

IMPLEMENTING THE FREEMIUM BUSINESS MODEL IN THE SOFTWARE INDUSTRY: KEY FINDINGS AND IMPLICATIONS

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ABSTRACT

The freemium business model has been defined as giving away your service for free (whether ad-supported or not), acquiring customers quickly and efficiently, followed by offering premium priced value-added services to the customer base (Wagner et al, 2013). This model has been present in the economy since the 1980's, but has taken traction in recent years in the software industry with large corporations such as Google, Apple, Spotify and many others accepting it as a primary method of payment for their products and services. The model assumes that the customer potentially can pay more money through this method, rather than paying to own the product or service outright with all the included features. However, there is still uncertainty whether this business model works and generates profits, while different case studies and statistics question that this model and the implementation of a “pay wall” (use limited features of the product/service for free and pay a certain amount to access the “locked” features) can prove as a successful marketing tactic. Baden-Fuller and Haefliger (2013) argue that the freemium model brings a growing pool of users, which are a valuable strategic resource for the company in the long run.

The paper focuses on three different aspects of the freemium model. Empirical research is done to cover the basis of the freemium model and the main differences with other related models. Case study analysis focuses on the practical implementation of the freemium business model in the software industry in recent years. Emphasis is put on analyzing the possible benefits and drawbacks of the business model implementation, both on the short-term and long-term, along with the reputation risk it carries.

KEYWORDS: Revenue models, Marketing models, Freemium, Growth strategy

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1. LANDSCAPE FOR THE FREEMIUM MODEL

The rise of digital technologies has brought significant changes in every aspect of the business world. One of the areas that has been the focus of transformation in recent years have been the pricing and promotional strategies which have been completely revamped to satisfy Web 2.0 users. In order to attract more users, companies have been trying to innovate and position their products and services in a new way, as part of their digital marketing strategy (Bonnaccorsi A. et al, 2006). Traditional pricing models for digital products include either full payment upfront to own the product/service or a subscription-based model (more prominent for services) where the user is charged on a monthly level as long as he is active. The initial efforts to innovate with a new pricing model came in the late 80s, where companies started to promote their software as “shareware”. Shareware is freely provided for a limited period of time in order to offer potential customers the opportunity to use the program thus determining its usefulness and potential advantages over competitors before taking a decision about buying a license (Iglesias, 2013). Shareware can be labeled as a “trial version” to stress that meaning. In other cases, the software is offered with some limitations on functionality, such as import/export or save options and the like. Shareware software was often viewed in negative light, which can be attributed to the simple wording of the offer that was given to consumers. Using the words “limited” or a “trial version” is unattractive for consumers, who get the sense that they have to pay for the full version to use the software properly. The term slowly dissapered in the beginning of the 90s, failing to capture the consumer attention⁴.

Moving forward, in the early 2000s we can see the rise of the first Freemium models for payment. For example, Yahoo offered their e-mail service as free, with advertisements being shown across the platform. For a certain fee, paying users would get rid of advertisements, as well as get almost unlimited storage space as another benefit (Dörr et al, 2012). This is one of the earliest freemium models, although it has not been billed as such. The freemium business model has been defined as giving away your service for free (whether ad-supported or not), acquiring customers quickly and efficiently, followed by offering premium priced value-added services to the customer base (Wagner et al, 2013). For software companies, there are huge potential benefits as a growing user base indicates success of the application, while for the users there is the option of using an application with basic features, which can be completely sufficient for them. Since 2010, the landscape of software has been shifting, in part because of the popularity of smartphones and the widespread of Internet technologies (Teece, 2010).

