

# Acceptance of Music on Demand with a focus on mobile devices

## Masterarbeit

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# **1. Introduction**

## **1.1 Motivation and Relevance**

Along with the development of new technologies to save and transport data, concepts have been created over the last decades that allow for new opportunities in the field of music distribution. With the initial release of the data compression format MP3 in 1993, the attachment of music to a storage medium became obsolete. The outcome was the rise of digital music downloads which enabled the access to large quantities of music at any time without the need to leave one's house. This paved the way for distribution services like the iTunes store, where users can legally buy and download music, among other digital content.

Over the last few years, new methods of digital music distribution have been developed, Music on Demand (MoD) being one of them. MoD differs from the widely used concept of Download to Own (DtO) in that it provides music streaming over the internet as a service, without transferring ownership of the content.

MoD services like Rdio, Simfy, Napster, or Spotify which will serve as primary example for this study, already have more than 12 million users in Germany, with steadily growing user numbers. 4.5 million of those who are using MoD are accessing the service more than once a week.<sup>1</sup> Most MoD services use a business model called "freemium", where a product or service is provided free of charge. At the same time a premium is charged for advanced features or functionality.<sup>2</sup> In the case of MoD, the free offering is typically also financed by advertising.

As part of the paid premium content, this concept has lately been extended to mobile systems including smartphones and tablet devices, creating an interesting market with a high installation base of internet-capable smartphones (as of July 2012, 34 per cent of Germans use a smartphone, with 51 per cent of the under 30 year olds).<sup>3</sup> This in turn provides an enormous platform for MoD applications. Analyzing the user acceptance of MoD on mobile systems could be useful in creating an overview of the current status of the service as well as a future outlook.

## **1.2 Objective and Scope of the Study**

Among the research regarding MoD, little research has so far been conducted focusing on the service's expansion to mobile devices. Therefore, the main objective of this paper is to

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<sup>1</sup> cf. BITKOM (2012a).

<sup>2</sup> cf. Kincaid (2009).

<sup>3</sup> cf. BITKOM (2012b).

identify factors influencing the acceptance of Music on Demand with a focus on mobile devices, and to further analyze their respective degrees of influence. This is intended to be achieved by developing a theoretically well-founded measurement model that accounts for the particularities of MoD on mobile devices.

Generally, with applications and e-commerce services like MoD, it is preferable to measure the usage of said service over time to be able to make statements about the actual acceptance if the usage has actually been observed.<sup>4</sup> Since the service has only been available in Germany since March 2012, the probands have had very little time to get acquainted with the functions and qualities of MoD on mobile devices, so the actual use of the system is impossible to measure. Additionally, the assessment of the usage of MoD over time in the form of a time series analysis is also not possible for just the same reason. Therefore, this study will concentrate on a theoretical foundation of models that enable the evaluation of the intention to use MoD on mobile devices to get answers to the following research question:

**What are important influencing factors on the user acceptance of Music on Demand on mobile devices and what is their respective degree of influence?**

By getting the answers to these questions, one should be able to derive implications for the providers of MoD in terms of how they can reach the consumer in a better way or how to market or improve their service.

Thus, this study aims at a critical assessment of acceptance research and the development of an acceptance research model that helps to analyze the particularities of MoD on mobile devices with the goal to develop implications that could be helpful for the further development of the service, using the German market as a basis.

### **1.3. Research Design**

This study is divided into six chapters. Chapter 2 that follows this introduction contains the groundwork necessary to follow the analysis of the user acceptance with regard to MoD on mobile devices. This starts with an introduction into e-business which bears the foundation for the distribution of the analyzed service. Following that is a taxonomy of relevant mobile devices that are able to provide the user with a MoD experience, as well as a description of

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<sup>4</sup> cf. Kollmann (2004) p.149.

the wireless network techniques associated with this process. Successional, there will be a classification of mobile music distribution as well as a definition of MoD with its signature characteristics and price models.

The following chapter 3 presents an overview of acceptance research with regard to information systems including several acceptance research models that could be relevant for the present study. On the basis of the Technology Acceptance Model (TAM) by Davis<sup>5</sup>, a measurement model will be developed containing selected constructs reflecting hypotheses proposed in that chapter. Based on this measurement model, a questionnaire is designed to be distributed online. That questionnaire is supposed to capture the user acceptance of MoD on mobile devices and is to be evaluated in the then following chapter 4.

Chapter 4 contains the empirical analysis of the user acceptance of MoD on mobile devices and starts with a description of the utilized analysis methods along with the quality criteria that are crucial when interpreting the measurement model developed in the previous chapter. After that, the data collection is illustrated followed by a presentation of the sociodemographic characteristics of the sample group as well as several basic characteristics establishing a preliminary classification of their relationship to MoD on mobile devices. Following, the measurement model will be tested and evaluated with the aforementioned quality criteria in order to assess a compatibility with a multiple regression analysis that is the intended analysis method to expose influences of the several attributes hypothesized as having an impact on the acceptance of MoD on mobile devices. Next up are the results of the regression analysis followed by a discussion of the analysis results.

To sum up the findings of the study and their implication on the acceptance process of MoD on mobile devices, chapter 5 contains implications and an outlook on future research as well as limitations that came up in the study. Closing the study is a final conclusion in chapter 6 which summarizes the procedure of the study as well as the findings. The following illustration depicts the structure of the study as outlined previously:

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<sup>5</sup> cf. Davis (1989).

