

The Success of the Freemium Business Model. How Riot Games flourishes with a free to play game.

~ Ph. D. **Falko Lucht** (Leuphana Universität Lüneburg, Lüneburg, Germany)

E-mail: falko.lucht@googlemail.com

Abstract: Freemium is an emerging business model mostly used in the online software market and mobile application market that offers a free basic version and premium version of a product or service. One of the most successful companies that uses the freemium business model is Riot Games Inc. with their multiplayer online game League of Legends. The growing number of successful freemium businesses requires scientific analysis and evidence. In this paper, first we analyze the general concept of the business model, especially focussing on the benefits of paying and non-paying customers and second, we analyze the fast-growing and still young market of eSports which contributes to the success of the game. The finding then will be compared to the actual business model of Riot Games. The results show that Riot Games success is based on several factors that are all affiliated with the freemium business model: micropayments, sunk cost and network effects, data collection and sophisticated reward systems that foster customer retention.

Keywords: Freemium Business Model, Riot Games, Network Effects, eSports

JEL Classification: L11, L86

1. Introduction

From October 1st until November 3rd 2018, the official League of Legends World Championship took place for the 8th time in Seoul, South Korea (Riot Games Inc. 2018). Almost 100 million people watched the final game during last year's championship and a total prize pool of more than \$6.7 million was given to the most successful teams (Goslin 2018). League of Legends is a multiplayer online battle game (Moba), developed by Riot Games Inc. which is available for both Microsoft Windows and MacOS. But how can a company like Riot Games finance such a huge event with a game that is free to play and has no in-game advertising (Riot Games Inc. 2017)? This question is quite important if considering the immense financial success of many of these games and the coherent significance for the economy. Complete new markets, jobs and opportunities arise through this new business model that therefore cannot be ignored anymore. The underlying concept of League of Legends is the freemium business model which is a neologism of the words free and premium. More precisely, freemium is a pricing strategy that offers a basic product or service free of charge, but costs money for additional benefits, features, goods or services (La Marín de Iglesia et al. 2009). It is an emerging business model that is mostly used in online markets, like for software, mobile applications, entertainment, social networks and gaming businesses (Chen et al. 2018). The companies mainly generate their revenues through the users that convert from the free to the premium version or that buy other features. Depending on the industry and on the product or service, a conversion rate of 5% is already enough to cover the costs of the basic version (Anderson 2009;

Pechtl 2014). Since there is no premium version of the game and consequently there is no income through regular subscription fees the business model needs to generate the profits elsewhere. But the paying customers are not the only ones who contribute to a game or a company's success. Depending on the respective business model, the non-paying customers can likewise create considerable benefits and values for a company, for example through data, advertising or customer attraction, and therefore cannot be neglected.

The aim of this article is to analyze how Riot Games is using the freemium business model to create one of today's most successful video games and how the company generates profits through its paying, and especially through its non-paying, customers. In order to do so, in section 2, we first review prior literature on the topic of freemium. The subsequent section 3 describes the used research methodology. This will be followed by the results and discussion in section 4 which show the financial situation of Riot Games and the esports market in general as well as the main factors that are related to the freemium model. Finally, section 5 concludes the findings and considers limitations and provides an outlook for possible future research.

2. Literature Review

The concept of business model gained prominence in the literature in the late 1990 (Toma & Marinescu 2012; Toma & Tohanean 2019). Innovation has become a key element of today's business models (Tohanean & Toma 2018). When using the freemium business model, companies offer a free basic version of a product or service and a

value-enhanced version of the same product or service wherefore the customers have to pay (Koch & Benlian 2017). Different examples of this will be given in the following sections. Research showed that many of today's well-known brands, products or services are based on a freemium business model, especially in the area of software and internet services (e.g. Skype, YouTube, Facebook, Google, Dropbox, LinkedIn, Spotify, Microsoft OneDrive, Survey Monkey, Trello, League of Legends and Candy Crush). The existing

research of the freemium business model underlines the success of this relatively new way of doing business (Voigt & Hinz 2016; Holm & Günzel-Jensen 2017). Although the underlying business model of these products is based on the same core idea, the companies generate their profits through different types of the freemium business model. Pujol (2010) differentiates between three separated types of freemium:

Table 1 Three types of freemium models

Category	Description
1	Quantity differentiation is simply the free giveaway of either a product unit, like free samples, or a restricted time that a user can use a product or service, like a beta phase in software or gaming. The quantity limitation serves as a restricted sample which will be gone after it is used or after a determined time frame is over.
2	For the distribution differentiation, the split between the free and the commercial model occurs in the way how the consumer uses the product, for example "software may be free to use but not to redistribute or embed" (Pujol 2010, p.2). This differentiation occurs mainly between a non-commercial and a commercial use.
3	The feature differentiation separates the product or service functionalities that are accessible to the customer. The free user only has limited functionality while the paying customer enjoys all features of the product or service (Pujol 2010). This type is mostly used and therefore represents the majority of all freemium business models nowadays.

