Critical Success Factors for the Monetization of Mobile Applications

Masterarbeit

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1 Introduction

"There are only two industries that call their customers 'users': illegal drugs and software."

– Edward Tuite

1.1. Motivation

Mobile phones were first introduced to the world in the 1950s and have ever since been a strongly demanded product. Due to the high and sustained growth rate of mobile telecommunications, a shift from using landlines or phone booths to using a mobile phone occurred. Using a phone naturally and without specification began to mean using a mobile phone, not a landline (Dunnewijk and Hulten, 2007). Over the years, the devices have undergone profound changes, the most revolutionary paradigm shift being caused by the presentation of Apple's first iPhone in 2007 (Ling and Sundsøy, 2009). From that moment on, the mobile smartphone market has been experiencing relentless growth, as more and more producers began to incorporate a plethora of functionality on top of the now generic calling and texting features (Chai, 2007). As a result, smartphones and tablets have become omnipresent and indispensable in many parts of the world. According to Statista, an estimated 37% of next year's global population will own a smartphone (O'Dea, 2020), while there are more than four million applications (apps) available for download in the two biggest app stores right now (iOS App Store and Android Play) (Clement, 2020a). There are apps available for nearly every aspect of our lives with app verticals ranging from photos and music to office applications and games and on to fitness and health. Google Play, for example, lists 28 app verticals with 17 sub-verticals for gaming apps alone. The establishment of app stores has created compelling opportunities for entrepreneurs to earn money. Alongside the decreasing costs of app development and distribution, the app developer profession has become increasingly important (Bresnahan et al., 2014). This explosion in entrepreneurship has gone hand in hand with an increase in competition, forcing established companies to enter the app business as well, and has ultimately led to the now overwhelming choice of apps for consumers. Many areas of the software industry are populated by engineers who have very good technical know-how, but often lack marketing and monetization knowledge (R8, 2020). Hence, a good software product might never gain popularity and financially successful because the developers did not consider relevant marketing and monetization approaches.

Overall, the app industry is expected to reach $581.9 billion in revenue in 2020, a more than 200% increase from 2016 (Stancheva, 2020). While the market for apps will continue to expand from a global consumer spending in app stores of $81.7 billion to a projected $156.5 billion in 2022 (*App Annie Forecast: 2017-2022*, 2018), app

developers are making use of and are constantly looking for new strategies to identify and monetize their consumers. The ultimate goal of mobile app monetization is to convert consumer demand for apps in the form of visits from a smartphone or tablet (Clifton, 2012) into long term revenue streams (Bresnahan et al., 2014).

There are three overriding strategies for developers to extract money from their users: Charging users a small amount of money for the download of the app (paid), selling ad space in their free-to-download app (free) or charging a fee in exchange for access to premium features or consumables of an otherwise free app (Freemium) (Clement, 2020a). These strategies are further elaborated in section 3.

However, identifying and successfully implementing the right strategy for a specific app can arguably be the most challenging part of the app business. "Finding the right way to monetize an app is the most time consuming, difficult, and mind-boggling part of the entire business" (Genadinik, 2014). Next to this statement, the following research proposals indicate that a study, regarding the **critical success factors of mobile app monetization,** will contribute crucial insight of the mobile app industry:

> *"[…] there has been very limited study of how apps themselves are monetized […]. […] As it has been estimated that the app economy represents over a half-trillion dollars in American economic activity, improving understanding of the keys to successful monetization has the potential to enhance a meaningful portion of many economies"* (Powell et al., 2019).

> *"$339.7 billion in direct contribution from mobile-commerce, advertising revenue and paid downloads, subscriptions and in-app purchases"* (Deloitte, 2018).

> *"The remarkable growth of mobile apps has spawned a number of different revenue models, yet research dedicated to these app business models (ABMs) is relatively scarce"* (Tang, 2016).

> *"As app creators struggle to remain profitable, the question of choosing the correct business model and marketing mix becomes more pressing"* (Appel et al., 2020).

1.2. Objective

My work is relevant to research efforts aimed at understanding the practices of app publishers and/or developers in today's mobile market with respect to monetization. The laws of the app stores, as well as the specifics of information goods enable app developers to find various ways to monetize their apps. A prerequisite for successful app monetization is economic and technical background knowledge and insight into relevant approaches and models. The aim of this study is therefore to not only examine the origins of the respective monetization approaches, but also to highlight the associated app internal success factors as well as app external entities of the mobile advertising industry. Based on a detailed research of technical literature, online resources and professional journals, a qualitative data collection with ensuing analysis and evaluation was conducted. Through this work, app developers and publishers can

gain an overview of the monetization landscape. Moreover, existing strategies regarding in-app advertising and Freemium monetization approaches as well as all applicable external entities are explained and classified within the field.

