

Saimaa University of Applied Sciences  
Faculty of Business Administration Lappeenranta  
Degree Programme in International Business

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# **Subscription Business Model in Mobile Software Industry. Case: Company X.**

Thesis 2018

## **Abstract**

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The purpose of this study was to determine the consumer motives to download and pay for mobile subscription-based applications. Firstly, the theoretical background is given to obtain a comprehensive understanding of the field of study. Afterwards, the empirical research investigates the case company's practices as well as the potential customers' motives. The work was commissioned by the fourth year bachelor student of International Business, Dmitrii Gladun, in cooperation with an international mobile software developing company.

The information for this thesis was collected from various books, scientific papers, articles, the Internet and by carrying out qualitative interviews and a quantitative web-survey. The study adopted a Mixed-Methods approach. Six managers from the case company took part in the interviews and 204 respondents participated in the survey.

As a result of this thesis, a marketing research into the consumer motives to purchase subscription-based mobile applications was done. The implications of the study include general advice on how to convert potential users into subscribers as well as recommendations for the case company. This research might prove useful in the similar settings.

Keywords: subscription business model, mobile applications, purchase decisions, monetisation methods

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# 1 Introduction

## 1.1 Background

The beginning of the XXI century is known to be the Information Age or, as it is also called, Digital Age. It is characterized by an increasing use of electronic devices and consequently their rapid development. Today our lives are heavily affected by the information and communications technology (ICT) and many people can hardly imagine their lives without phones, tablets or other gadgets. It is debatable whether such changes are more beneficial or harmful to the society, but what is certain is that people are becoming dependent, or rather say accustomed to using sophisticated technologies on a daily basis.

One trend has emerged quite recently and seems to have gained popularity in a glimpse of an eye, that is Subscription business model. Subscription has already been widely implemented in business and everyday more and more companies are adopting this approach. Consumers appreciate having 24/7 unlimited access to music and movies (Apple Music and Netflix), receiving monthly parcels with basic toiletries and groceries (Dollar Shave Club and Blue Apron) and automatic payments on a monthly or yearly basis. It is convenient and beneficial to both consumers and businesses: the former save time, effort and get the most up to date products, while the latter enjoy recurring revenues in advance which allow for better forecasting and multiply the business value. (Musgrove 2016.)

The success of subscription model lies in the tendency that people prefer to have access to something rather than owning that thing. An article featured in Fortune says *“Consumer behavior, especially among younger people, is changing, and the need to own and house goods—from music to cars to physical documents—is waning”* (Lev-Ram 2014). Noticeably, we are hearing more and more of such words as “sharing”, “cloud”, “leasing” or “subscribing”. This is undoubtedly the new stage in the technological revolution and it cannot be ignored while running a business.

It has probably been most common among software producers to incorporate subscription models. For example, in May 2013 Adobe announced its intention

to switch to the subscription business model based on the new Creative Cloud instead on the old Creative Suite boxed set. This move has proved very beneficial ever since. (Miller 2015) Having adopted this business model, software companies can generate more profits in the long run as well as track individual customers' user habits and offer personalised timely updates. Customers, on the other side, would always have up to date, well-maintained products.

## **1.2 Case company**

This thesis provides a marketing research for Company X, which is a privately owned application and software development company. Recently they have adopted a subscription model for their applications. Further description cannot be published due to privacy concerns.

## **1.3 Objectives, delimitations and limitations**

### **1.3.1 Objectives**

The purpose of the study is to conduct a marketing research into the topic of subscription model in mobile software business. The researcher aims at learning about the consumer motives to download and pay for software using the case company's example and practices. Moreover, this knowledge will be compared with the survey findings and the existing literature to determine the new ways to trigger consumers.

Therefore, the objectives of the research can be defined as:

- Studying existing literature on application marketing, purchase decisions, monetisation models and subscription business model.
- Obtaining the internal and external data on consumer motives to pay for online applications and do subscription.
- Determining the patterns to trigger consumers.

### **1.3.2 Delimitations**

This study is conducted within certain frames set by the author and the case company. What is not included in the study is, for instance, neither a detailed project plan nor a marketing plan, since the researcher is not a member of the

management team. The implementation of the knowledge provided by the paper and the controlling part are both to be handled by the company to a desired degree. The researcher is not required to go beyond the frames of collecting data, analysis and providing suggestions. The researcher has limited the scope of the research to interviewing the people from the decision-making unit of Company X and surveying people reachable via Facebook and VK.com.

### **1.3.3 Limitations**

Limitations in this case are the factors that could affect the course of the study and the credibility of results.

- Lack of an existing study group for quantitative research.

This means that the scope of this research does not allow for officially engaging certain groups of people defined in the “Sampling” section further below to participate in the web survey. The survey itself is done on the voluntarily basis by the people who are compassionate to help the author, and they are not many.

- Lack of availability of previous empirical research on this topic.

This means that this research is a pilot in the field of study of subscriptions. This limits the authors ability to relate to the previous studies when constructing the surveys and discussing the outcomes.

- Limited access to professionals in digital content creation.

This means that the type of survey participants that is needed the most is also the most difficult for the author to reach. The author’s involvement into design and creativity (for instance, studying some sort of design) would have greatly widened access to the desired sample of people.

- Limited variety of participants of the research.

This means that greater variety could have been achieved in terms of geographical, demographical, professional, etc. distribution, if the author was more involved in the field and if the scope was greater.

- Limited time.

This means that the time frames set by the author pressure the author himself as well as the research participants. The lack of time limitations could have positively impacted the scope and the variety and validity of the results.

- Limited generalisation.

This means that the empirical study has limited generalisation to other cases as it is narrowly focused on providing data for the case company related questions. Although, the theoretical discussion could prove insightful to a wider range of cases.

#### **1.4 Research questions**

The research questions of this thesis were established in cooperation with the case company and based on their current interests. As the workflow of the company is directly related to selling subscriptions to the applications they are developing, the company representative has show general interest in the following aspects:

- Who are the people that have high potential to do subscription?
- What are the factors that trigger them to pay for subscription?

However, these questions would be too broad to research, as the conditions influencing them are plentiful. It was decided to define a specific sample of people that would take part in future observations and whose behavioural patterns would be studied. Therefore, in order to narrow down the scope of the research and make it more related to Company X, the following sub-questions have appeared:

- What is the reason why users would download Company X apps?
- What would the users value most about Company X apps?
- Are ratings and reviews important when deciding to download an app?

The first two sub-questions are connected with the factors that trigger people to do subscription, in other words, they allow the researcher to explore the internal



(values) and external (reasons to download) motives that drive purchase decisions. The third sub-question, related to ratings and reviews, deserves particular attention since a number of researchers (Bohm & Schreiber 2014, Hsu & Lin 2014, Lim, Bentley, Kanakam, Ishikawa & Honiden 2015) consider them as a very influencing factor and the author of this thesis sees the areas of feedback management the case company could develop.

## **1.5 Empirical research**

### **1.5.1 Methodology**

This chapter deals with the theory related to conducting empirical research. In order to conduct the study, Mixed-methods approach has been chosen. This method involves both qualitative and quantitative data collection (Creswell 2014). The data collected from the respondents will be considered as the primary source of information for the research. The Sequential exploratory design of this study requires first collecting the qualitative data and then collecting quantitative data considering the information retrieved from the qualitative research (Creswell 2014). Thereby, the qualitative data consists of the Company X managers' answers to the interviews concerning their customers, products, marketing strategy, feedback and unique features about the company. The quantitative part helps collect information from a sample of potential customers to see to what extent the Company X's view is realistic. As a result, the discussion part covers the conclusions and suggestions.

### **1.5.2 Research description**

This research is deductive because the researcher is testing the theory and collected data using the new empirical data. This research is also of exploratory nature because it aims at exploring problems and behaviours. There are several units of analysis, the firm (managers) and the individuals (customers) being central to the study. This thesis employs a positivist method of study, which means that it uses a deductive approach, starting with a theory and applying it to the empirical data. The scope of the research is hardly large enough to involve such actions as building constructs, defining varia-

bles, making propositions and testing hypotheses, neither it seems feasible to build models and use sophisticated software. Nevertheless, the collected data will be thoroughly studied using logic and following the postulates of empirical research. For instance, both the internal validity (cause-effect, temporal precedence, no plausible alternative explanation) and the external validity (generalizability from the sample to the population) need to be ensured. Also, the results are considered valid when a measure adequately represents the constructs it is supposed to measure. The results must also be reliable, which is explained by a degree to which the measure of a construct is consistent or dependable. (Bhattacharjee 2012.)

### **1.5.3 Research design**

The following study is designed as a field survey, which is a non-experimental design and does not involve manipulation of variables, but a study of them. Such surveys observe practices, beliefs, or situations from a random sample of subjects in a particular environment using a survey questionnaire or a structured interview. The strength of such design is high external validity, the possibility to explore a case from various perspectives or using different theories. However, the downside is the internal validity, which can be affected by the respondent biases (“socially desirable” or “funny” responses). As it was discussed before, this survey research includes both qualitative interview surveys and questionnaire surveys. The questionnaire survey will also be a web-survey, which is done over the Internet using interactive forms (namely, Google Forms). The strong side of this research is time-effectiveness and the ability to reach respondents all over the world, while the bias may be represented by the skewness towards the younger generation who are frequently online. Designing the surveys, the researcher explains how the data will be used (in this case, for academic research) and thanks the respondents for their time and effort. The questionnaires have been pretested using a convenience sample of fellow students prior to sending them out. (Bhattacharjee 2012.)

### **1.5.4 Sampling method**

The sampling is done by first defining the target population, which is the

people interested in creating digital content (they could be potential or current Company X users). Second, the sample frame is chosen: the workers in Company X and people reachable via spreading out online questionnaires. Next, samples are drawn from the sample frame: expert sampling (based on the expertise on the phenomenon of study) for the interview survey, and probability, or random, sampling (every individual had equal chances to participate in the study) for the questionnaire survey. The expert sample consists of 6 people taking part in the marketing and development decision making of the case company, whereas to ascertain the random sample is representative to the population, the questionnaire is created in such a specific way that only people interested in digital content creation were invited to continue with the survey. Moreover, it was spread out in the places with the highest concentration of such people, for instance design university students, design and creative pages on Facebook, VK.com and forums. This audience has also appeared to be the major target audience of the case company. (Bhattacharjee 2012.)

## **1.6 Review of the sources**

In order to complete this work, the theoretical background has been studied. This paragraph shows what sources have been used and their relation to the research questions and overall objectives of the thesis.

The literature study is considered as the secondary source of information for the research. Existing literature provides useful insights into application marketing with suggestions for adjustments according to nationality or operation system of the device, which are discussed briefly in this paper. The knowledge obtained in this section helps us learn about the factors that trigger consumers to pay for applications. Additionally, there is a number of articles studying consumer purchase decisions for mobile applications. These articles employ profound psychological theories and draw practical conclusions for marketers and developers. The study of this area of knowledge gets us closer to understanding the internal motives as well as other purchase decisions drivers. Besides scientific papers, sources such as developer web pages of Apple and Google have been used to describe the software distribution platforms and application monetisa-

tion methods. This section introduces the necessary background to understand how the subscription model is different from other models. Our main interest monetisation method, which is subscription, has also been studied from different angles in order to open the users' minds to this gaining popularity model and explain its benefits in detail. This section is important as it unveils the factors that must be kept in mind when approaching the study the case company customers' behavioural patterns.

Overall, this paper covers the four major theoretical dimensions chosen by the author and related to the marketing of a subscription model in mobile software industry. Various sources, from online blogs and articles to scientific publications and books, have been used to ensure the profound understanding of the theory in question. The author aimed at approaching the topic from different viewpoints to maintain objectivity of the study and apply critical thinking. Sometimes it felt necessary to use the web sources to keep up with the latest information not yet discussed in scientific articles and books, however, the researcher tried to ensure maximum credibility of the sources by trying to use only the web pages written by specialists or trustworthy organisations.

### **1.7 Structure of the thesis**

This thesis consists of five main parts guiding the reader through the entire research process. Each chapter is divided into sub-chapters that are more specific. The "Introduction" chapter provides an overview of the thesis and gets the reader acquainted with the goals and procedures. The "Theoretical framework" chapter provides knowledge related to the topic. The "Data analysis and results" chapter explores the data collected during the course of the empirical research. The "Discussion and conclusions" chapter covers the implications of the empirical and theoretical parts of the study. The last part, "References", consists of the list of figures and references of this thesis.

## **2 Theoretical framework**

### **2.1 Application Marketing**

This section discusses the features related to mobile application marketing. This is still a rather contemporary marketing topic since the need for mobile app marketing only appeared with the establishment of the market itself (Wooldridge & Schneider 2011; Bohm & Schreiber 2014). Today this market is represented by the app stores, the application distribution platforms, from where the software can be downloaded. Almost anyone can enter this market and sell software worldwide via app stores (Lim et al. 2015). Today developers face a big challenge of standing out in the multimillion app markets. In order to be successful, the application should attract a large enough audience, but it can be difficult not to fail by lacking downloads and interactions (Lim et al. 2015). This is when a need for a well-organised marketing strategy appears. On the whole, the majority of the conventional marketing theories can be transferred to mobile app marketing, too. Keeping that in mind, marketers use standard marketing tools and principles and assign them to app-specific marketplace.