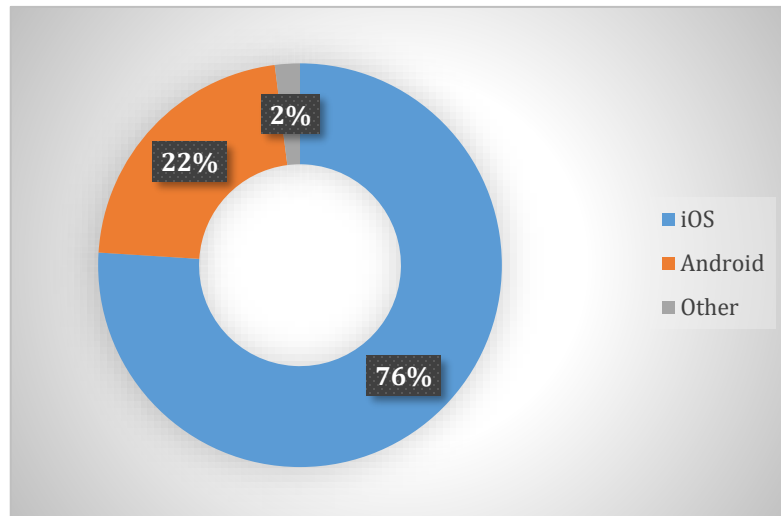
Figure 1. Digital in 2019



⁴ PC Mag, Nov 24, 1993

Figure 1 shows that 57% of the world population has internet access, while 67% (5,1 billion) are mobile phone users. These numbers are growing every year, making it very lucrative for companies to tap into this market with their applications. By the start of 2018, users have downloaded more than 178 billion applications to their smartphones, with 48% of the website traffic worldwide has come from mobile devices (Statista, 2019). In the current business landscape, there are two major mobile operating systems, iOS (produced and managed by Apple⁵) and Android (produced and managed by Google⁶).

Figure 2. Android vs iOS market share



Source: Statcounter, 2019

Both operating systems enjoy their fair share of users, with Android being dominant with 76% of the marketplace, while iOS captures 22% of the smartphone users. Google distributes applications through the Google Play Store, launched in March 2012. iOS distributes applications through its App Store, launched in 2009. These are core applications and system services, installed in every phone with its respective operating system. Companies must distribute applications through these platforms, generally choosing one of four payment models:

- **Free app** – users can download and use the application for free. There are no additional purchases, while the revenue generating model is focused on showing advertisements while using the application
- **Paid app** – users are able to download and use the application only after paying full price for it. When downloaded, they have access to all of its features to utilize however they see fit
- **Subscription based app** – users can download the app for free, but to use its features they have to pay a certain amount on a monthly/yearly level.
- **Freemium app** – users can download and use the application for free, while certain “advanced” functions are locked away and only accessible after payment of a certain amount.

Latest data shows that 96% of Android apps are listed as free (falling under the free, subscription or freemium app), while only 4% are listed as paid apps. Mobile apps are expected to generate \$462 billion in revenue in 2019. The Apple App Store has listed over 2.2 million apps available for download. There are over 2.8 million apps available for download on the Google Play Store (Statista, 2019).

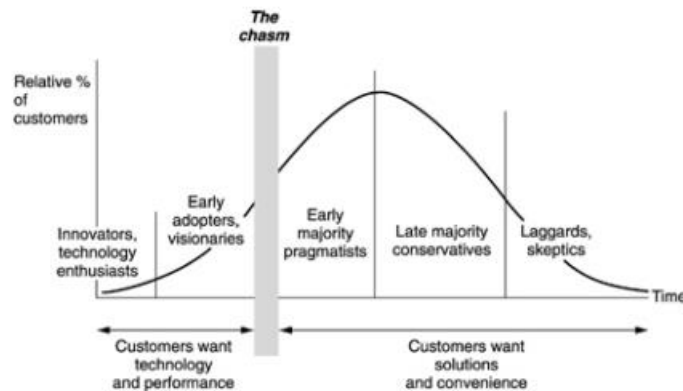
⁵ <https://www.apple.com/ios/ios-13/>

⁶ <https://www.android.com/>

2. STRUCTURE OF THE FREEMIUM MODEL IN MOBILE APPLICATIONS

Expanding the research on the freemium pricing model, we have to analyze the product life cycle of a mobile application. The product's life cycle - period usually consists of five major steps or phases: Product development, introduction, growth, maturity and decline (William & McCarthy, 1997).

Figure 3. Product life-cycle and technology maturity



Source: Komninos et al, (2014), Product Life Cycle Management, URENIO, Aristotle University of Thessaloniki

Freemium pricing models look to push through the chasm in the product life-cycle model, where there is skepticism towards new products/services on the market, by making them free to use with certain limitations. This is similar to shareware, however from a marketing standpoint there are some clear differences:

- The phrasing “limited use” and “limited features” have been completely omitted. This simple change has enabled freemium applications to differentiate themselves as full applications with all the basic features the user would need
- There is no sense of urgency created to buy the “premium” version of the application, as opposed to shareware, with exception of time-limited model
- Premium features are billed as extras, gradually enticing users to either test them out or show them what they are doing and how they would be beneficial for the user

Freemium pricing structure includes different aspects, mostly differentiating between features for application and mobile phone games. Applications usually lock premium features such as customizations, filters or other type of uses behind a premium fee, while games could include purchase of special items, avatars or even resources to continue playing in an expanded way.

