socio-Demographic Data of the Clusters

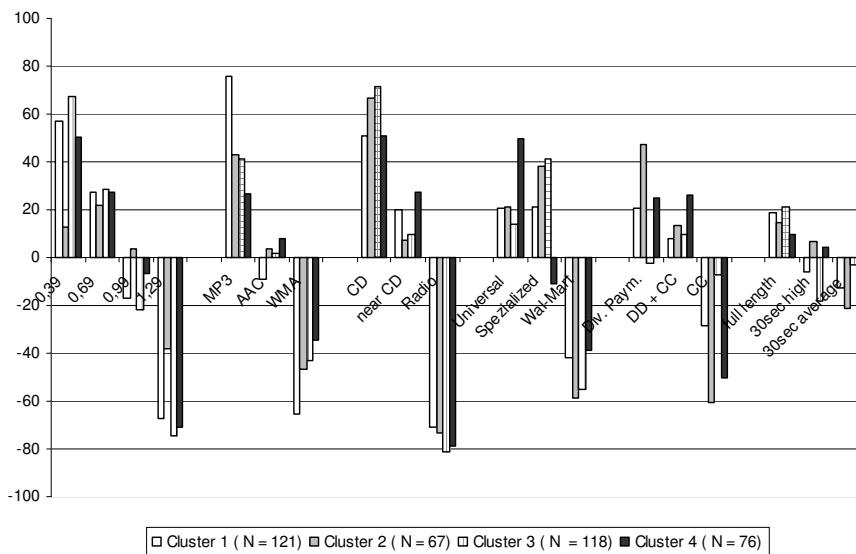
	Cluster 1 n = 121	Cluster 2 n = 67	Cluster 3 n = 18	Cluster 4 n = 76	Cluster 5 n = 28	Cluster 6 n = 30	Cluster 7 n = 54	Cluster 8 n = 33	Total n = 527
Gender									
Male	79%	82%	91%	67%	68%	83%	87%	39%	78%
Female	21%	18%	9%	33%	32%	17%	13%	60%	22%
Age									
14-19 years	8%	3%	2%	1%	14%	3%	4%	9%	5%
20-29 years	74%	73%	66%	84%	61%	60%	69%	79%	72%
30-39 years	17%	24%	32%	15%	25%	37%	28%	12%	23%

Original Data

These calibrated, zero-centered partial utilities were used as basis for the cluster analysis. In terms of social demographic variables, the clusters slightly differ. Based on the standardized residues women are highly significantly ($p < 0,01$) underrepresented in Cluster 3, whereas 30-

39 year olds are significantly overrepresented ($p < 0,05$). Cluster 4 consists of more 20-29 year olds than expected, however this overrepresentation is not significant ($p > 0.05$) but females are highly significantly overrepresented in this cluster ($p < 0.01$). However, the highest overrepresentation ($p < 0.01$) can be found in cluster 8. Young consumers (14-19 years) are more likely to be found in cluster 1, 8 ($p > 0.05$) and 5 ($p > 0.05$). Overall, few statistically significant differences between the clusters in terms of age and gender could be found, however this seems to be due to small case numbers when dividing the sample into different clusters. With respect to the preferences towards commercial music download platforms, some interesting differences between the clusters can be found. We are thus turning our interest on the preference structure within the individual clusters. Furthermore, when appropriate we will use external variables such as interest in music download or interest in music and music preferences to describe the individual clusters.

Figure 2: Zero-centered, calibrated partial utilities in Cluster 1—Cluster 4



Cluster 1: DRM-Averse Bargain Shopper ($n = 121$) The first and largest cluster ($n = 121$) is characterized by a strong aversion towards rigid DRM systems and high prices. Being able to buy DRM-free music files is more important for them than buying them for the cheapest price. Only when confronted with a decision between a price of €1.29 and a WMA-DRM these consumers would be willing to pay the higher price for not having to use a rigid DRM. A cheap price ranges second on their

preference structure, closely followed by CD-quality. 48% of the users that download have already downloaded songs from a commercial download platform (n = 101).

Cluster 2: Demanding Quality Buyer (n = 67) In their preference structure, users in this cluster differ strongly from the first cluster. Consumers in this cluster would actually prefer a price of € 0.69 to the cheapest option. Price indeed does not play an essential role for them. CD-quality is the most important characteristic for them, followed by the possibility to use different payment methods. A specialized offer is even more important than having DRM free titles. Users see a price of € 0.69 as only the fifth important attribute. Cluster 2 is further characterized by a high interest in music¹ (M: 21.78). It is thus not surprising that consumers in this cluster used download options on artist web pages more often than consumers in other clusters (M: 4,22²). 53% of the consumers who download music from the Internet (n = 57) have already used commercial download platforms.