#### **2.1.1 Marketing Mix**

The ground-making tool to base any commercial strategy is usually the so-called marketing mix, and mobile app marketing is not an exception for that. Kotler and Armstrong (2014) explain the marketing mix to be a combination of various tools related to product policy, pricing policy, communication policy and distribution policy. It is also widely known as 4P's (Product, Price, Promotion and Place). In the app marketing context, "Product" refers to the app idea and design (Bohm & Schreiber 2014). "Price" is a critical concept that requires consideration of the overall price level, dynamic pricing strategy to react to market changes, app store pricing policy, etc. (Wooldridge & Schneider 2011). "Place" concerns the distribution channel the developer decides to focus on, considering its specifications and environment (Kotler & Armstrong 2014). "Promotion" policy can be divided into actions internal and external to the app stores. These actions include advertising and other channels of communicating the value of

the app to the customer, keeping in mind the differences between the app store guidelines and the audiences (Bohm & Schreiber 2014).

### **2.1.2 App store elements**

Bohm and Schreiber (2014) studied the importance of the app store elements in the context of application marketing. It was found that the most influential factors for consumer purchase decision were the reviews and ratings. Therefore, the authors suggest that active review management must be performed. The users can receive reminders to write a review within the app after they have used the application for long enough to assess its value and give a positive review. Active reaction to user feedback is another way to encourage reviews, for example, by answering to bug reports and taking into account improvement suggestions regularly.

Pricing has been found to play an important role, too, although the price decisions are often influenced by the development costs (Bohm & Schreiber 2014). Often, a solution can be found in adopting one of the modern revenue schemes, by introducing in-app purchases (IAPs) or offering subscriptions. The modern monetisation methods allow for a variety of pricing plans, and this aspect will be dealt with in detail in the further sections.

The study by Bohm and Schreiber (2014) also revealed that such elements as app name and descriptive text are crucial for the app store's search engine to find the application. Moreover, app name easiness to remember additionally plays a very important role in the word of mouth marketing. They also emphasise the significance of designing a proper icon and placing attractive screenshots on the descriptive page, although these parameters did not outweigh the reviews and ratings in the study.

### **2.1.3 Geographical and behavioural differences in app user behaviour**

Lim et al. (2015) claim that many developers are not aware that people from different countries may differ in the factors, such as behaviours and needs, that could affect app downloads. Their study appeared to greatly correlate with the Hofstede's cultural dimensions model. The cross-country app user behaviour

analysis revealed that app packaging, by which they mean app description, title, keywords and screenshots, is very significant for app discovery and downloads. Moreover, such features as description, screenshots, app name and icon have been found to be the most triggering for the consumers to choose a particular application. The major differences in relation to app packaging across countries appeared to be: Chinese users more than other countries' pay attention to the app's name and icon, while Japanese marketers tend to add some "cute" features even for adults in an app's icon and interface, justified by a cultural preference (Hjorth 2005).

As identified by Lim et al. (2015), feature preferences among users also vary across countries: Indian users are more likely to download education apps, whereas German users download more reference apps. Developers have been facing a challenge of limiting and the choice of features for an app, the differences between countries considered. 58% of the respondents in the study looked for apps for their entertainment and 51% did it to complete a task, 35% did it because of curiosity. Consequently, an app should fulfil a specific user need.

In principle, users have high expectations related to performance of apps. The research shows that 34% of users stop using an app if it is too slow, 26% drop it because it is difficult to use and 25% are annoyed by advertisements. Users from Spain and Brazil, for example, appeared to be much more likely to abandon an application because it crashes or shows slow performance. 39% of users stop using an app because they find a better one, which indicates that many applications offer similar features. (Lim et al. 2015.)

Pricing is another sensitive issue among app users. Some countries, such as the UK and Canada, are more influenced by price when apps are chosen. Among the other highlights of the study, software brand has been identified not to have much value when downloading an application. Reviews, ratings, number of existing users and the number of ratings represent the ways people communicate the value of the app to the fellow users. Recommendations by family and friends outperformed media mentions, app store recommendations, and top downloads charts. The country insights reveal that the Australians, Ca-

nadians and Japanese prefer not to rate apps, while the Chinese do it more than others do. (Lim et al. 2015.)

#### **2.1.4 Marketing in the Apple App Store**

This section is based on the book “The Business of iPhone and iPad App Development: Making and Marketing Apps that Succeed” by Dave Wooldridge and Michael Schneider (2011), if not referenced otherwise.

Apparently, there are millions of applications on the Apple App Store. To be more specific, 2.2 million apps as of January 2017 (Statista 2018a), and this number is growing with an incredible speed everyday (42matters 2018). Many of those applications are of rather low quality, made just to make use of the short-term trends, therefore the discovery of a particular app can be problematic. In order to promote an app, it is critical to capture the users’ looks by designing an icon and screenshots that would engage potential users straight away. The first seconds of interaction with the user will determine whether there is a future in these relationships or not. The app icon and the name are the first things the users see in the app store, therefore they should look professional to make people think the app has potential to be well-built as well, and jump to the app’s product page. Additionally, the app’s icon, logo and user interface (UI) design should be consistent (slight differences are allowed) throughout the user experience (UX) to reinforce the brand identity and make people recognise it.

As App store users browse through to the app’s product page, the second most important step is to place the best descriptive and appealing screen shots that would capture the users’ interest. Any app is required to have a description text on the product page, although commonly few people read it. That is why the first screen they see should be the most representative for the main functionality or the defining feature of the application. If the first screenshot is selected right, it should encourage the users to click on the other screenshots and continue to reading reviews and description. In the best-case scenario, the user will download and try the application. There is a much bigger chance that the user will try a free (version of the) app, which can also serve as a promotion tool to



sell the IAPs or for other ways of monetisation. Then it becomes essential that the user interface indeed persuades the user to engage further with the app.

When it comes to the user interface, the developers must think of it from the perspective of a user. The functionality that the app offers is important, but UI is something the users will interact with throughout the entire experience. Therefore, it should completely satisfy their needs to win the competition from the other developers. The user-friendly and good-looking interface is a key to retain customers, and consequently, revenues.

There are different ways to retain revenues, most of which will be discussed in the further chapters. Be that Free, Paid or a model with In-App purchases, there are key factors marketers must consider to sell well. For instance, in order to convince the user to make additional purchases, it is necessary to remember how they were convinced to get the app in the first place. Offering a package that would appeal to the customers will make them want to use on the app. Moreover, people usually want to know exactly what they are going to get, provided they decide to pay. Therefore, whether visual or descriptive, some clues should be offered to users to help them make that decision. Although brief, these clues must not be misleading to avoid receiving negative ratings and feedback.

Another crucial factor in marketing an application is reaching out to audience. Growing a big audience can take a long time, but it is a necessary investment. The ways to grow audience for an app include: blogging, journalists, Twitter, Facebook, LinkedIn connections, suggestions by app store, etc. The social networks and other online resources serve to distribute news and information about your product to large audiences, but this step should be done carefully not to disclose too much information to competitors, especially during the pre-release campaign. Online marketing should not be very persisting too, not to create excessive expectations and too much marketing noise. These campaigns should only whet people's appetite without scaring them away. Writing an "elevator pitch" can help in promoting the app. The authors suggest to write three different texts: one-sentence long, one-paragraph long, and a few para-

graphs long. Not only will this supply the perfect-sized descriptions suitable for all marketing channels, but also helps enhance marketing communication.

### **2.1.5 Marketing in the Google Play store**

This section is based on the book “The Business of Android Apps Development: Making and Marketing Apps that Succeed on Google Play, Amazon Appstore and More” by Roy Sandberg and Mark Rollins (2013), if not referenced otherwise.

The Android application market has successfully overgrown Apple’s in size, according to some calculations it is already double the size of Apple App Store (42matters 2018). However, the growing number of applications means a great challenge for the app developers to be able to reach the audience, as the apps can easily get lost in the numerous alternatives. Therefore, any application should connect well with potential users, and the business strategy should be well built.

In principle, the marketing of Android applications is similar to the Apple’s. The Google Play store works on the similar principles with the biggest difference being between the operating systems: Android is an open source software while iOS is proprietary. Also, Apple App Store and Google Play differ in the application release and other policies, but in relation to the marketing to consumers both platforms are similar. The differences between these two distribution platforms will be discussed in greater detail in the further chapters.

Generally, the book for the Android app developers advises to consider the marketing budget, schedule and milestones, carry out a SWOT analysis, make sure to identify the right customers, use blogging, advertising in social networks, consider local and guerrilla advertising. Particular attention is paid towards the post-release actions, such as customer support and feedback management. It is suggested to provide some in-app or online help (such as FAQ) to minimize persistent similar questions. In order to create a feeling of control for the customer, different options that serve their interests can be provided: information and alternatives. Dealing with customers should be done in a respectful and friendly manner in any case. CRM software is there to help maintain relation-

ships with the customers. It can track issues from their first appearance until the final solution. Analytical software helps tracing the user patterns of using the application and figuring which parts of the app need development and which are not used at all, even without communicating to the users. Overall, whenever a user comes across a problem, they should be able to easily solve it via in-app or online help, feedback or a direct contact with the developers. Listening to the users is vital in today's high competitive conditions, not to mention the fact that it pays off with loyal customers and their respect and word of mouth.

## **2.2 Purchase decisions**

### **2.2.1 Theoretical background**

This section gives brief explanations about the theories used by the authors whose works are discussed in the following chapters as well as other important studies relative to the topic of paying for apps.

#### **2.2.1.1 Core Self-Evaluations**

This concept was first studied by Judge, Locke and Durham in 1997. Core self-evaluations (or CSE) symbolize a stable personality trait that comprises a person's subconscious, basic assessment about themselves and their abilities. Individuals with high CSE tend to be confident and think positively of themselves, whereas the ones with low CSE tend to be unconfident and evaluate themselves negatively. The study includes four personality dimensions: Locus of control, Neuroticism, Generalised self-efficacy and Self-esteem. CSE are very significant in people's study because they illustrate a trait that stays constant over time. This concept is invaluable for numerous studies related to personal and job satisfaction, performance, and more recently it was adopted to various other fields of research.

#### **2.2.1.2 The Theory of planned behaviour**

The concept was introduced by Icek Ajzen in 1991. The theory of planned behaviour (or TPB) in psychology explains the connection between one's beliefs and behaviours. The theory indicates that attitudes towards behaviour, subjective norms and perceived behavioural control together form one's behaviours

and intentions. TPB nowadays is used to study beliefs, attitudes, intentions and behaviour in different spheres, for example, marketing, PR, advertising and medical care.

#### **2.2.1.3 Expectation-Confirmation theory**

The construction of the theory was proposed by Oliver R.L. in 1977 and continued in 1980. The expectation confirmation theory (or ECT) is made to explain satisfaction that comes after purchase of a product or service. It considers such variables as Expectations, Perceived performance and Disconfirmation of beliefs to explain satisfaction. ECT was initially used in the psychology and marketing fields, but today its application has been widened to other scientific spheres, such as consumer research and information systems.

#### **2.2.1.4 Mental Accounting theory**

The Mental Accounting theory is one of the major theories to help understand the consumer decision-making in relation to purchases. It is also one of the main concepts in behavioural economics (Stockinger T., Koelle M., Kindemann P., Kranz M., Diewald S., Moller A., Roalter L. 2014). Introduced by Richard Thaler (1985), Mental Accounting theory has to deal with the tendency that people like to divide their spending and earnings into mental accounts, such as food, entertainment, transportation etc., creating special budgets for each category (account). These mental accounts help avoid overspending in each particular category, however, such behaviour can also be called irrational, since money is just an interchangeable asset that can be spent irrespective of which mental account it belongs to. By the theory, it is not rational to deprive yourself of spending from one account while others are still full. In order to describe this irrationality, Thaler (1999) carries out an experiment where participants of one group had to respond whether they are likely to purchase \$50 baseball tickets knowing that they had already been to baseball that week, while the other group's condition was that they got a \$50 parking ticket that week. The group that received parking tickets was significantly more likely to spend \$50 for a baseball match because their budget for the entertainment account was further from being exceeded, although both groups' financial situation was the same.

The main dimensions of mental accounting include several aspects. The House Money effect happens when people receive unexpected profits they tend to treat them differently compared to the normal budget. Sunk Costs refer to unprofitable investments, when people think if they already put so much into something, they should stick with it until the end or make the most out of it by increasing usage. Payment decoupling describes the fact that people prefer paying in advance rather than afterwards as well as the effect of minimisation of “pain of paying” when using a credit card. (Stockinger et al. 2014.)

The important conclusions from the theory are that people’s behaviour is often irrational, and money is fungible. The irrationality of people’s behaviour is well explained by the various tendency observations, which in most cases make no logical sense. The fungibility of the money refers to the fact that money is just a set of notes and coins, or an amount on a bank account, and whatever the source or the purpose of the money, it can be exchanged for goods and services at any place and time.

#### **2.2.1.5 The IKEA-effect in making IAPs**

Norton, Mochon, and Ariely (2011) describe the IKEA-effect as overvaluing things that they have not created from scratch but using a “box of bricks”. For example, when it takes several steps to assemble an IKEA wardrobe, people tend to give too high of an estimate to its value. The same happens with mobile applications: mobile developers offer various kinds of supplements to users via IAPs in order to make the best functionality of an app. Collecting the supplements drives the IKEA effect and increases users’ attachment to the application.