Despite the differences, all three business model types depend on premium customers in order to generate enough profit. Therefore, the number of paying premium customers needs to reach a critical level (or critical mass), so that all costs can be covered, or the business risks failure. Whether freemium works or not, depends on a firm's ability to actually monetize the advantages of basic users and to raise the conversion rate, for example through a high fit between both

versions (Wagner, Benlian & Hess 2014). The conversion rate shows how many of the total amount of users convert from the free to the premium version of a product or service. A successful freemium model does not only depend on the number of its paying customers. Those customers that only use the free or basic version of a product or service, (referred to as non-paying customers) also create huge value for a company, and sometimes they are as necessary as the paying customers.

Therefore, the following section will focus solely on non-paying customers in order to analyze how they create value for a company.

First of all, a company can benefit from non-paying customers by collecting, selling and displaying their data. This can be done either officially or secretly. Social networks, for example, like Xing or LinkedIn show personal user information (at least a part of it) to paying headhunters or companies (Xing SE 2019a). On the unofficial side, many mobile applications secretly collect user data as an investigation by the Yale Privacy Lab showed. They proved that more than 75% of the tested apps contained secret trackers (O'Brien & Kwet 2017). Even if a company does not sell or display the personal information of its users, it is still very valuable in terms of knowledge. The data can be used to get a better understanding of the individual or the community, thereby leading to more effective advertising, which ultimately raises the chances of getting more premium customers.

This leads to another big advantage: the use of advertising. Many freemium business models base the idea that the user is exposed to a lot of advertising if the basic version is used and that, if upgraded to premium, the product or service is ad-free. A perfect example for this is the music streaming service Spotify. Non-paying users have to listen to visual and auditory commercial breaks that appear every 15 minutes and last for approximately 30 seconds (Verhovnik 2017), while paying users can enjoy add-free streaming (Spotify AB 2018). Depending on the popularity of the product or service, the company can sell expensive advertising spots, meaning that a high number of users (paying and non-paying) makes the spots more attractive to potential advertising firms. Thereby

Spotify is still making profit by selling these advertising slots to external companies.

One of the biggest benefits originates through so called network effects which state that the value of a product or service changes with the amount of other people that also use the same product or service (Tiwana 2014). Positive network effects increase the value for every user (e.g. the increase of value for every person that also uses a telephone), while negative network effects decrease the personal value (e.g. the decline of exclusivity of luxury products). Furthermore, network effects can be distinguished between direct and indirect effects. Direct (horizontal) network effects influence the personal value for every additional member, while indirect (vertical) network effects influence the value of a complementary product or service which in turn can influence the value of the original product (e.g. DVD and DVD player). Most platform markets are characterized by indirect network effects (Tiwana 2014). Taking the theoretical concept of network effects into practice, means that the non-paying customers add value for the paying customers and therefore make it more attractive to them. Xing serves as a great practical example for this because it highly depends on these network effects, since the value for their paying customers, like headhunters and recruitment agencies, increases with every new member of the network. That is one of the reasons why Xing was able to acquire almost one million premium members with a base of more than 16 million basic members (Xing SE 2019b). Another great example of the benefits of network effects can be found in the free-to-play mobile games area. These games get most of their profit by a small number of users, called "whales", that spend a good deal

more money for in-game purchases than the average user (Fields & Cotton 2011). Whales only represent 10% to 15% of the players, but account for about 50% to 70% of in-app purchases (Shi, Xia & Huang 2015; Shaul 2016). But in order to obtain and satisfy these players, they need other players that they can compete, cooperate, or compare with. That is why the non-paying users are still very valuable for a company.

Another reason why the non-paying users are valuable for a company is actually quite logical: companies can still convert non-paying users from their free version to a premium version, especially if those same users already made a big – or even a small – investment into the product or service. The psychological sunk cost effect states that there is “a greater tendency to continue an endeavor once an investment in money, effort, or time has been made” which indicates that users are more likely to make an investment in order to justify their expenses (Arkes & Blumer 2000). So for example, if a person already spent many hours playing League of Legends in order to get a specific playable character, the chance of buying an adaptable skin for this character is higher than before. Summarizing the mentioned benefits, a company should not only focus on its paying customers, but also on its non-paying customers, since they contribute immensely to the company’s success. Therefore, companies should strive for a well-balanced combination of the two different groups.