Cluster 3: Price Sensitive Quality Buyer (n = 118) Consumers in cluster 3 share with their partners in cluster 2 the preference for CD-quality titles. Having titles with high quality is more important than getting them for the cheapest price. However, in contrast to cluster 2, the importance of price is much higher. Consumers in this cluster are sensitive towards price and prefer the cheapest available price. Similar to cluster 2, they prefer DRM free music, but payment models do not play a huge role for their evaluation of a product. Although consumers in this segment are rather price sensitive, they would still rather pay more for a song, than listen to it in radio quality. It is interesting to note, that consumers that download more than 50 titles per month are significantly over-represented in this cluster (45%, $p < 0.05$). However, only 44% of the ones who download music (n = 111) have already used commercial download platforms.

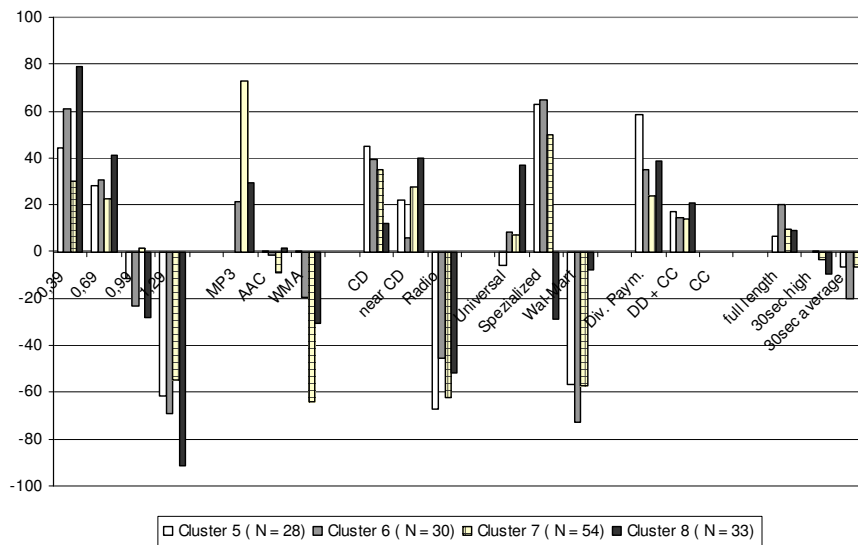
Cluster 4: Mainstream Downloader (n = 76) It should be kept in mind, that Cluster 4 has one of the highest proportions of women in the sample. The preference of music styles such as Pop (47.4%), Black Music (17.1%), Soul / Funk (21.1%) is significantly overrepresented ($p < 0.05$) in this cluster probably due to the gender distribution. Furthermore, this cluster is characterized by the highest degree of music downloader (n = 65) that have already used commercial downloads (66%). In terms of consumer preferences for commercial download platforms, sound quality (CD) and price (€ 0.39) are the most important characteristics. With

¹ Music interest was based on an index of six items (6-point Likert-type scales) asking for different music related activities (listening to music in radio, on CD, as digital file, talk about music with friends, visit concerts, use information sources on music)

² Unless indicated, means are given for 6-point scales

respect to the range of titles a platform should offer, there is a clear preference for a universal offer. Specialized offers are much less liked than in cluster 2. Indeed, the “Universal” offer (extensive repertoire and number of titles) has the highest partial utility of all clusters in this segment. It seems that existing platform is best oriented towards consumers in this cluster.

Figure 3: Zero-Centered, Calibrated Partial Utilities in Clusters 5 to 8



Cluster 5: Conservative Music-Lovers ($n = 28$) With only 28 cases this cluster is the smallest one. Compared to the previous clusters, the preference structure in this cluster differs strongly. The most astonishing aspect is the role DRM plays for these consumers: There is no revealed preference towards DRM-free files in this segment. All three characteristics score roughly the same partial utility scores. Still, similar to other price sensitive clusters; cheaper prices play a huge role for the preference of a certain platform. However, the option to use different payment methods gets the highest partial utility not only in comparison to the other attributes within the cluster but among all the other clusters. The option to only use a credit card is seen as the least preferable option. Here, the partial utility is the lowest among all other clusters. Similar to Cluster 2, 3 and 6, consumers in this segment prefer a specialized repertoire to more general ones regardless of the range of titles these platforms offer. The interest in commercial music downloads seems to be low. Only 32% of the consumers have already used such a platform.