#### **2.2.2 Purchase intention drivers for apps**

This section deals with the drivers that encourage consumers to pay for mobile applications, be that Paid apps or IAPs. Literature presents different approaches to identifying consumer motives to make purchases in app stores, for example through studying people’s Core Self-Evaluations, or CSEs, which are in fact stable personality traits that contain individual evaluations about themselves (Judge et al. 1997; Wu, Chien & Liu 2017). Moreover, the Theory of planned

behaviour reveals us the patterns that connect an individual's beliefs and behaviour (Ajzen 1991), while the Expectation-Confirmation theory, where expectations, perceived performance and disconfirmations of beliefs are used to explain post-purchase satisfaction (Oliver 1980), helps understand the repurchase decisions and build comprehensive marketing strategies.

These theories helped researchers explore the determinants that influence consumers to pay for apps. For instance, with the help of CSE it was discovered that people with strong positive emotions are expected to trust and buy applications (Lount & Phillips 2007; Lount 2010) and the feedback is taken seriously while making an app purchase decision (Wu et al. 2017). Wu et al. (2017) also found that positive emotions positively affected the level of trust, while consumers showing high level of trust in apps proved to have strong purchase intention (Wu, Kang & Yang 2015), too. Therefore, they suggest that in order to make consumers have positive emotions, marketers are encouraged to occasionally come up with surprises or gifts for the users, such as discounts or coupons (Hsu & Lin 2014; Wu et al. 2016), or the developers and marketers may even invite the users into co-production by offering them to participate in designing a new product or service. Such actions would increase the utility of the app, which is claimed to have higher ranking than the developer reputation in motivating consumers to pay for applications (Xu, Erman, Gerber, Mao, Pang & Venkataraman 2011). Additionally, the factors related to the product itself, for example functionality, could influence purchase decisions too, as consumer expectations about the app might make them consider if the particular application is able to meet their needs (Kim, Kankanhalli & Lee 2016). The researchers also suggest that, besides the utility, a well-tailored marketing plan would help increase visibility in the app distribution platforms and social networks, which in turn allows to hold high positions in the search engine suggestions and draw more purchases (Xu et al. 2011).

Kim et al. (2016) used the Theory of planned behaviour to discover that the decision factors related to the consumers, such as attitudes towards purchasing, could be of great importance, and if that attitude is good or has improved after the purchase, the consumers may come back to purchase again (Yeh & Li 2014), while other papers suggest that satisfaction with the purchase does not

automatically lead to a further repurchase (Yi & La 2004, Hsu & Lin 2014). Satisfaction has been proved to influence other factors instead; therefore, the user may have a better motivation or a desire to spend more when back to an App store next time (Anderson & Srinivasan 2003).

Kim et al. (2016) suggest the five most important factors to consider when developing and marketing an application:

- monetary value of app
- app enjoyment
- app usefulness
- word of mouth (WOM) about app
- app trialability.

Kim et al. (2016), in accordance with many other authors' opinions (Chang & Tseng 2013; Hsu & Lin 2014; Wu et al. 2015) explain the factors influencing the purchase decision drivers. The Monetary value of app, as perceived by consumers, is the trade-off between the app's utility and the cost. The app's price should be mirroring the utility perceived from the application; therefore, the monetary value of the application can be enhanced by increasing the utility or decreasing the price. The utility can be increased by improvements in the app's Usefulness and Enjoyment. The study also suggests that Word of mouth influences the consumers' perception about the Monetary value of the app and therefore makes an impact on their purchase decision. It is hereby suggested that marketers should make extensive use of social network and app store promotions, as well as blog posts, to leverage the utility against the price. Another driver for purchase decision is App trialability. A free trial, offered on a timely or feature basis, can serve as a promotional tool for marketers to increase downloads. However, the researchers suggest that increasing the Monetary value of the app is more important than promoting purchases. The findings of the study also show that App enjoyment makes greater impact on consumers than App usefulness, which should as well be considered in the trial versions in order to enhance the Monetary value and drive purchase decisions. (Kim et al. 2016.)

The study by Hsu and Lin (2014) also claims that the monetary value, or they call it value-for-money, has proved to be very significant and the only factor motivating purchase intention. In other words, their research showed that consumers are only willing to pay for an app if they think that the value offered is worth the costs. Additionally, good application ratings also proved to positively affect the purchase decisions, while the availability of free alternatives had a negative impact, meaning that free substitutes might threaten the sales of paid apps, if the functionalities are comparable. The authors suggest that in order to enhance the perceived value-for-money and customer satisfaction, marketers should communicate clearly the intrinsic benefits of the app, or in other words emphasise the emotional aspect the application is going to provide to the user, such as fun, joy, entertainment, etc. Their research related to potential users indicates that social value influences the desire to make purchases. Social factors such as personal identification or group reference positively affect consumers to make IAPs or pay for applications. Potential users have also been proved to pay great attention to application ratings. Therefore, marketers are advised to encourage users to rate their app high on the distribution platforms, while bad ratings and reviews should be addressed with due seriousness. (Hsu & Lin 2014.)

## **2.3 App monetisation methods**

### **2.3.1 Justification for app monetisation**

An easy way to understand the scale and importance of the app market better is by making use of the infographics released by GO-Globe (2015). According to the statistics, 52% of the time spent on digital media is in mobile apps, while smartphone users spent 89% of their mobile media time there.

Statistics have also predicted that the application market revenues will rise significantly from 69.7 billion U.S. Dollars in 2015 to 188.9 billion U.S. Dollars by the year 2020 via IAPs and application stores. The latest findings reveal that there were around 2.2 million apps available on the Apple App Store in January 2017 and 3.5 million apps on the Google Play store in December 2017, and the numbers keep increasing. (Statista 2018a,b,c.)



It is not a secret anymore that in today's world mobile applications are no longer just handy additions to businesses, but they increasingly often serve as primary or secondary sources of revenue. With the proliferation of application market a great number of companies created mobile applications to make it more convenient for users to access information and do ordinary online activities that had previously been done on the Internet. At the same time, a new type of business has occurred: app enterprises. That type of business is represented by the companies that use mobile applications as a primary source of income, meaning that they get revenues from running the applications. In both cases, there is a need to make the applications yield profits. This has brought about a concept of an Application business model, or ABM. An ABM in this respect means how the customers are able to gain value from using an application and how the developer is able to gain value from the customer in return.

There is a variety of business models designed to balance the app developers' profit goals with the users' expectations. Pauwels and Weiss (2008) argue that, ultimately, it is the number of users that determines the monetary success of the choice of a particular business model. The factors that help increase the amount of users include:

- consumer characteristics
- competitive characteristics
- company characteristics.

Consumer characteristics may include attitudes towards paying for apps, price sensitivity, and expectations from an application. Competitive characteristics may include the size and strength of the competition on the market, product similarity and repeatability, pricing models. Company characteristics may include marketing and strategy decision-making, content of the product or service. (Pauwels & Weiss 2008.)

### **2.3.2 Application Business Models**

Having considered the factors to target customers, it is also necessary to think carefully about choosing the right monetisation model to build it seamlessly into the marketplace. There is a great variety of business models a developer can

choose from. The Box UK (2009) portal has come up with an excellent classification of those based on the revenue flow type:

## 1. Immediate revenue (Generate regular cash-flow)

### 1.1. Subscription

The user pays a fee on a regular basis in order to continue using the service. This generates recurring revenue for the developer. This model is characterised by a minimum contract length and it might include such additional promotions as “Pay for X period of time and get Y time free”, Trial period, Discount period, Remove advertisements, Premium content, Advanced features, Support subscription.

#### 1.1.1. Fixed

Includes only one fixed subscription cost paid to unlock all the app’s features.

#### 1.1.2. Variable

Includes several types of subscriptions ranging in features or usage limitations. For example, so-called “Freemium” model that is normally a free limited version of an app that allows upgrading it to one or another version offered.

### 1.2. Third-Party supported

The user does not pay any fee to access all the features of an application. Third-party pays a fee for a returned service.

#### 1.2.1. Advertising

Third-party places adverts into the application, which can appear in a form of banners, text, pop-ups, etc. It normally gets charged for the number of clicks, number of interactions, etc.

#### 1.2.2. Sponsorship

Third-party becomes the official sponsor of the app and places fixed adverts, branding features (colours/slogans) or licensing agreements.

#### 1.2.3. Paid content

A third-party pays to include marketing-led content in the app.

#### 1.2.4. Paid placement

Third-party pays to be included in the app.

#### 1.2.5. Referrer

Third-party pays a fee for the referred transactions when users are directed to the third-party app/web site.

### 1.3. Payments (the user makes individual purchases)

#### 1.3.1. Pay-per-use

Micropayments: the user pays a fee to use a service once or for a limited time, for example Ebay (pay per transaction) or “credit” purchase to use a service X times for a fixed cost. Offer discounts for bulk purchases.

#### 1.3.2. Physical products

User pays commission on the physical products bought with the app.

#### 1.3.3. Virtual products

The user pays for a digital product, such as in-game items, virtual gifts, etc.

#### 1.3.4. Related products

The user does not pay for the main product or service but is offered additional charges for value-added ones.

#### 1.3.5. Donations

The revenue is generated by voluntary donations.

## 2. Long-term revenue (Strategic models aimed at a longer-term pay-off)

### 2.1. Establish and exploit (Attract substantial audience before monetising)

#### 2.1.1. Platform

Create a platform, and then charge third-parties to participate.

#### 2.1.2. Branding

Create a ‘personal brand’, and then go on conference/workshop, etc.

### 2.2. Sell/Exit

Create a popular application, then sell it or make someone else monetise it for you (example: YouTube).

### **2.3.3 Monetization methods today**

In order to narrow down and generalize the options for the business model to a certain extent, modern literature tends to discuss app monetization in terms of

two broadly defined revenue gaining strategies: Charging users and Advertising. The most popular models that exist within these two strategies are: Free Model, Freemium Model, Subscription model, Paid Model and Paymium Model. In their paper, Roma and Ragaglia (2016) discuss that it is of utmost importance for the developer to choose the suitable ABM today because that is one of the main determinants of the financial success. It also matters greatly which type of application is to be monetized and on which distribution platform, as these factors may significantly affect the decision (Roma & Ragaglia 2016).

In the next sub-chapters popular monetisation models are going to be discussed. This discussion is partly based on the articles from the Apple Developer and Google Developer web pages, since the content they provide is first-hand, insightful and up to date. Moreover, most of that content nowadays already became common knowledge as well as it is applicable to various app stores besides Apple and Google Play. Whenever the scientific literature does not correlate with the articles from Apple Developer and Google Developer, the necessary references will be made. The aim for these following sub-chapters is to include the descriptions of monetisation models as of the state they are present today.

### **2.3.3.1 Free model**

In this model, users do not pay for using the application, they use it completely for free. Without doubt, consumers usually prefer getting services and products free of charge (Pauwels & Weiss 2008). The free model allows targeting greater numbers of potential users by lacking the barrier such as price. Besides, it also involves fewer trade-offs and the psychological costs are not as high (Pauwels & Weiss 2008). Consequently, the user base can grow bigger and faster, increasing the awareness of the app. As a rule, developers monetise on this models by allowing third-party companies to place adverts in the app. Therefore, the Free model applications create two sub-markets: one for the users and the other one for the advertisers (Roma & Ragaglia 2016). In order to generate remarkable revenues, the application should have a large and active enough user base to make an app desirable for the adverts providers or market information seekers (Roma & Ragaglia 2016), as cash-flow is usually generated by

the number of clicks on the advert, interactions, impressions or conversions. It is important that the advertisement content is related to the target market or at least is appropriate for the viewing audience, otherwise it might affect the engagement and reputation. The ads displayed in the apps target users based on their location, nationality, communication, interests, searches, etc.

Many authors have agreed on the idea that digital content should be offered to consumers free of charge because it can be produced at minimal marginal costs and the revenues can be gained by advertising (Anderson 2009). At the same time, some sources (Pauwels & Weiss 2008) claim there is a trend towards moving to fee-based models. The reasons for that could be:

- Large number of users required to create interest for advert providers or information seekers (Canzer 2006; Laudon & Traver 2007).
- Strong competition from search engine advertising (Pauwels & Weiss 2008).
- The decreasing effectiveness of Internet advertising (Clemons 2009; Zott, Amit & Massa 2011).

### **2.3.3.2 Freemium model**

Freemium (comprises the words Free and Premium) model is one of the most popular ABMs of today as apparent from the app stores. It is well described on the online source Apple Developer with the inclusion of interviews with JP Chookaszian, former Director of Revenue at VSCO; Joe Ghazal, CTO at Originator; Josh Yguado, President and COO at SGN and Rex Ishibashi, CEO at Originator. The following passages highly rely on the information described in the source above as well as other articles (Roma & Ragaglia 2016; Tang 2016).

In a Freemium model users do not pay if they want to download and try the app, however the payments come about when it comes to utilizing some premium features the app offers. This content is usually optional and come in the form of various in-app purchases, which can be divided into three groups: Premium upgrades, Subscriptions and Consumable goods.

Premium upgrades refer to any non-consumable features or services within the app. Once purchased, they do not need renewal and stay with the owner until the end. An example can be some photo filters in an image-editing app or the removal of advertisements popping up in the free version.

Subscriptions can be offered within the application as a renewable in-app purchase. They may contain a set of additional features and services, such as clouds and regularly updated content like news. The users in a subscription model are charged on a periodical basis.