3. Methodology

The underlying scientific approach of this article follows the designs and methods for case studies of Robert K. Yin (2018).

Since it is not always possible to acquire scientifically validated data on up-to-date key figures, the researchers used well acknowledged business sources, like Business Insider or Deloitte Insights. The analysis of League of Legends’ success will solely focus on the factors that are related to the freemium business model. The researchers used quantitative research methods that focused on secondary data which was mainly gathered through scientific papers and articles, through company statements and financials as well as Internet sources. Furthermore, the League of Legends game was downloaded and carefully analyzed to compare the theoretical findings with the actual praxis, especially the concept of the ingame shop. Therefore, we combined the theoretical aspects of a quantitative analysis with the more practical case study approach.

4. Results and Discussion

In order to understand the economical and the financial relevance of games like League of Legends, a short analysis of today’s eSports market was necessary. eSports (short for electronic sports) is a “form of sports where the primary aspects of the sport are facilitated by electronic systems; the input of players and teams as well as the output of the eSports system are mediated by human-computer interfaces” (Hamari & Sjöblom 2017). Nowadays eSports competition takes places in professional league structures between professional players either in teams or individually. The global eSports market is expected to reach a market volume of \$1 billion in 2019 with a market growth of more than 35% in regions like North America (Arkenberg 2018). Considering the fact that

most of the consumers of the market are respectively young, it can be estimated that this growth will go on in the next years or decades (Tran 2018). The eSports market was able to create a gigantic ecosystem of different players and platforms. Meaning that there are not only the game producing companies that are mainly responsible for the international and national tournaments, but also countless third-party suppliers that build completely new businesses around these video games. There are, for example, companies that sell private, professional coaching for League of Legends players in order to improve their personal gaming skills (e.g. Gamer Sensei or LoL Academy). As one of the major players on the eSports market, Riot Games employs more than 2,500 employees in 24 offices around the globe. Riot Games Inc. is a 100% affiliated company of Chinese tech giant Tencent Holdings Limited that generated revenues of more than RMB 312.7 billion (\$45 billion) in 2018 (Tencent 2019). Unfortunately, a separate financial statement of Riot Games was not published, but according to a financial analysis of SuperData, League of Legends accounted for \$1.4 billion in 2018 (SuperData Research Holdings, Inc. 2019). Since League of Legends is the only product of Riot Games, it can be concluded that this number conforms to the annual revenue of the company. Although revenues decreased from 2017 to 2018, the numbers still indicate the success of the company and its freemium business model.

In order to analyse the freemium business model success, the aforementioned theoretical concepts of value or profit generation were compared with the actual business model of Riot Games. Therefore, certain aspects of the game itself had to be examined

and evaluated: first of all, League of Legends is a free-to-play game that is playable on almost every personal computer. In a usual game every player controls one out of 145 different champions and fights against a team of computer or player-controlled champions. The goal of the game is to destroy the enemy nexus which can be reached by three different lanes and which is protected by towers and repeatedly spawning minions that automatically walk towards the enemy base. The champions earn gold by killing minions, towers or other players which they can spend on items that raise the champion's strength (Riot Games Inc. 2019a).

The first important finding is that League of Legends is not a pay-to-win game, meaning that players can not buy any in-game advantages with real money, which is the case for many freemium games, especially in the mobile application area. Thus, the game is still enjoyable for the players that are not willing to spend money on it. The underlying strategy is to obtain and to preserve a larger player base of satisfied players that are not forced to spend any more in order to be good at the game. Hence, there are probably many players that do not spend a single dollar on the game, which does not necessarily mean they are not bringing in any value. Taking the concept of network effects into account, the large player base makes the game more attractive for paying customers, especially whales.

The game does not contain any advertising slots, which means that Riot Games is not monetizing this aspect of the freemium business model. However, the company is the host of many eSports tournaments and events which indeed have a lot of advertising and sponsorships. The European

Championship 2019, for example, is sponsored by well-known brands like Red Bull, Shell, Kia, Logitech and Alienware (Hayward 2019). Thus, the company is able to earn money through its game.

Riot Games also utilizes its large player base to consistently gather a great amount of information about the game. On a short-term view to prevent, analyse and fix system errors and bugs and on a long-term view to improve the game's overall quality and direction. Video games belong to a fast-changing environment where speed and quick reactions are necessary to not lose unsatisfied customers because of system or game-play errors. Hence, bugs need to be fixed as soon as possible and all champions have to be balanced in terms of strengths and weaknesses. As a result, Riot Games is uploading small patches twice a day and big patches with major changes and new content every Wednesday. Since the game is already well developed, most patches try to keep every champions win rate at about 50% (Claypool et al. 2016). The best example for Riots ability to react to players behavior is the permanent implementation of a new game mode that started as a community movement (Riot Games Inc. 2019b). All of this shows again that the company is able to successfully exploit the given benefits of the freemium business model.