Cluster 6: Specialized Non-Downloader (n = 30) Cluster 6 is also a very small cluster. Consumers in this cluster are more reluctant to download music from the web. 19 of the 30 cluster members download music from the Internet, only six of these (32%) have used commercial download platforms. Furthermore, members of this group are listening rather often to CDs (M = 5.4) and go to concerts (M = 4.13). Using a commercial download service, they will look out for rare and exclusive titles, because a specialized offer has the highest partial utility for them in comparison to any other characteristic and in reference to all the other clusters. An offer comparable to that of a Wal-Mart like store would dramatically reduce the utility of the platform for these consumers. This preference for a rather specialized repertoire is not followed by an acceptance of higher prices that could partially be found in cluster 2. Consumers in this group want exclusive tracks and they want them cheap and without DRM.

Cluster 7: DRM—Averse Quality Buyer (n = 54) Cluster 7 seems to share some characteristics with Cluster 1. In both clusters, the option to buy DRM free files has the highest partial utility. They even have similar scores that are higher than the score of any other group. Cluster 7 and 1 then differ in the importance of the role of sound quality and price. While members of cluster 1 prefer a cheaper price, members of cluster 7 score higher with CD-quality. However, the partial utility for both characteristics is higher in cluster 1. The partial utility of a specialized platform is higher than in cluster 1. Consumers in cluster 7 seem to strongly prefer a DRM free music file from a shop that offers them a specialized selection. Members in this group are not less likely to use commercial music download platform than members of other clusters, half of all downloaders (n = 48) have already used commercial platforms.

Cluster 8: Price Sensitive Non-Downloader (n = 33) Similar to Cluster 4 this cluster is characterized by a statistically significant overrepresentation of women ($p < 0.01$). This also leads to significant overrepresentation ($p < 0.01$) of music genres such as Pop (57.6%) and Black Music (21.2%). In contrast to Cluster 4 only 70% of the members download songs from the Internet and only half of these use commercial download platforms. The interest in activities such as going to concerts (M = 3.03) or talking about music (M = 3.97) is lowest in comparison to the other clusters. With respect to consuming preferences, price seems to be the outstanding attribute. The partial utility score of € 0.39 is highest and the partial utility score for € 1.29 is lowest among all other clusters. Song quality does not seem to be important for members of this group. Although they prefer CD- to radio quality, the partial utility of close-to-CD quality is highest. No cluster has an as high preference for both radio and close-to-CD Quality as this cluster.

Summary of Findings

Based on their preferences for commercial music download platforms eight clusters of consumers could be identified. Because of the self-selection of the sample, the results of the cluster analysis should not be taken as representative for the whole market; in line with our hypothesis still it was possible to demonstrate that certain consumer groups can be identified based on their consuming preferences. For some of these groups price seemed to play an essential role (Cluster 3 and 8). It is arguable if increasing the price for some rare titles while decreasing the price for more often demanded titles would increase the attractiveness of commercial download platforms. Indeed, we can see that the Demanding Online Buyer (Cluster 2) would not be as affected as other consumer segments by higher prices. For them good sound quality and a specialized offer could probably compensate for higher prices. Strict DRM systems are a reason for several consumer segments why they do not prefer existing commercial download platforms. Easy payment systems however seem to play a huge role for consumer preferences in almost all clusters. For Cluster 1 and 7 the usage of DRM free files is found to be the most important aspect of commercial download platforms. The less restrictive the DRM system is, the higher will be the utility for the user, regardless of the segment. Still, Conservative Music-Lovers (Cluster 5) are not affected as much by DRM as others. The utility of a platform would not decrease as much for them, if it used strict DRM-systems. For others, the sound quality seemed to be the more important attribute. Our results also indicate that there is room for more specialized repertoires. Members of Cluster 5 and 6 seem to be very keen on specialized offers. Although these clusters do not show a high affinity towards commercial music download and more or less prefer traditional forms of music (concerts, CD), a specialized offer would probably increase their interest in commercial music downloads. This seems to be also relevant for Cluster 2. Here, even higher prices seem to be realizable. For three of the eight clusters, specialized offers that do not yet exist will offer an important added value. Another important advice for improving existing platforms comes from the comparison of Clusters 4 and 8. Here, we can see that gender may play an important role for consumer preference. Probability samples on Internet users may help to verify or falsify our results. From our findings—especially with regards to Cluster 8 and Cluster 4—we assume, that gender together with aspects such as interest in music and download behavior may influence consumer preferences for commercial downloads.