Consumable goods relate to such items that users can purchase within the app and in return advance their performance. Such items tend to run out and can be repurchased again on a voluntary basis. For instance, those can be lives or superpowers in a gaming app.

It is common to come across two versions of the app in this ABM: Lite and Pro, the first being the free one and the second being the paid one, which is naturally recommended and can be purchased within the Lite version. The Freemium business model is distinguished by lowering the price barrier for the consumers allowing them to be able to try or use the app first and appreciate its value. If the user decides to get more engaged with the app and try other features, then they will be going to pay. Yguado says that in SGN they wish that all users got great experience from the app, even the ones that choose not to spend. However, free versions are often regarded as a way to advocate product trialability, where the customer only gets to test the basic features of the app and consider if the value given is worth paying for, before the decision to purchase is made (Roma & Ragaglia 2016).

In order to monetise continuously and well, developers are under constant pressure to improve the applications and monitor that the content is up to date, that way they maintain the value they offer keep the consumers' engagement high. To do that, it is common to have analytical systems built in, so that the developers could trace which parts of the app are used most of all and what parts seem more engaging. Analytical tools help the developers keep under observation various important KPIs, such as retention rate or time spent using the ap-

plication, etc. and analyse which tools are useful and which need development. Some practitioners (such as JP Chookaszian, former Director of revenue at VSCO) also believe that it is vital to connect the analytical data with the user feedback to create a comprehensive picture of what the users truly like and want.

Not only constant improvements of the app, but also heavy user acquisition marketing campaigns help developers enlarge their user base. Even though the likelihood of downloads is highest with the Free model, marketing serves the Freemium model developers to help consumers overcome the price barrier. Some brands find it very rewarding to be associated with, such as when users make “mentions”, or put hash tags on the Internet, or make word of mouth referrals. Additionally, some developers appreciate paid user acquisition marketing when using a subscription model, that way they can study consumer behaviour and do the necessary adjustments before they start marketing their product to other users. Moreover, potential subscribers may associate the paid content with better quality, as the research shows (Zeithaml 1988).

### **2.3.3.3 Subscription model**

Subscription model could be a derivative of the Freemium model as it can be implemented through IAP. However, it is discussed in a separate section due to the many peculiarities and unique techniques, which appear to be explained in detail on the Apple Developer pages, too. In a subscription model, the user pays on a periodical basis in order to use an application. The payments, or subscription renewals, typically happen monthly or yearly until the user chooses to terminate the subscription. Pauwels and Weiss (2007) argue that subscriptions have become one of the biggest revenue drivers on the mobile application market, or at least it is undoubtedly a growing trend (Gohil & Dalvadi 2015).

The Subscription ABM may include multiple subscriptions within one app. There could be a different set of features offered to a consumer depending on their preferences, consequently, following different pricing schemes. One subscription can also include several different apps of a portfolio on condition they are from the same developer and support the same type of IAP, so that users are

able to subscribe using any application from the group. This way the users will be able to manage their subscription plan according to their needs: downgrading, upgrading, crossgrading or choosing a suitable package whenever they like. Gohil and Dalvadi (2015) mention that the subscription model is more suitable for the content rather than feature providers, so that the subscribers watch a certain portion of the content for free and then pay in order to access it in full.

Dealing with a paid model, it is important to take the first subscription step carefully to appeal to new users. Therefore, developers use various introductory pricing schemes to make a seamless transaction for the new subscriber:

- Pay as you go  
New subscribers pay a price significantly lower than the normal subscription fee for a predefined period of time. This type could help targeting more price-sensitive subscribers and offer them time to decide whether the service is worth paying for.
- Pay up front  
A subscriber pays, for instance, for half a year of a yearly subscription, and the price can be additionally discounted. This type is convenient to offer the users enough time to appreciate the app before the new subscription period begins.
- Free trial  
The app is fully functional for the subscriber for a specific period of time. New subscribers can discover the application in full and decide whether they would like to continue with the paid subscription after the free trial period is over. Free trial usually works best with the well-established brands.

Subscription pricing within a single app can differ depending on the territory, especially if there is a different taxation policy or currency. The developers are also free to make changes to the pricing policy over time. However, whenever they decide to make a change, subscribers will be informed of it via the app store platform's announcements and will be offered a choice whether they would like to agree or disagree to pay a new price. Price changes may affect the number of retaining subscribers heavily. However, developers can decide to



keep their existing subscribers paying the original price and only increase it for the new subscribers, but in case the existing subscribers decide to upgrade, downgrade or crossgrade they will have to pay by the new pricing standards.

#### **2.3.3.4 Paid model**

In the Paid model users get full access to the application only having to pay its whole cost once. This model does not contain any in-app purchases neither it includes any further billing. This model is suitable for the consumers who would prefer to pay once and get full experience straight away. Due to the fact that potential users might doubt the real value of the application, the paid apps tend to be positioned as a premium segment of applications, characterised by remarkable design, functions and marketing. Because the monetisation only comes from the initial purchases, the paid model relies heavily on the marketing promotions and user acquisition. It makes it essential for the developers to present the extraordinary nature of the app by carefully designing the presentable layout features such as title, description, screenshots and previews, etc. on the app store platform and in other marketing channels. Pauwels and Weiss (2008) have discovered that carefully constructed marketing mix, thoughtfully build content offering, price structure and level, search engine referrals and email advertising positively influence the consumer decision to purchase paid content on condition the execution is done well. Researchers examined that the paid content buyers are more likely to devalue free content in comparison to the paid one (Fitzsimons & Lehmann 2004). Moreover, paid content may seem more appealing because of an assumption that the quality should be higher than in the free alternative (Zeithaml 1988).

In case the developer sells several applications, it can be possible to create app bundles to sell multiple apps together at a discounted rate. App bundles are a great way for a developer to increase sales of all apps. Typically, the applications within a bundle are similar by nature but different by functionality. In the Apple App Store for instance, a bundle can contain up to ten apps, sold together at a reduced price. Such bundles, however, are not supported at Google Play store. Some features of app bundles:

- sold at discount compared to the apps sold separately
- an app can be part of several bundles simultaneously
- bundled apps must also be sold individually.

In the Apple App Store particularly, both Paid and Freemium ABMs appeared to be creating more (but similar to each other) app revenue than the apps following the Free model (Roma & Ragaglia 2016). On the contrary, the same researchers found out that in the Google Play store there has not been seen any big difference in terms of revenue performance between the Free and Paid models. In addition, recent studies have shown that the ABMs that involve payments allow developers to get greater financial benefits from app monetisation (Lunden 2013). Payable business model has been identified to be exceptionally suitable for particular categories, such as Photo & Video, as users tend to value photo and video content sharing (Deloitte 2016).

#### **2.3.3.5 Paymium model**

Paymium model includes the characteristics of the Freemium and Paid models, however, in comparison with Freemium model, for instance, the average revenue per download (ARPD) can be much higher because of the initial price of an app (Distimo 2014). In this ABM users will have to pay to download an app, also they will have to pay additionally through IAP to get premium features, content or services. Such models are justified when they possess some progressive, unique features, such as great functionality, design, etc. that might as well be useful for professionals. Because the users are charged for both downloads and additional purchases, the developers must set clear expectations about the app's basic functionality as well as about the advanced in-app purchases. In order not to upset the consumer, such an application must be able to function even if no in-app purchases have been made. Analysts at IDC and App Annie (2014) have estimated that the revenues generated from paid downloads were 22% greater than the ones generated from in-app purchases, making up to 61% and 39% respectively. However, the applications of this type allow the developers to reduce the original price by leveraging the IAPs. The most popular types of applications in this ABM include navigators, maps and dictionaries. Apple App Store offers app bundling for Paymium apps, too.

### **2.3.4 Application platforms**

Before the emergence of the app stores how we know them today, applications for mobile devices had been distributed by the mobile network operators. Those platforms were not structured well and were generally immature, therefore did not appeal to many developers and were not booming with countless apps. However, this situation changed in 2008 with the appearance of such a breakthrough platform as Apple App Store. It was the best application store of the kind. An application store is an online distribution platform from where users can download mobile applications. These applications are normally developed by software producers or individual developers. Therefore, app stores play a role of a two-dimensional market: for final consumers and developers. The benefits that come from the developers are certainly partial revenues from every transaction happening on the application store but also the increased value of the app store owner's products, such as operating systems (OS) or mobile devices where those apps can be installed. The developers' benefit is that they are able to reach greater number of users via a popular application store. Consumers benefit from using app stores as they have a great variety of apps to choose from. (Roma & Ragaglia 2016).

There is a number of application stores available to consumers, however, almost 90% of the market has been retained by the two dominating stores: Google Play store and Apple App Store (Roma & Ragaglia 2016). The Google Play store offers applications suitable for the Android operated devices while Apple App Store serves the Apple mobile devices. The third biggest application platform is Windows Marketplace, which offers software for Windows operated devices. However, this paper will provide details only regarding the two major app stores due to them being the most evidential.

#### **2.3.4.1 Google Play store**

Google Play is the world's largest app store (Statista 2018c), operating since 2008. As mentioned before, applications for Android OS based phones are offered on this platform. Android is an open-source operating system for mobile devices and tablets. Originally, Google Play operated under the name of Android Market until the merger with Google Music and Google eBookstore in

2012. As of today, it offers apps, music, books, movies and digital newspapers under one brand. Although this store does not win the Apple App Store in revenue, it makes 60% more app downloads, as Wallenstein (2015) says.

Google Play store generates revenues in a variety of ways: for example, a developer must pay an entry fee of \$25 if they want to place their app on this platform (Gohil & Dalvadi 2015). In addition, Google uses a 70:30 revenue sharing scheme, which means that 70% of the revenue after each transaction made on the platform goes to the developer of an app, while 30% goes to the app store (Gohil & Dalvadi 2015; Roma & Ragaglia 2016). However, with the adoption of the subscription model on the platform, Google has changed the ratio to 85:15 to benefit the subscription app developers (Liftoff 2017).

In terms of revenues made on Google Play platform, the study conducted by Roma and Ragaglia (2016) reveals that the developers enjoy greater benefits if they are using the Free or Paid monetisation models, while the Freemium model did not prove as effective, even said to have a negative effect. The same authors also imply that the customers of the Google store are on average less valuable than those of the Apple store, supporting their implication by the fact that Android devices are more often purchased by the low-end segment of the market and the revenues generated by Google Play are lower than those of Apple, though the number of downloads is greater. Another conclusion of that study reveals that the segment of consumers that is willing to pay for apps is not well developed in Google Play in comparison with App Store. They also advise the developers to avoid using the Freemium model, as it appears to be the least profitable on this platform.

#### **2.3.4.2 Apple App Store**

Apple App Store is one of the largest and the most successful in terms of revenue app store, earning 29 billion U.S. dollars from selling their apps in 2016 (Statista 2018b), or 34 billion by other estimations (App Annie 2017). It started operations in July 2008 by offering the iOS device, namely iPhone, iPad, iPod Touch or iWatch, users a marketplace where they can download apps. The establishment of this store changed the app market completely by providing a uni-

fied, solid marketplace serving as a new example for mobile commerce (Roma & Ragaglia 2016). It was also the first application store to feature in-app purchases and content subscriptions (Jansen & Bloemendal 2013). As of the latest estimations, the statistical web site Statista (2018a) reported 2.2 million mobile applications available on the App Store in January 2017. This number makes the App Store number two on the mobile application market after Google Play in terms of the number of apps, however, it is performing far better than the “opponent” in terms of revenue, as Figure 1 shows.

iOS To Remain The Single Largest Store in Revenue, But All Android Stores Combined Forecast to Surpass iOS in 2017

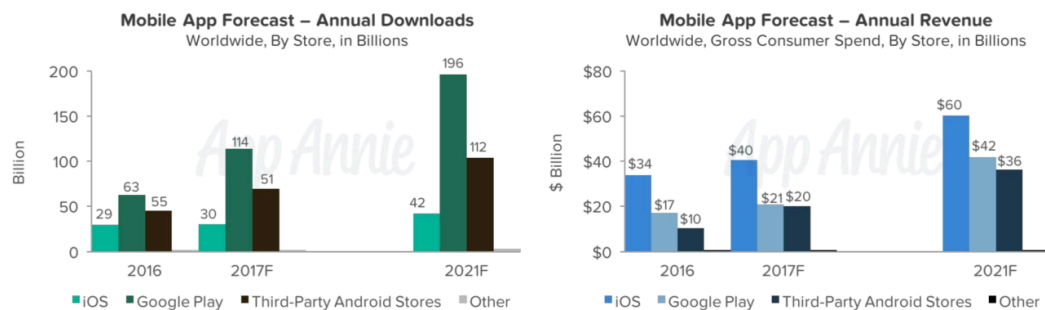


Figure 1. Mobile App Forecast (App Annie 2017).

To enter Apple App Store as a developer, one has to pay an annual fee of 100 U.S. dollars (Gohil & Dalvadi 2015). Apple App Store was the first to introduce the revenue sharing division model 70:30 (70% to the developer, 30% to the app store), which is now adopted by most of the major application distribution platforms (Gohil & Dalvadi 2015; Roma & Ragaglia 2016). However, the most recent changes introduced by Apple dictate that the subscription based app developers will receive 85% of the revenue after the first year of a subscriber’s payments (Liftoff 2017).