Based on the afore mentioned research proposals by Powell, Tang and Appel and the author's own examination of relevant literature, the following research question was derived for a target-aimed and structured analysis:

How do current app publishers of different verticals use their app to monetize their users?

On the basis of this research question, which is answered with a review of the relevant literature and a qualitative content analysis according to Kuckartz, the critical success factors for the monetization of mobile apps are derived and elaborated.

1.3. Structure

This work is divided into seven sections. After the introduction and a short presentation of the relevance of the topic, a general introduction to mobile apps and their distribution channels is given in chapter two.

Section three then discusses the different ways to monetize paid, Freemium and completely add-based apps.

Subject of the fourth section is the derivation of the research directing assumptions based on the current status of literature.

In section five, the design and methodology of the empirical investigation is illustrated. It demonstrates how the author went about in identifying the critical success factors in the monetization process of different app verticals by means of conducting qualitative expert interviews and using a coding frame as part of a qualitative content analysis to analyze and evaluate these interviews.

In section six, the literary findings from chapter four are discussed and interpreted in comparison with the empirical findings derived from the expert interviews.

A concluding seventh section summarizes and critically reviews the findings of the research study and offers a brief outlook on further research.

7 Conclusion

The central goal of the present thesis was to examine critical success factors for the monetization of mobile applications. Within the scope of this topic, the research question of 'how do current app publishers of different verticals use their app to monetize their users?' was answered. A look at the existing research and literature showed that that the monetization of apps is an extensive field, whereby publishers and developers can select many roads. This initial finding of the work was validated, discussed and supplemented with assessments and perspectives from practical experience through expert interviews. According to the research results obtained, current monetization practices and critical success factors for the monetization of apps are assumed to be the following: The topic of monetization should be integrated into the development process at an early stage and be closely linked to user experience, user acquisition, granular vertical definition, resources and tracking of metrics and data. Therefore, it is essential to conduct analyses of the competing granular app vertical and explore industry best practices. The interviewed experts agreed that a holistic view of monetization, user acquisition, user experience and compliance with data protection laws has an impact on the success of an app business. In addition, there are clear differences in the monetization strategies of apps from the same vertical, indicating that comprehensive and holistic industry best practices do not yet exist.

7.1. Limitations

In order to strive for a differentiated view of the chosen procedure and the results of the work, the work's significance of the results is discussed in the following.

As the present research was conducted within a reality dependent on the author, it must be pointed out that the research work and the objectivity of the results are inevitably bound to the author's perception. For this reason, an attempt was made to achieve a clear understanding of the monetization of mobile apps in the theoretical part as well as to conduct the interviews in a neutral, uniformly guided way. Nevertheless, it cannot be completely ruled out that subjective assessments and interpretation patterns advected into the conception of the work and the organization and evaluation of the expert interviews.

The chosen data collection instrument of guided interviews was found to be suitable to get an overview of the topic. Thereby, it was established, which current monetization practices are being followed and which related topics are and will be of relevance for the experts.

The general assessment of the significance of qualitative data from expert interviews is also problematic with regard to the objectivity of information. The procedure of selecting interview partners, their professional contexts within the field of monetization

as well as their experience background and resulting interests can influence the information provided in the interview.

Furthermore, due to the small survey size of eight interview partners from three app verticals, only a small part of the ever-growing mobile industry is covered with this analysis. However, in the selection of the interview partners, care was taken to ensure that there are at least two experts from each vertical to form a basis for comparison.

7.2. Recommendations for Future Research

The present work is to be understood as a foundation to analyze current practices and developments regarding the monetization of apps in various verticals in a scientific way and to show their relevance and implementation in the practice of publishers. On this basis, further analyses can be taken up and developed.

Some interviewees already noted during the interviews that it would be interesting to see, in which way the frequently updated data protection laws and the deprecation of the IDFA will affect the mobile advertising ecosystem in the future. In addition, with a time interval, a repeat of the study could be performed, and the results could be compared.

Thanks to the results obtained, it is also possible to address future research approaches of this kind more precisely and to examine certain trends in greater detail. For example, more specific and vertical-oriented industry best practices could be investigated individually. Furthermore, it would be interesting to find out how relevant the analyzed best practices are in other verticals and if there are possible connections. In addition, further empirical studies could be conducted following a large-scale quantitative research design test the level of statistical significance.