Implications of our research

In order to give concrete advices for an improvement of existing platforms, it is necessary to concentrate on the supply side. We will thus

compare the ideal product for the users with existing platforms. We then ask the question, what the provider needs to change, in order to increase the utility of the platform within this consumer segment. We postulate that one characteristic of the whole platform can be changed. We then calculate the new utility for the improved product based on the characteristic that would result in the highest increase in utility. As guideline for an existing model we assume a model comparable to that of iTunes. As existing royalties - at least in Germany—do not allow dropping the price to € 0.39 we assume that the lowest possible price for the improved product is € 0.69.

The existing model uses a price of € 0.99, has implemented an AAC-like DRM system, uses close-to-CD quality, has an extensive repertoire and number of titles (Universal), as payment method only credit cards are accepted and you can listen to 30 sec. of the song in high quality before buying it.

Table 3: Comparison Ideal, Existing and Improved Product, Combined Partial Utilities

	Ideal Product	Existing Product	Improvement	Improved Product
Cluster 1	243.61	- 13.75	No DRM	69.94
Cluster 2	220.10	- 11.83	Div. Payment	88.80
Cluster 3	252.73	- 6.48	CD-Quality	54.37
Cluster 4	213.30	21.92	Credit + Direct Debit	98.27
Cluster 5	217.80	- 70.35	Div. Payment	63.13
Cluster 6	241.46	- 59.74	Div. Payment	34.78
Cluster 7	220.38	- 10.78	No DRM	70.48
Cluster 8	232.11	- 18.94	Div. Payment	79.29

The combined partial utilities for the ideal product indicate that the differences between the individual groups are rather small. It is interesting to see that Cluster 4—the Mainstream Downloaders—has the lowest score for its ideal product. However, this cluster had the highest penetration of commercial music downloaders. This can be explained by their relative high score on part of the existing product. For them, the discrepancy between ideal and existing product is smallest. Existing models seem to cater best for this consumer segment. On the other hand, Conservative Music-Lovers (Cluster 5) and Specialized Non-Downloaders (Cluster 6) score extraordinary low with respect to the existing product.

As a conclusion it can be argued that one reason for the reluctance of consumers to use commercial music download platforms is the rather strong discrepancy between consumer preferences and actual existing models. Almost all user groups are repelled by existing products. It seems that existing commercial music download platforms almost exclusively focus on one out of the eight consumer segments. However, our research indicates that there are other segments in the market that

have different requirements. Their needs do not seem to be fulfilled by existing products.

Even without lowering the price to € 0.39 improvements can be made. By changing only one of the six attributes utilities for the existing product increase strongly. Switching from DRM to Non-DRM file formats would increase the utility of the product in all cases and would have the strongest impact for two cluster groups that are characterized as DRM-averse. Even if providers do not want to risk the usage of Non-DRM file format, the change from credit card based payment methods to an option, which allows for different payment methods would increase the attractiveness of existing platforms. For five of the eight clusters a change from credit card to other forms of payment would result in the highest increase in utility. Partly this transition has already taken place. Still, reducing the barriers in relation to the payment transaction can be seen as an important step to increase the attractiveness of commercial music download platforms.

CONCLUSIONS

Our research has shown that there is a great potential in commercial music download platforms, however consumer demands and offers by providers do not yet match. Slight improvements may help to close this gap. As changes in price (due to royalties) are probably not easily made, our research proposes four improvements that would significantly increase the attractiveness of commercial download platforms.

- First, suppliers should consider relaxing and standardizing the restrictive Digital Rights Management. This improvement would be attractive for all consumer groups. Furthermore, it can be supposed that relaxing DRM helps to draw users from illegal platforms to commercial download services. On the other hand, relaxing DRM might lower the sales numbers due to free use and copy of the legally bought music. The suppliers are called upon to solve this problem by models such as flat rates, incentives to buy legally, or additional services to exploit novel revenue sources.
- Second, all platforms should take care that different payment models are accepted. Handling the payment process in an easy and non-complicated way will result in a closer match between consumer preferences and the existing products. This improvement would be attractive for all consumer groups, too.
- Third, a diversification of the offer should be considered. Some consumer segments, which showed only a rather weak affinity towards music download in general and commercial music download in specific showed preferences for specialized platforms. Existing platforms do not match their preferences but these consumer groups show a strong potential for additional

services. Learning more about the music taste and genre preferences of these consumer groups may help to generate successful niche products. In this respect, the relationship between music preferences and consumer preferences needs to be further scrutinized.