The insights provided in the study by Roma and Ragaglia (2016) reveal that the revenues of the App Store have been positively influenced by the developers adopting IAPs in their applications, which means that it is beneficial to make use of the Freemium model while selling apps on the Apple’s platform. Moreover, as many authors agree, Apple targets the high end users (Halaburda, Gans & Burbank 2011; Ghose & Han 2014), who are more willing to pay for apps

(Roma & Ragaglia 2016). The researchers also found out that the Free model tends to be the least efficient in terms of revenue in that store, while the Paid and Freemium models are more revenue-effective. Therefore, it is clear that the strategies the developers must consider are very different between the two major app distribution platforms, the main point of difference being the type of users that access these stores.

## **2.4 Subscription business model**

### **2.4.1 Running a subscription business**

This paper has already discussed the subscription business model within the context of different monetisation methods for mobile application developers. However, mobile app subscription is a relatively new concept, which has grown from other subscription businesses' popularity and development. Subscriptions in general have become a big trend in the past few years. Many businesses and start-ups try to offer different types of subscriptions because they understand the benefits of recurring revenues and the consumers change their taste on how they would like to purchase and use products and services (Zuora 2014a). Subscription constitutes a more effective business model as continuous consumer relationships with periodical revenues lay in its foundation, if the business delivers value over time (Zuora 2014a).

The market leader in subscription commerce and billing, Zuora, calls this situation the Subscription Economy. The Economist Intelligence Unit have conducted a survey among around 300 senior business leaders from the USA, the UK and Australia, which revealed that 40% of the respondents declared their shifting to the subscription business model. Further, Zuora claims the shift to subscriptions has appeared in almost every industry, be that entertainment, healthcare, media, software, etc. Their report suggests that in order to succeed with the subscription business model, companies should embrace four core business values:

- Initiate stronger customer relationships instead of concentrating on single transactions.
- Create dynamic prices based on value instead of fixed ones.

- Offer efficient, consumption-oriented service instead of single unit shipments.
- Operate with measurable and predictable revenue instead of making use of financial statements.

Their Content Team have also collected their experience and practice with other firms to create “9 keys to building a successful subscription business”. (Zuora 2014b.)

**Price.** There is a variety of different subscription pricing models. It is suggested to start with the basic ones and develop learning from the customers over time. It is vital to dynamically adjust the prices and features to attract and retain customers while increasing the value of your relationships.

**Acquire.** Acquiring a large number of subscribers is not easy and neither is solving the user flow issue. Subscribing should be made easy and fast, across all channels: online, mobile, or via an assisted sale.

**Bill.** Subscription business involves regular and a great amount of payments and invoices. Therefore, in order to ensure smooth operations and customer retention, a comprehensive and scalable billing system should be implemented to establish accurate and transparent cash flow.

**Collect.** Automation is what a subscription business requires to optimize payment collection. An automated system should collect payments quickly and efficiently, locally and overseas, to maximize cash flow.

**Nurture.** Customer relationship management lies in the centre of any subscription model. It is crucial to add new subscribers, but the majority of transactions consist of various renewals, up- and downgrades, add-ons, terminations, etc.

**Account.** Subscription business typically involves a great number of customer transactions, which result in a very complex effect on bookings, billings and cash flow. A comprehensive financials handling scheme should be implemented to deal with transactions.

**Measure.** Subscription businesses are continuously developing and adjusting. Along with the changes, it is critical to analyse multiple KPIs to understand the customer value and financial condition of the business. Some of the vital metrics are: Annual Recurring Revenue (ARR), retention rate, recurring profit margin, and growth efficiency index.

**Iterate.** There are plenty of pricing models for subscription businesses. Whichever option a company goes with, it is vital to adjust and adapt pricing fast and in dynamically reacting to the changes on the market and to customers' habits. However, respect the existing customers and raise prices only for the new ones.

**Scale.** As subscription business model is adopted, businesses grow bigger. It is essential to run on a reliable and scalable system that will be supporting growth limitlessly, at any time. This infrastructure should integrate commerce systems, payment gateways, and other technology systems.

#### **2.4.2 Creating an “automatic customer”**

In the book “The automatic customer” John Warrillow (2015), the founder of Value Builder System, argues that “subscribers are better than customers”. He asserts that unless you have subscribers, your sales-counter resets at zero every month, while in case you do have subscribers, then such business has a better visibility and, consequently, can be sold at a better margin. He points out that comparing two businesses with the same revenues and profits, one with subscribers, the other one without, the first company will be able to sell three to five times more. For quite a long time now, the author has been consulting companies on how to sell for a very high price and has witnessed the pluses of the subscription business model both through his customers and through his own business. The book features nine subscription business models that help focus on how to stop selling to customers but build a business with recurring sales.

**Membership website.** In order to succeed with a membership website, it is vital to identify a niche group that would be willing to pay for good quality materials. As an example, he suggests creating an online travel guide to a country with some secret places, or a guide on how to build a successful restaurant busi-



ness. Once created, it could be monetised by selling subscription with regularly updated content or even bigger items like invitations to events. (Warrillow 2015.)

**All you can eat library.** This model refers to a platform where a large collection of something, be that movies, books or articles, can be stored and updated on a timely basis. Netflix works the same way: they charge a periodical fee and users have access to limitless content. Subscription here offers a great benefit as for a smaller cost customer gets to use a lot of content, which would be much more expensive to access on a pay-per-use basis. (Warrillow 2015.)

**Other subscription models.** The “private club” model offers exclusive access to certain information or events. The “front of the line” model offers “early” access to something, which free users have to wait for. The “consumables” model offers regular replenishment of consumable products, such as socks, blades, etc. The “surprise box” model offers a subscriber a set of goods as a surprise monthly. The “simplifier” model offers to deal with the services that simplify one’s life, such as mosquito fighting or managing “to do at home” list. The “network” model offers subscription to a service for a large audience, and as the audience grow, the utility of the network increases, like in the WhatsApp messenger. The “peace of mind” model offers insurance for anything that could go wrong: from losing a pet to compromising one’s personal identity. (Warrillow 2015.)

John Warrillow (2015) stresses that it is not necessary to follow one of the above mentioned subscription models, but expand into one and gain ever-growing revenues from it. Warrillow (2015) claims the possibility of turning practically any industry’s business into a subscription-based business and provides an advice on the ways to sell subscriptions:

Purchasing a subscription is a big commitment, therefore it is advisable to give the subscriber a big return on their first investment. For example, a consumer is much less likely to subscribe for a 10% benefit than for a 10 times benefit compared to an alternative. The next advice is to appeal to the irrational side. Nowadays subscribers demand that their subscriptions should be of a better value

than the alternatives, which can be achieved by bypassing several steps between the buyer and the seller. Another advice is to give the customers an ultimatum. This means either do business on a full subscription basis, without any single purchases or orders, or not to do business at all. An alternative to the last suggestion is to give a Freemium option. In most cases, it is rather difficult to make customers buy a full subscription before they can get a taste via a free version or a sample. Another option is to offer a trial lasting for a specific period of time. This trial will help users get an understanding of a product or service that is difficult to describe unless it can be used in full. The next advice is to offer the subscription as a gift. Many gifts are used only once and then forgotten, while a subscription gives a chance to show your appreciation over time. The last advice is to create conditions for customers to buy subscription immediately, as if they could lose something unless purchase promptly. A “burning” offer could act as a great incentive. (Warrillow 2015.)

### **2.4.3 Subscription apps insights by Liftoff (2017)**

This sub-chapter is entirely based on the 2017 report issued by the “full-service mobile app marketing and retargeting platform” Liftoff. This report features user acquisition trends and benchmarks for subscription apps based on the study of over a billion ad impressions across over 14 million clicks and over 520 thousand app installs during one year. To be precise the report traces the cost and conversion rates for the occurrence of the user subscription itself. The following chapter presents a comprehensive look into the ideal price range and proper contexts for user acquisition with the further demographical breakdown as well as app category and the operation system used.

The Liftoff study revealed that on average it costs \$4.40 to acquire a new user among all categories of apps. Further, it costs \$30.51 to convince this user to register and provide useful data to enhance future retargeting. Finally, it costs \$161.38 to convert this user into a subscriber, the most costly but rewarding practice. Compared to the gaming and shopping app conversion costs represented in Figure 2, subscription apps may seem the most expensive, nevertheless it is critical to keep in mind the long-term returns of this

model.

### 2.4.3.1 Overall subscription app costs and conversion rates

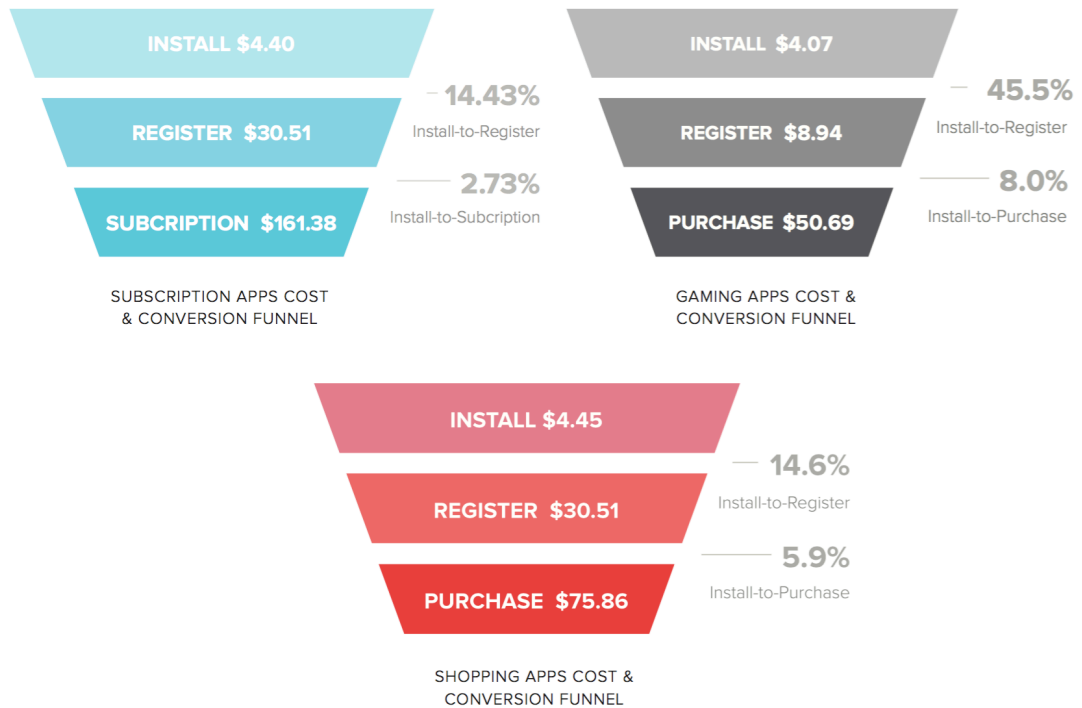


Figure 2. Cost and Conversion Funnel (Liftoff 2017).

### 2.4.3.2 Subscription app sub-categories by cost

The 2014 survey conducted by Branchfire (2014) revealed that almost half of the respondents were willing to pay a monthly fee for apps. Right now, when subscriptions have become a commonplace, subscribers are ready to pay for value and extract as much value as possible from what they paid for. This fact is explained by the Sunk Cost Fallacy (of the Mental Accounting theory), which concerns a cognitive bias that makes people continue using something because they have already spent time or resources on it. In the light of the subscription apps, people will be more likely to use the apps more extensively since they are paying for them. However, in order to achieve the desired conversion rate it is crucial to set up the right pricing. Liftoff have studied the app prices and consumer engagement among a vast range of apps of all categories and designed three price groups for the subscriptions based applications: low (\$0-\$7), medium (\$7-\$20) and high (\$20-\$50). It was found that the application falling into the medium price range had the best

conversion rate (7.16%) along with the lowest cost to acquire a subscriber (\$106.35), as shown in Figure 3. Interestingly, the low- and high-priced apps did not even stand close with their conversion rates of 1.37% and 0.73%, and subscriber cost of \$234.14 and \$307.96 accordingly.

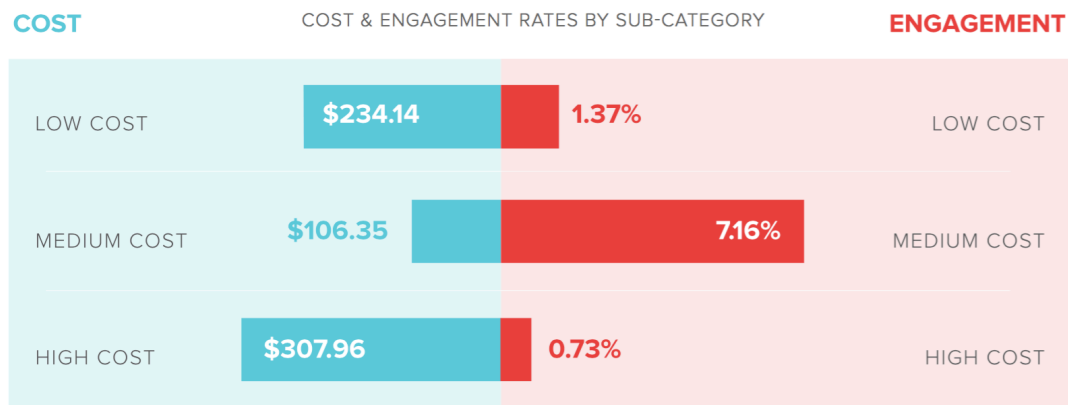


Figure 3. Cost & Engagement Rates by Sub-Category (Liftoff 2017).