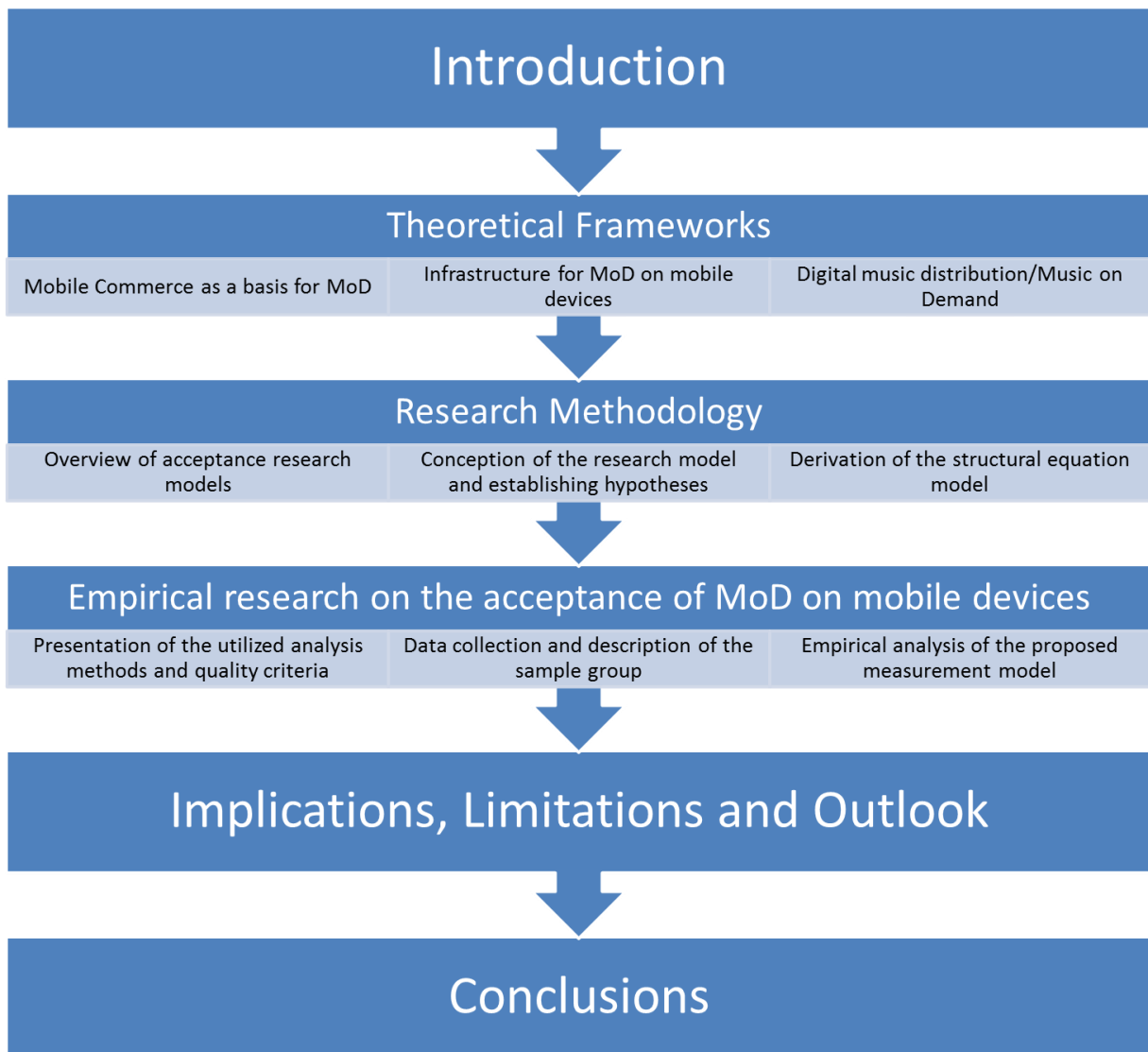


Figure 1.1: Overview of the structure of the study.  
 Source: Own illustration.

## 5. Conclusions

The objective of this study was to measure and reveal influencing factors on the user acceptance of Music on Demand, especially on mobile devices. To achieve this goal, an empirical model was developed with theoretical foundation on the Technology Acceptance Model as well as other related research models for measuring acceptance in connection with technologies. The research data was then collected via an online questionnaire, targeting a German sample group. The data analysis with SPSS revealed several influences on the user acceptance of MoD on mobile devices, most importantly the usefulness aspect of having mobile access to a large library of music content. This aspect is being affected significantly by the ease of use, so while not directly influencing the intention to use MoD on mobile devices, a high ease of use of the application seems to hint towards a greater perceived usefulness. In addition to that, the entertainment factor connected with listening to music on the go was shown to have a significant influence on the willingness to use the service. The perceived ease of use also had an impact on the enjoyment, which could mean that an easier to use application takes the thoughts away from the operation of the device and towards the core service, listening to music. Also, recommendations from the social circle of the potential user play an important role in the acceptance of MoD on mobile devices, as the polled seem to put a lot of weight into the common opinions that exist within their social circles, and decide whether or not to use a service like that amongst other things based on these opinions.

Overall, at least in the German market, MoD itself has a long way to go. By the time the survey was conducted, there was still a generally low awareness of the service, especially on mobile devices. Due to free trials that have emerged since, which have been reported to be well received,<sup>215</sup> the awareness can be improved so that people can get the important hands-on experience needed to really get a grasp on the possibilities and pros of MoD on mobile devices. Thus, an intensified promotion on social networks could be a possibility to increase the user base through recommendations in connection with a free trial.

Recent studies on digital music often targeted the users of established music platforms.<sup>216</sup> This study provides a unique view on the general attitude towards MoD on mobile devices of the target group of the service by not being restricted to people who already use the service. Thus, the implications of this study can be helpful for MoD providers to assess the main

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<sup>215</sup> Sparwelt.de (2012).

<sup>216</sup> cf. Doerr et al (2010) p.22



selling points of MoD with regard to mobile devices and emphasizing these in their marketing measures accordingly in order to gain new customers.