- Finally, linked with our third advice it seems that existing models are focused on a group of customers who can be labeled as “Mainstream Downloaders”. Even if—due to our sampling procedure—no statements about the importance of the individual segments could be made, we assume that at least some of the segments we identified will provide a substantial target group. It is essential for shops with a universal offer—i.e. an extensive repertoire and a huge number of titles—to attract diverse target groups. Here, efforts are necessary to increase the attractiveness for different consumer segments. The proposed diversification of the offer is one such effort. Different price models (higher prices for rare titles) or exclusive offers for certain customers could be others.

Following these advices might help to overcome the reluctant demand for online music markets and make them a serious alternative to both, common retailers and illegal platforms. Still, our research is limited. The most important restriction is due to our sampling procedure. Our results are not representative for online shoppers in general. Here, probability samples are necessary. Furthermore we did not focus on the prediction of user preferences. Socio-demographic variables, online behavior or music interest may provide variables that can predict certain consumer preferences. In order to further understand what makes consumers choose a certain product such as a commercial music download platform or not, more research into these explaining factors is necessary.

REFERENCES

- ACTA (2005): Allensbacher Computer- und Technik Analyse (ACTA) [Allensbach Computer and Technology Analysis]. Online Database: www.media.spiegel.de
- Altinkemer, K., & Bandyopadhyay, S. (2000). Bundling and Distribution of Digitized Music Over the Internet. *Journal of Organizational Computing and Electronic Commerce*, 10(3), 209–224
- Backhaus, K. E., Bernd ; Plinke, Wulff ; Weiber, Rolf. (2003). *Multivariate Analysemethoden. Eine anwendungsorientierte Einführung* [Multivariate Analysis Methods. An Introduction] (10th. edition). Berlin u.a.: Springer
- Becker, J. U., & Clement, M. (2006). Dynamics of Illegal Participation in Peer-to-Peer Networks-Why Do People Illegally Share Media Files? *Journal of Media Economics*, 19(1), 7–32

- Bizer, J.; Grimm, R. & Will, A. (2006): Privacy4DRM: Nutzer- und datenschutzfreundliches Digital Rights Management [Privacy4DRM: User- and Privacy-friendly Digital Rights Management], *Datenschutz und Datensicherheit*, 30 (2), 69—73
- Buxmann, P., Pohl, G., Johnscher, P. & Strube, J. (2005). Strategien für den digitalen Musikmarkt. Preissetzung und Effektivität von Maßnahmen gegen Raubkopien [Strategies for Digital Music Markets: Pricing and Effectiveness of Measures against Pirate Copies]. *Wirtschaftsinformatik*, 47 (2), 118 - 125
- Chiang, E., & Assane, D. (2002). Copyright Piracy on the University Campus. Trends and Lessons from the Software and Music Industries. *The International Journal on Media Management*, 4(3), 145 - 149
- Coridaß, C., & Lantzsck, K. (2007). DRM-Formate und Standardisierungsstrategien in der digitalen Musikdistribution [DRM formats and strategies of standardization in Digital Music Distribution]. *Medien- und Kommunikationswissenschaft*, 55 (2)
- Frenzel, T. 2003: *Akzeptanz von Systemen der digitalen Distribution im E-Commerce der Musikwirtschaft* [Acceptance of Systems for Digital Distribution in the E-Commerce of the Music Industry]. Hannover: Buchholz
- Friedrichsen, M., Gerloff, D., Grusche, T., & von Damm, T. (2004). *Die Zukunft der Musikindustrie - Alternatives Medienmanagement für das mp3-Zeitalter* [The Future of the Music Industry –Alternative Media Management for the Age of MP3], München: Fischer (Reinhard)
- Gillespie, T. (2006). Designed to 'effectively frustrate': Copyright, Technology and the Agency of Users. *New Media Society*, 8(4), 651—669
- Green, P. E. & Srinivasan, V. (1990): Conjoint Analysis in Marketing. New Developments with Implications for Research and Practice. *Journal of Marketing*, 54(4), 3—19
- Grimm, R. (2005): Privacy for Digital Rights Management Products and their Business Cases. In: *Proceedings of Axmedis 2005*, Firenze: Firenze Univ. Press, 101-112
- Hammann, P., & Erichson, B. (2000). *Marktforschung* [Market Research] (4th. edition). Stuttgart: Lucius & Lucius
- Herrmann, A., Schmidt-Gallas, D., & Huber, F. (2003). Adaptive Conjoint Analysis. Understanding the Methodology and Assessing Reliability and Validity. In: Gustafsson, A., Herrmann, A., & Huber, F. (eds.): *Conjoint Measurement. Methods and Applications*. (3rd edition). Berlin, Heidelberg, New York. 305—330
- IFPI (2005) Brennerstudie 2005 [Piracy-Study 2005], Online report retrieved from: <http://www.ifpi.de/wirtschaft/brennerstudie2005.pdf> [12.09.2006]
- Jenkins, H. (2004). The Cultural Logic of Media Convergence. *International Journal of Cultural Studies*, 7(1), 33—43
- Kroeber-Riel, W., & Weinberg, P. (2003). *Konsumentenverhalten* (Consumer Behavior) (8th. edition). München: Vahlen
- Leyshon, A., Webb, P., French, S., Thrift, N., & Crewe, L. (2005). On the reproduction of the Musical Economy after the Internet. *Media Culture Society*, 27(2), 177-209
- McCourt, T., & Burkart, P. (2003). When Creators, Corporations and Consumers Collide: Napster and the Development of On-line Music Distribution. *Media Culture Society*, 25(3), 333—350