Nonetheless, in the high-priced apps category, although low conversions, the rewards can be beyond imagination. The developers in this category of apps should be looking for long-term payoffs drawn by highly effective and targeted marketing campaigns. Liftoff calls the potential customers of this category “whales” as they potentially represent very serious and lasting gains.

The low conversion rate among the low-cost applications is suggested to be the fault of improper pricing, not marketing. By the Sunk Cost Fallacy, it is only natural for humans to appreciate things based on commitment and cost, therefore the cheaper apps are the least likely to be highly valued and extensively used. However, if this appears to be too much of a risk to put a higher price tag, then other channels should be used to advertise the app’s value, such as email, push notifications, etc.

Finally, the data shows that the middle price range seems to be the best choice to price a subscription application. Yet, it also means the highest competition and the variety of numerous types of apps and audiences. For that reason, Liftoff suggests to approach this pricing category carefully as well. It is advised to avoid using “average” marketing in order to reach the

targeted segments of the highly competitive subscription app niche.

### 2.4.3.3 Subscription app engagement by gender

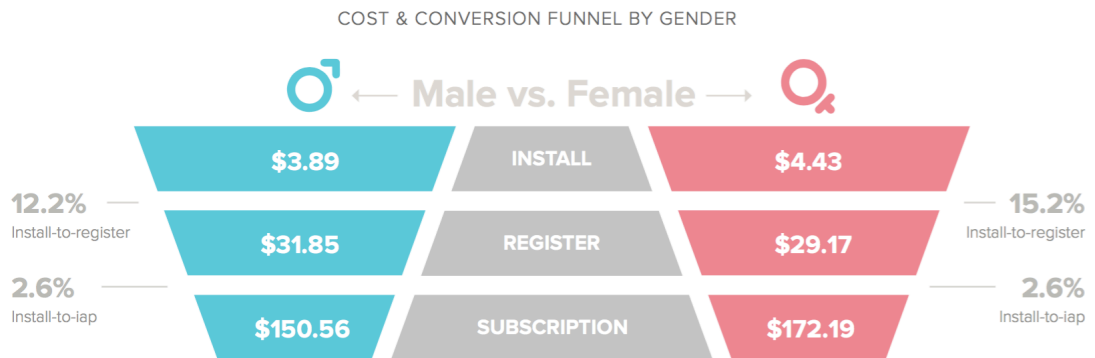


Figure 4. Cost and Conversion Funnel by Gender (Liftoff 2017).

As shown in Figure 4, the acquisition costs and engagement rates are similar across both genders, with slight differences in install-to-register ratios, which lead to the similar install-to-IAP ratios. Although female users seem to be somewhat more expensive than males to acquire, the conversion to register comes easier with females, too. Converging both male and female users is equally crucial given the results of the study.

### 2.4.3.4 Subscription app engagement by operating system

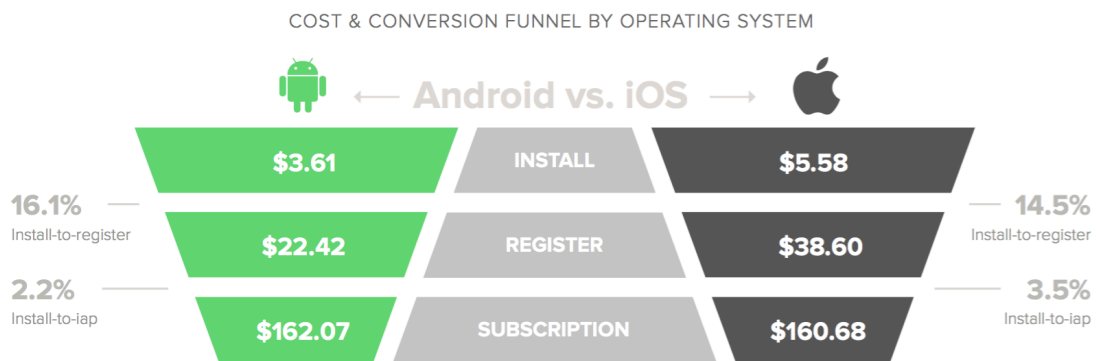


Figure 5. Cost and Conversion Funnel by Operating System (Liftoff 2017).

Figure 5 indicates that, apparently, the iOS users are significantly more expensive to acquire, however the gains from the iOS subscriber turn out to be more predictable and reliable, especially for the apps from the high price category. There is a widespread belief that the iOS users are more willing to

spend money on apps, besides, Android app generally cost less. Consequently, it is suggested to analyze the internal data to figure which OS users should be targeted.

#### **2.4.3.5 Monthly trends**

In general, the study results show that the subscription apps use and interest is rather stable. It means that marketers do not necessarily need to diversify their campaigns during the yearly holidays, but a well-targeted campaign with convincing working will suffice throughout the year. Still, January has proven to be one of the most expensive months to acquire a new user, but the app costs may increase during this time of the year, too. It is important to understand, that many receive new smartphones for the holidays, which can serve as a push to download new app on the new phone. February and March, appear to be cheaper in terms of user acquisition, while the smartphones have still not got old. Summer and start-of-school time appeared to be the least pricy in terms of UA (user acquisition), perhaps due to the availability of free time and new study season preparation.

In relation to the subscription conversion rate, a relatively steady result of just above 2% has been noticed throughout the year, while the cost to bring a new subscriber varied from \$133.56 in March to \$176.95 in January, with an average of \$156.56. Such figures would mean different things to the developers of low, medium and high price applications, thus the strategy will highly depend on the category and objectives. The results are shown in Figure 6.

#### **2.4.3.6 Install to subscription times**

*“Subscription apps win users because they offer a winning value proposition”*. This is how Liftoff sees the reason subscriptions are on top of the game. They explain that it is vital to have a good mix of appropriate advertising with the ability to communicate the value the app delivers to the customer and why it deserves the repeatable payments and loyalty. Pricing is another crucial issue, because it is supposed to generate desirable revenues while not scaring the potential subscribers away. A good blend of the above-

mentioned parameters is a good start for running a subscription application, but it also helps to know the typical conversion times to warn the marketers if they are doing it wrong.

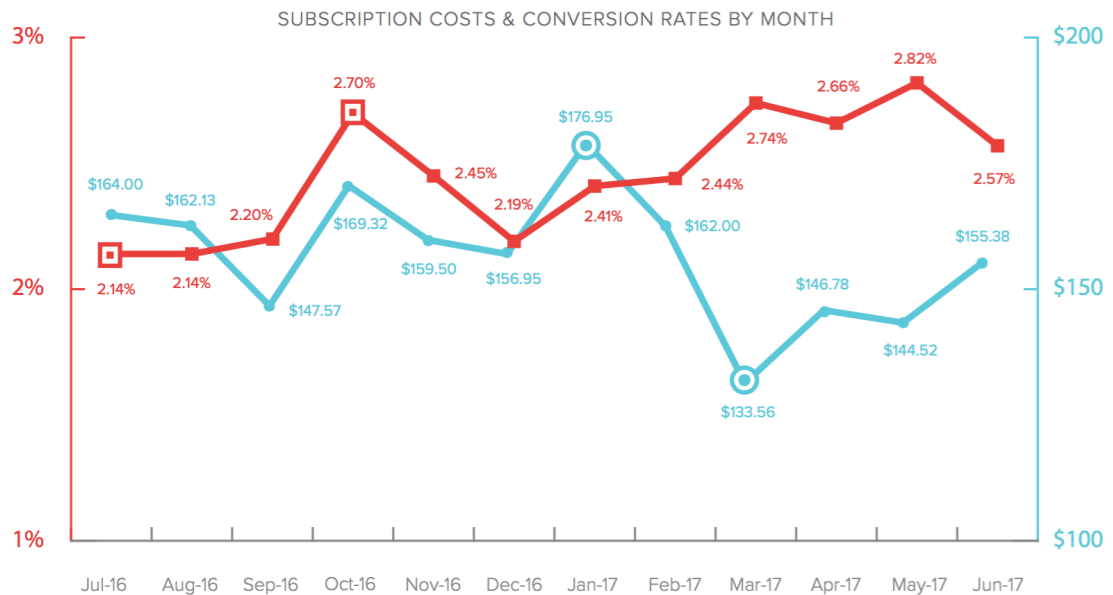


Figure 6. Subscription Costs and Conversion Rates by Month (Liftoff 2017).

On average, it took the user around three hours to decide to subscribe, but the time differed across the price categories. For example, the average subscription time was in the lowest price category amounting to around 15 minutes, while in the medium prices slot it took just 26 minutes for the users to subscribe. In contrast to the less expensive applications, the high priced ones showed the time of 22 hours to convert a new subscriber, which is not surprising provided the cost of the apps. The general advise here is to consider carefully how to communicate the value offered to the potential subscriber the best way possible via the campaigns as it may affect the subscription times or whether or not to subscribe at all. If the subscription process does not happen within the given time frames, it might be wise to reconsider and optimize campaigns to ensure they cling to the users at every step of their customer journey.

## 2.4.4 Designing for subscription success

The Apple Developer web page features a video from the Apple Worldwide Developers Conference 2017, where they discuss the best practices of subscription app design. They approach the core principles to improve the user experience:

### 2.4.4.1 Being effortless

Being effortless in the first place means that others should easily understand that you have a subscription. The subscription button should be visible and a hint to sign up should be present. For example, The New York Times persists the subscription button on every opened article page, making it always visible but not irritating. It is not advisable to enforce the subscription by popups or notifications as they tend to be dismissed. One more way to present a subscription is via a feature or function that is offered only through subscription, suggesting that the user has shown interest.

Whichever option is chosen to show people the application has a subscription, it is always imperative to have an option to sign up in the Settings menu, because intuitively this place is accessed first when looking to subscribe.

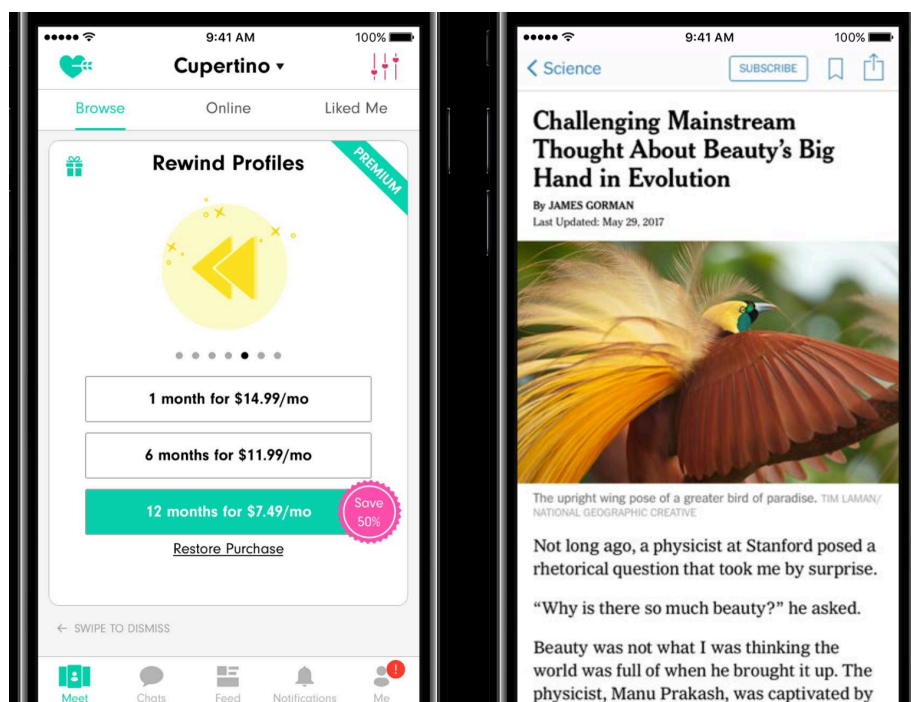


Figure 7. Subscription button example (Apple WWDC 2017).



A lot of “friction” appears from asking too much information and having excessive steps when users are trying to sign up. Figure 8 depicts the relationship between the amount of clicks required to sign up and the conversion rate in three major video streaming apps in the USA.

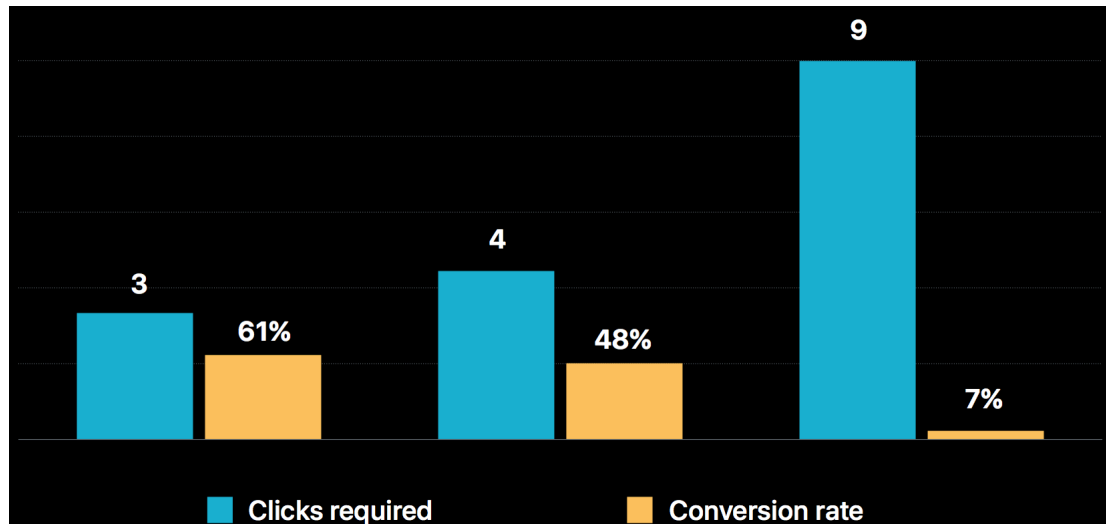


Figure 8. Clicks to Conversion ratio (Apple WWDC 2017).