Freemium models can be divided in two general categories (Anderson, 2009):

- **FLF (Feature limited freemiums)** – involve a basic version of the application with certain functionality, while additional functionalities are charged extra (either as a group or individually)
- **TLF (Time-limited freemiums)** – offer free access to the full versions of the application, but for a limited amount of time. After the period expires, the user has to buy it for full functionality. TLF is very rare in the mobile app market, as it has proven to be less successful.

3. BENEFITS AND DRAWBACKS OF UTILIZING THE FREEMIUM MODEL

Different companies entail different approaches to freemium, with FLF, TLF and hybrid solutions being present. The economic logic is sound and relates to the chicken and egg problem (Caillaud & Jullien, 2003), meaning that a platform/application has to reach a certain critical amount of users, which require a certain amount of content, which to be provided needs a certain amount of users...ongoing in a spiral to develop and sustain the business model. For example, Instagram for Windows Phone was released 3 years after the initial version on iOS and Android, with the main problem being cited that there are not enough users to sustain the development costs⁷. On the other hand, users often cited that the lack of applications on Windows phone makes it less appealing to switch to the platform.

The freemium model can be seen as a fast and efficient way to gain a critical mass of users to be able to create content and fast-track through the adoption phase. Music streaming platforms are a prime example of different freemium models being implemented:

- Spotify and Deezer implement FLF, focusing on free music streaming in the basic version, with ads being featured between songs. The premium version offers no ads at all, if the user is willing to pay
- Google Play Music and Apple Music implement TLF, with a free trial available for a limited time (ad-free), making the user pay for the service in full after it expires

Table 1. Benefits and drawbacks of freemium models

FREEMIUM MODEL	
BENEFITS	DRAWBACKS
Attract a large number of users quickly	Difficulty in conversion
Give users time to learn the application	Perceived pay wall
Experiment with revenue models (subscription, ad revenue)	Expensive infrastructure and support systems
Testing of applications	

Source: Own research

Proper freemium implementation can be difficult to carry out. As shown in table 1, there are numerous advantages offered by the freemium model:

- **The ability to attract a large customer base** – when offering the application for free (whether FLF or TLF), users are keener to try it out if it piques their interest (Baeden-Fuller & Haefliger, 2013). Compared to paid applications, where even a small investment is seen as a potential barrier.
- **Educating consumers** – Advertising is a difficult and expensive process, especially for mobile applications. For users to understand the concept of a mobile phone application and its benefits,

⁷ <https://www.digitalcitizen.life/best-instagram-clients-windows-phone>

it can be drastically better for them just to use it for themselves, instead of reading about it, viewing screenshots or watching reviews⁸.

- **Flexibility in revenue models** – freemium enables the company to choose how to monetize the user base. In certain cases, it can be better to utilize ad-revenue models, as the user base is not willing to pay for the application, while in other cases it can be a subscription model or some other hybrid version.
- **Free beta testing**⁹ – As mobile application development can be a long process requiring a lot of testing, freemium models offer the ability to include future consumers early and have them use the application on an everyday basis, helping in ironing out the bugs and other potential problems. Since the user is not paying, the product doesn't have to be offered as a final and fully functional version.

Despite the obvious advantages, there are certain drawbacks to the freemium model which companies should take into account:

- **Difficult conversion of users** – FLF models rely on user conversion to pay for the premium features. This can be rather difficult, as users could be happy with the basic offering and never convert to the premium version of the application (Benlian & Hess, 2014). To reduce the risk of free riders, companies should consider converting to a TLF model.
- **Perceived pay wall** – more prominent in mobile games, where certain functionalities and even the core usage of the application can be locked behind payments. This creates an uneven experience for the users, where they feel extorted to pay a certain amount to continue using the application, creating a negative perception for the application, company and brand.
- **Expensive support systems** – Since freemium apps rely on giving the application for free, this means that the company amasses a large number of users who are not paying customers. Regardless, the application has to be built on a certain infrastructure and offer some support mechanisms to all users. These fixed costs are usually calculated in the price of a full-version application, but have to be waived for free in freemium models for all users.

4. CONCLUSIONS

Freemium models are a promising solution for pushing out applications on a saturated marketplace and connecting with the core user demographic. There are large implications both on the marketing and revenue generating models. Marketing and advertising gain more flexibility in promoting the application, with the option to enable the user to either try before they buy (TLF models) or use a basic version of the application (FLF) for free and have premium features available as well. This enables the company to generate the critical mass of users needed to implement the selected business model and at the same time enabling users to check out products and services risk-free and in a non-intrusive or pressured way, as previously with shareware applications.