- Müllensiefen, D., & Schlumbohm, D. (2004). Wo spielt die Musik im deutschen Internet? Von der Internetpiraterie über Produkt- und Promotioninformationen zum kommerziellen Download [Where is the Music Playing in the Internet? From Internet Piracy to Product and Promotion Information and Commercial Download]. In: Wiedmann, K.-P., Büxel, H., Walsh, G. & Frenzel, T.(eds.): *Konsumentenverhalten im Internet. Konzepte- Erfahrungen- Methoden* [Consumer Behavior in the Internet. Concepts—Experiences—Methods]. Wiesbaden: Gabler, 488—503
- Nieschlag, R., Dichtl, E., & Hörschgen, H. (2002). *Marketing* (19th. edition). Berlin: Springer
- Orme, B. K. (2003): Which Conjoint Method should I use? Retrieved from: <http://www.sawtoothsoftware.com/download/techpap/acatrubl.pdf> [23.08.2005]
- Premkumar, P. G. (2003). Alternate Distribution Strategies for Digital Music. *Communications of the ACM*, 46(9), 89—95
- Tschmuck, P. (2003) *Kreativität und Innovation in der Musikindustrie* [Creativity and Innovation in the Music Industry], Innsbruck: Studienverlag
- Vaccaro, V. L., & Cohn, D. Y. (2004). The Evolution of Business Models and Marketing Strategies in the Music Industry. *The International Journal on Media Management*, 6(1&2), 46—58
- Walsh, G. & Frenzel, T. (2004). Hier spielt die Musik. Konsumentenverhalten im Internet am Beispiel digitaler Musik [That's where the Music Plays. Consumer Behavior in the Internet Based on the Example of Digital Music]. In: Wiedmann, K.-P., Büxel, H., Walsh, G. & Frenzel, T.(eds.): *Konsumentenverhalten im Internet. Konzepte- Erfahrungen- Methoden* [Consumer Behavior in the Internet. Concepts—Experiences—Methods]. Wiesbaden: Gabler, 505—524
- Walsh, G., Mitchell, V.-W., Frenzel, T., & Wiedmann, K.-P. (2003). Internet-induced Changes in Consumer Music Procurement Behavior: a German Perspective. *Marketing Intelligence and Planning*, 21(5), 305—317
- Walsh, G., & Frenzel, T. & Wiedmann, K.-P. (2002). E-Commerce-relevante Verhaltensmuster als Herausforderung für das Marketing - dargestellt am Beispiel der Musikwirtschaft [E-Commerce Relevant Behavior Patterns as Challenge for Marketing- Presented by the Example of the Music Industry]. *Marketing ZFP*, 24(3), 207—223
- Will, A. (2005): An Economic Analysis of Music Download Platforms. In: *Proceedings of Axmedis 2005*, Firenze: Firenze Univ. Press, 97—10.