It is suggested that in the subscription design it is critical to ask only for what is necessary, because the less friction there is, the more subscriptions there will be. The additional information can be asked for when the most important phase of signing up has been completed. As a result of good visibility and lack of friction, the subscription process shall be effortless.

#### 2.4.4.2 Transparency

“Transparency is the best policy”. In order to be transparent it is required to provide clear terms. It is suggested that the subscription page should be very concise and comprehensive, allowing users to understand what is offered and how to sign up in seconds. Consequently, the developers suggest that the page should include: value proposition, a strong call to action, a place to log in in case this is an existing user, or a place to restore, and the sign up options of multiple tiers with clear pricing and terms.

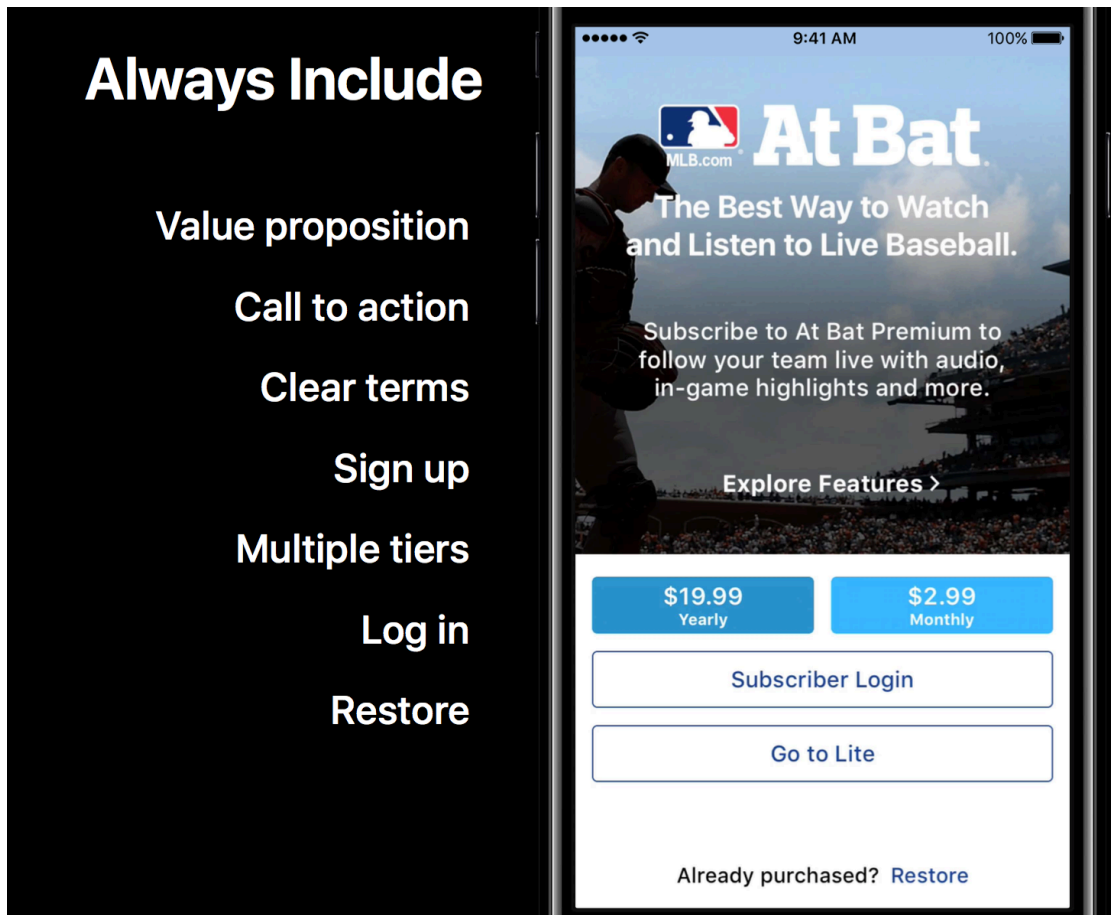


Figure 9. Sign up page example (Apple WWDC 2017).

Multiple tiers are important because it is difficult to predict for how long a user wants to sign up, therefore offering three or four different options will help understand what appeals more to the audience. Moreover, it is vital to keep this page simple as most subscriptions happen on the phone.

#### 2.4.4.3 Engagement

The developers believe that an application must be engaging from the beginning, before people even subscribe. Letting them experience the app before they decide to make a subscription is the best way to engage the consumer. The reason to it being the way we decide to make purchases today: trying on clothes, test-drive cars, visiting a house before buying it. All these things people can do to help understand whether they want to purchase or not and the same applies to mobile apps. One of the ways to offer experience is to make a free trial. The trial version will allow people to try the app in full for a limited time. Trials are usually highly beneficial for well-known brands, when people already

have an understanding of what is included in the subscription. Another way to provide experience is to offer most features free of charge except for the premium feature, which can be offered as a subscription. For instance, the graphical part of the premium feature can be blurred, that is where the users can go to subscribe already having an idea about the contents they will get access to. The third way to engage through experience is to provide sample content. The New York Times offers their users to read ten articles per month without having to subscribe. This way, users can decide what stories they are most interested in and better understand what they miss out not purchasing the subscription. The goal is to allow people to experience and become familiar with the contents of the app.

These three steps (being effortless, transparency and engagement) are keys to designing for subscription success. Make your app an effortless experience by stressing visibility and reducing friction, introducing transparent terms and pricing, and engaging through experience. These steps will make signing up a painless experience.

### **3 Data analysis and results**

#### **3.1 Data analysis methods**

This chapter discusses the methods used to analyse the data collected during the empirical study. The qualitative data were analysed by means of simple narrative analysis, which involves reformulation of the participants' responses. In order to conduct the narrative analysis, the author had to revise the primary qualitative data. (Research Methodology 2017.) This was done by putting all the responses in writing together, grouped by question, and making a synopsis of the opinions. Each question received six responses, which are summarised in the following chapter.

The quantitative data were analysed using Microsoft Excel. Microsoft Excel was used because it is free of charge and is easily synchronized with Google Forms, from where the primary quantitative data were collected. The necessary representative numbers and proportions were obtained by applying filters to different

columns with data, whereby creating conditions for certain patterns to be observed. The proportions were calculated from the total number of responses or from the filtered number of responses.

### **3.2 Qualitative data analysis**

The purpose for collecting the qualitative data from the case company's managers is to understand their view about what the company is producing and for whom. The interview consisted of six questions with a few sub-questions in each. The respondents have been asked to give as much details as possible. Below is the overview of the results of the interviews.

The first question concerned the users of Company X software, particularly who they are and what they are interested in. The respondents share the same view that the users are students or young people whose field of study, occupation or interests have to do with graphic design, animation, art, entertainment, creativity and tech products. Some of them are professional designers or artists, the rest is also somewhat involved into digital creativity. Most of the interviewees agree that these people belong to middle wealth class. It has been mentioned that students often only afford a free version, while business people do not mind to pay.

The second question went deeper to understand the purpose why the customers would use Company X tools. Most respondents claim that their applications are mostly used for professional purposes and that is what they intend it to be. The user feedback suggests that the customers would like to receive tips on how to use the apps in life or at work. They help boost productivity and streamline the workflow, all at hand and in cloud. However, some users would use the tools in recreational purposes.

The next question was related to the company's marketing operations. The answers suggest that the main differentiation point is the operation system and devices used. The information and content is adjusted for different devices to fit the user interface best. The compatibility with all the devices' latest models must be maintained. The cultural differences also play a role: besides translating the software into different languages, the company has interns to do cultural

researches and deliver localised content. The marketing resources are arranged based on the revenue performance by country or OS. Company X also takes part in promotional campaigns organised by Apple, Google and Microsoft.

Question number four focused on the reasons to pay for the software and its value. The company sees the biggest value of their applications in providing a user-friendly interface, a complete multipurpose toolkit and convenience, all for affordable price. It was suggested that the current users are satisfied with the functionality and price and they do not feel the need to look for something else, especially when the time is precious. Especially the trial period helps to get acquainted with the software and make a purchase decision.

The fifth question concerned the customers' reaction to changes and feedback. The main transition point was from Paid to Subscription business model. The respondents said there were complaints about this and some preferred to buy off the product at once instead of automatic payments. That is when adjustments were made and the model was explained to the customers. Now the users are accepting the new ABM and the revenues are growing. The company would also offer its users to participate in various events and win prizes.

The last question is related to the main emphasis of the company and customer engagement. Most of the interviewees mentioned that they put a lot of attention to interacting with the users and making more than just applications for them. Besides producing software, the company analyses all feedback, user experience scenarios, has offline meetings with customers, creates blog posts, videos, tips and does much to tailor the products and services in the way to suit the users' needs. Discounts and campaigns are part of customer engagement as well.

### **3.3 Quantitative data analysis**

The quantitative data were collected via a web-survey in which 204 individuals took part. The aim was to observe the behaviour of the people interested in creating digital content, such as the attitude to paid and subscription apps, why they use them and what they value about them, etc. The survey mainly suggested multiple-choice questions for the ease of analysis.

Are you interested in some sort of digital content creation on your phone or tablet (drawing, editing photos, videos, documents, making creative notes with graphics, etc.)?

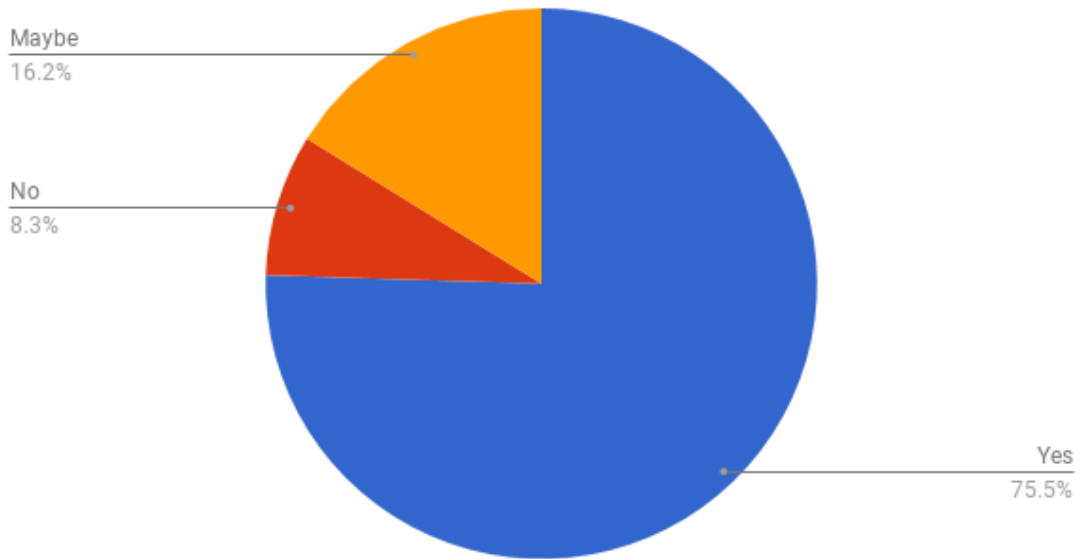


Figure 10. Interest in digital content creation graph.

The results of the survey indicated that the great majority (91.7%) of participants were interested in digital content creation to some degree. Demographically speaking, mostly (69.1%) young people from 18 to 25 participated in the survey, followed by the next age group up to 32 year old (17.2%). Geographically, the researcher managed to reach people from all continents with the major groups coming from Europe (36.8%), Russia (24.5%), Asia (20.1%) and North America (15.2%). The biggest part of the respondents were not currently occupied (64.2%), and 24% of the participants were occupied at operational level, 10.3% were managers and just 3% were high ranking managers. 58.8% of the respondents replied “Yes” or “Maybe” when asked if their occupation had something to do with digital content creation. Most people in the survey used iPhone (56.8%) and Android (31.7%) smartphones to create digital content, largely supported by laptop and desktop computers. The unprecedented software leader appeared to be Adobe software (68 of 109 responses) with some other applications appearing repeatedly. The most frequent reasons to create digital content were “Just for fun” (68.7%) and “To share with others” (59.2%), about 31% of the respondents confirmed that they do it for professional purposes. The answers to whether the participants use paid applications indicate that

mostly (42.9%) free apps are used, then come paid apps (24.4%), both paid and subscription apps (23.3%) and subscription apps (7.2%)

### Do you use any paid apps for digital content creation?

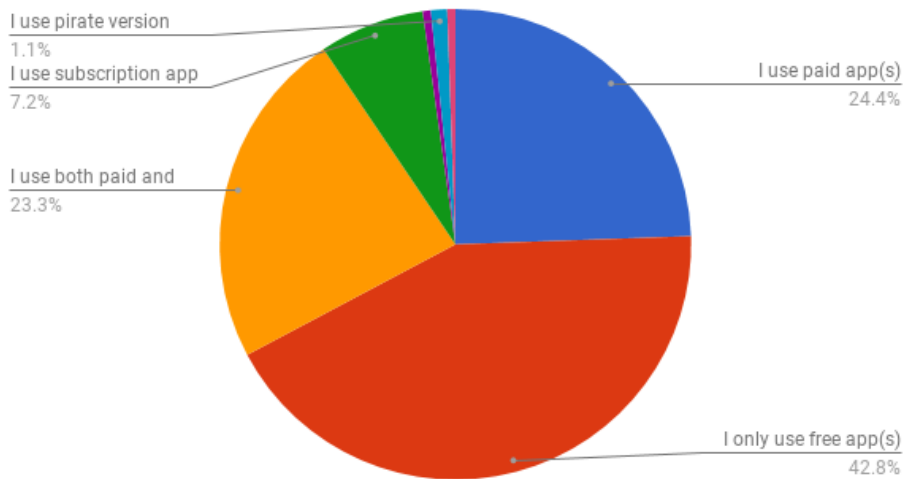


Figure 11. Paid apps usage graph.