From a revenue point of view, companies also gain flexibility in selecting a certain model or creating customized hybrids. Revenue can be generated through ads and paying for features in FLF models, paying for the full version in TLF models, subscriptions both in FLF or TLF models and any combination between them in a customized model. Companies can decide when to capitalize on the user base and which model to utilize based on individual scenarios.

⁸ <https://blog.bmtmicro.com/pros-cons-freemium-business-model/>

⁹ <https://www.conversion.com.br/en/-blog/freemium/>

Freemium models are transforming the product life-cycle, giving the company opportunity to push through certain stages with relative ease and compete on the market. There are numerous benefits that are offered via the freemium model, the most prominent being the acquisition of a large user base and capitalizing quickly. However, if not implemented properly, there can be significant disadvantages both on the short-term and long-term, such as difficulty in conversion and damaging the company reputation. Each application is unique with a specific user base, so models should be chosen accordingly. This research can be expanded by analyzing case studies of successful and unsuccessful implementations, researching other industries beside mobile applications and constructing a framework for implementing freemium models in the marketing and revenue generating strategies of the company.

REFERENCES

1. Anderson, C., (2009) Free: the future of a radical price, Hyperion; First Edition
2. Baden Fuller C., Haefliger S., (2013), Business Models and Technological Innovation, 46(6):419–426
3. Benlian A., Hess T., (2014), Converting freemium customers from free to premium—the role of the perceived premium fit in the case of music as a service, Electronic Markets 24(4):259-268
4. Bonaccorsi, A., Giannangeli, S., Rossi, C., (2006), Entry strategies under competing standards: hybrid business models in the open source software industry. Management Science 52 (7), 1085–1098.
5. Caillaud, B. and Jullien, B. (2003), Chicken & egg: Competition among intermediation service providers. RAND Journal of Economics, 34(2):309{28.
6. Dörr, J., Benlian, A., Vetter, J. and Hess, T. (2010) Pricing of Content Services - An Empirical Investigation of Music as a Service, in Proceedings of the sixteenth Americas Conference on Information Systems, August 12-15, Lima, Peru, ACM Press, 1-9.
7. Iglesias A., (2012), Freeware, Shareware, and Open-Source Mathematical Software Tools: a Feasible Alternative to Commercial Symbolic Packages for Mathematics Education, RIMS workshop, Kyoto University
8. Teece D., (2010), Business Models, Business Strategy and Innovation, Long Range Planning, Volume 43, Issues 2–3, April–June 2010, Pages 172-194
9. Wagner, T. M., Benlian, A. and Hess, T. (2013) The Advertising Effect of Free – Do Free Basic Versions Promote Premium Versions within the Freemium Business Model of Music Services?, in Proceedings of the forty sixth Hawaii International Conference on System Sciences, Hawaii, USA, 1-10.
10. William D. & McCarthy J. E, (1997), Product Life Cycle: “Essentials of Marketing”, Richard D Irwin Company

Internet sources

1. Hootsuite & We are social, (2019), Digital in 2019, available at <https://wearesocial.com/global-digital-report-2019> (accessed on 15.09.2019)
2. Statcounter, (2019), Global Stats, Mobile Operating system market share worldwide, available at <https://gs.statcounter.com/os-market-share/mobile/worldwide> (accessed on 15.09.2019)
3. Statista (2019), Mobile phone penetration, available at <https://www.statista.com/statistics/284202/mobile-phone-internet-user-penetration-worldwide/> (accessed on 10.09.2019)
4. Statista (2019), Distribution of free and paid Android apps in the Google Play Store as of August 2019, available at <https://www.statista.com/statistics/266211/distribution-of-free-and-paid-android-apps/> (accessed on 10.09.2019)
5. Statista (2019), Mobile app usage - Statistics & Facts, available at <https://www.statista.com/topics/1002/mobile-app-usage/> (accessed on 20.09.2019)
6. <https://www.apple.com/ios/ios-13/> (accessed 17.09.2019)
7. <https://www.android.com/> (accessed (17.09.2019)
8. <https://blog.bmtmicro.com/pros-cons-freemium-business-model/> (accessed 05.09.2019)
9. <https://www.conversion.com.br/en/-blog/freemium/> (accessed 05.09.2019)