The major reasons the participants decided to pay for the apps were: functionality (53%), user-friendliness (28.3%), trusted developer (17.5%), followed by interface (13.9%) and entertainment (10.8%). 65.7% of the respondents claimed that functionality was what they valued in the applications most of all, and the second-popular value was user-friendliness (19.5%).

### What do you value most about these apps?

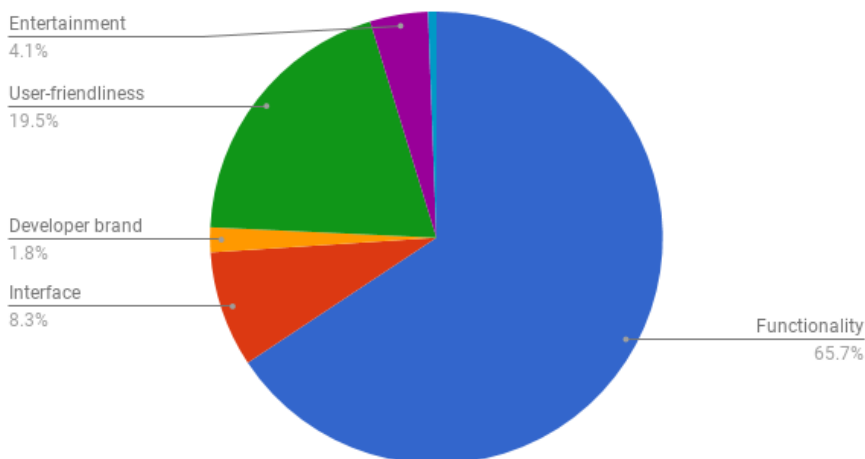


Figure 12. The most valuable characteristics of apps graph.

The ratings and reviews about the apps tend mean a lot to most (64%) users, while 25% of them expressed neutral position and the rest did not give it much value.



Figure 13. Importance of ratings and reviews graph.

Although many people claimed to care about the ratings and reviews, few of them (about 16%) actually ever got in contact with the developers via reviews or directly. The question about the respondents' perception about subscription apps indicates that 40% of the participants understand the benefits of subscription business model, but still do not like it. Almost every fourth person said they did not understand why they would have to pay periodically at all, while almost the same number of the respondents said they generally did not mind subscriptions. About 10% of the answers are from those who think that the subscription model is great. However, if it still had to do with subscription apps, the participants majorly (51.9% of the answers) express the same opinion that functionality of the digital content creation app would be the most important reason to subscribe, when about 20% of the answers relate to the fair price, with interface/user-friendliness, developers engagement with users and entertainment following with smaller percentages.



### How do you feel about subscription apps?

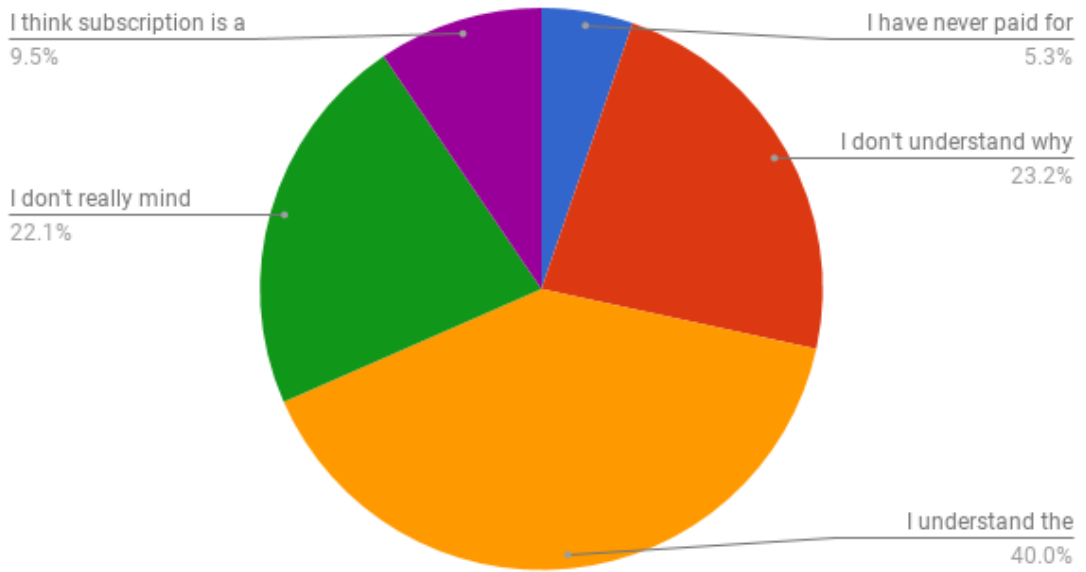


Figure 14. Perception about subscriptions apps graph.

### What could make you use a subscription app for digital content creation? (choose the most important)

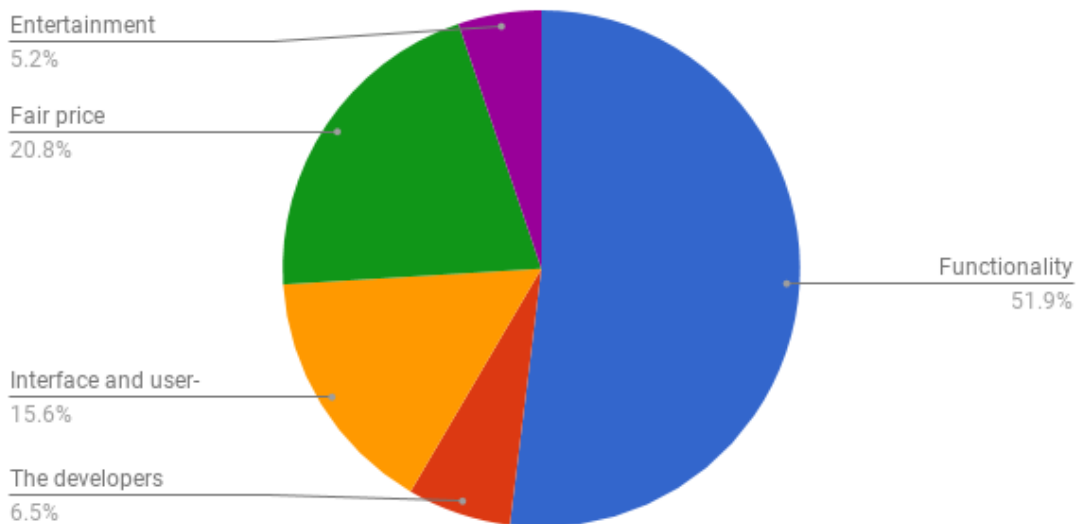


Figure 15. Subscription apps usage triggers graph.

The last question was related to any knowledge about the case company's products, and the results are as follows: 35.5% of the answers indicate that respondents have heard of Company X applications, some have tried them

(10.5%), and some are using them now (3.9%). 17.1% of the results indicate that people expressed a desire to try those apps and one third of the responses still belongs to those who have not heard of the applications by Company X.

## **4 Discussion and conclusions**

This study adopted the Mixed-methods approach to research using the data collected from the empirical part as the primary source and the existing intelligence in the field as the secondary source of information. The literature as well as the results of the study can readily provide the answers to the research questions of this thesis.

### **4.1 Discussion**

The quantitative part of the research was to compare and find out to what degree the case company managers' perception of their product and customers correlates with the needs and behavioural patterns of those. The results of the web-survey confirmed many propositions made by the interviewees from Company X.

For example, 65% of those whose occupation was somewhat related to digital content creation claim to be using some paid or subscription software for their creativity. Among the people who were generally interested in this field, more than a half said they paid for apps to create digital content. This means that these people could potentially be using the case company's software. The qualitative study also confirmed that that students would be more likely to use free versions of the apps compared to working class (39% to 68% correspondingly), moreover, the same applies to the gaining popularity subscription model (19% of students and 41% of working people used subscriptions).

The Company X applications' advantage is that they are free and fully functional from the beginning, while subscription only offers an extended range of tools for more creativity. There are three customer journey stages: first, the user discovers the free version of the app. At this stage, it is important to engage with the person and get them acquainted with the intrinsic values of the application. This

stage begins with the product page in the app store, where the customer can see the possibilities of the app at its best (via screenshots) and explore what others think of it (the importance of ratings and reviews have been rated 4 and 5 out of 5 by 64% of the respondents, this is also backed by other studies). The benefits of downloading the app, such as receiving tips on how to use it most effectively, getting access to the creative community where ideas can be exchanged and works are shared, informative blog posts, etc., must be communicated to the user without delay. The second stage is when the user already knows the app well and wants to try its premium features, but still not sure if wants to pay for it. That is when the trial version can be used. The trial period shows the ultimate functionality application allowing the user make the final decision whether or not to subscribe. The third stage is the conversion to subscribe itself, and it is hardly possible without the successful implementation of the first two. However, once a user becomes a subscriber, their usage of the app, the outputs and viral communication might multiply as explained by the Mental Accounting theory.

It is also necessary to consider the differences between the users. For instance, previous research as well as this study show that Apple users are more likely to pay for software than Android users (61% to 48% correspondingly). Many respondents, although the question was intended mostly for smartphone or tablet users, nevertheless mentioned that they used laptop or desktop computer for digital content creation. Currently the case company only has one application with a desktop version, which is an opportunity to develop more desktop programs and synchronize them with their mobile “siblings”.

Special attention must be paid to the factors that users find crucial in subscription application choice. Fair price can be a break point in the purchase decision, while others would appreciate professional interface and user-friendly experience using the app. However, more than a half of the survey respondents have voted for “functionality” as the factor they would most likely pay for. Apparently, from the professional point of view, it is advantageous when the application has various benefits, but the main purpose for its use is still the ability to complete the tasks most effectively.

The key finding of the survey was the participants' attitude towards the subscription ABM. Although subscriptions have been present for a while and have become popular on the application market, the vast majority of the respondents indicated that they either do not understand why they have to pay periodically (23.2%) or understand, but still dislike to do so (40%). Moreover, the managers of Company X also admit that some users complain about subscription. These factors signify that unless the applications leave no choice but become a subscriber, a big educational campaign could prove effective in teaching users about the advantages of being a subscriber and persuading them to become one. Openness and transparency about this aspect may help reduce hesitation and eliminate negative attitude.

#### **4.2 Implications for the case company**

Implications for the case company contain the answers to the research questions and sub-questions. The company was interested who the potential customers that would be likely to do subscription were. The survey answers indicate that people interested in the digital content creation most often download paid creativity apps because of their functionality (53%) and user-friendliness (28%), further, the same qualities apply to the reason why they value these apps (65.7% and 19.5% correspondingly). Therefore, the potential customers would most probably be the people occupied at some level (they are more likely to pay for subscription), their occupation could be related to design and creativity (to be motivated to pay for and use the software) and they would need high functionality of the apps they would use. The study results indicated that 56% of Asian respondents paid for apps, followed by Europeans (51%), North Americans (48%) and Russians (42%), although this might be the sampling bias as the results are quite close. Functionality appeared to be what triggers most potential users (51.9%) to pay for subscription. Also, positive ratings and reviews play an important role in the first stage of the customer journey, that is converting an individual to download the app. Therefore, active feedback and review management needs to be maintained.

### **4.3 Conclusion**

The objective of this bachelor's thesis was to conduct a marketing research into the topic of subscription model in mobile software business. The researcher learned about the consumer motives to download and pay for software using the case company's example and practices, survey findings and the existing literature. Various literature sources have been used to comprehensively cover the field of study and achieve the initial objectives.

In relation to the research process, the author would like to provide some remarks on what could have been done differently. Regrettably, the size of the quantitative study sample could have been larger if the researcher had been deeper involved into the field settings or had an opportunity to provide an incentive for participants. However, on the positive side the theoretical background has appeared to be substantial as a source of secondary data.

This study was aimed at providing useful insights for the case company and was based on the case company narrow specification. Further studies can be done about the subscription business model from psychological and other perspectives, as this ABM is only growing. Moreover, subscription business model can be studied in the settings of other industries or other dimensions of software industry.

The author wishes this study will be found useful for the case company. It was a pleasure to investigate such a modern and interesting topic.

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