League of Legends freemium business model can partially be associated with the third freemium type because players do not have full access to the total content of the game. Despite the benefits that were explained before, this is a key factor of the game's business model as well as its success and thus will be explained in more detail. The content that is not accessible can be

unlocked through two different ways: either by playing the game or by spending real money. The blocked content includes playable champions, champion skins, stickers, rune pages, name and server changes, ward skins, profile pictures and leveling boosts. However, there is a weekly rotation of 14 different champions that are free to play for all players. For the purpose of unlocking content Riot Games implemented a system with three different currencies that can be spent in an in-game shop. (1) The basic currency that can only be used to unlock champions and rune pages is called blue essence. Players can earn blue essence by simply playing the game. They earn a small amount after every game based on win or loss, a decent amount for the first win of the day (which encourages players to play every day) and a decent amount through seasonal events. The currency basically awards players with more playable champions if they spend a lot of time playing (e.g. unlocking a new champion can take weeks). (2) The second currency that can be obtained in-game is orange essence which can only be spent to get aesthetic modifications, like champion skins and ward skins, that normally need to be paid for. However, it is much harder to obtain this currency compared to the blue essence. Riot Games implemented a complex system in which players have to collect treasure chests and respective keys. This gathering takes a long time and effort and usually players either have too many chests and no keys or too many keys and no chests which in turn leads them to buy what they are missing. This reward system is another well-conceived instrument to bind players to the game and allure them to spend money. (3) The most important currency are the so-called Riot Points that can

be bought with real money. These points can be used to buy every kind of blocked content and are therefore the easiest and fastest way to unlock things. The purchase of virtual goods with usually small amounts of money are called micropayments. The idea behind this is that the profits of micropayments outweigh the profits that would have been made with a one time payment for a game (Kim et al. 2016).

Due to the typically low amount of money, micropayments are tempting and fast decision purchases with low cognitive involvement. The purchase of Riot Points through the in-game shop is designed to be convenient and fast. Riot Games follows the fixed prices strategy that is determined for a long term of constant prices to ensure customer loyalty (Marinescu et al. 2010). Riot Points can be purchased in fixed packages that are less expensive (per single Riot Point) if more points are bought. For example, one package contains 650 points for 5€ while another package contains 7200 points for 50€ (700 additional points). The fixed package sizes lead to another benefit for the seller: the amount of Riot Points in a package does not always match the price for the desired skin, meaning that the customer has to buy more Riot Points than needed. Many skins, for example, cost 975 Riot Points while the most suitable package contains 1380 Riot Points. This system leads players to buy more points than they actually need, which brings more money to Riot Games. These micropayments are the main income source for Riot Games which the company highly depends on. As a result, the company frequently publishes new skins, especially for the most favored champions. The players' high willingness to pay for these skins can be seen on the example of 2018's

world championship where more than \$4.2 million of the prize pool were collected through the sales of event specific skins (Goslin 2018). A possible explanation for the players' willingness to pay can be the mentioned sunk cost effect. After analyzing how much time and effort a player has to invest to unlock free content, either champions or skins, it seems to be logical or at least tempting to continue spending money on the game.

Besides the psychological constructs of microtransactions and the sunk cost effect, a study of Frederiksen (2017) analyzed the main reasons for players to spend money on skins. According to this, hedonic motives, like fun and excitement, along with the wish for customization are the main reasons. For many others, it is simply a habit to buy skins and others again want to support eSports or do it for attention. The least amount of players do it because of social pressure. Taking these findings into consideration, it can be concluded that Riot Games matches the players' reasons with its unique reward system and its frequent and creative skin releases. The players are able to customize their champions and these skins at the same time offer excitement and fun due to their changing themes and models. The eSport team-specific skins that get released for every big tournament fulfill the players' wish to support their own team and to identify with them in-game, like wearing a soccer jersey. Therefore, the game successfully matches what the players want, which is one of the reasons why it is so successful.

5. Conclusion

In conclusion, the case paper provides a general overview of how Riot Games created

a prosperous business based on a freemium business model which itself is the key factor for the success. The fact that League of Legends is not a pay-to-win game attracts a huge playerbase that is not forced to spend any money in order to become good at the game, but still does so. The system of free giveaways combined with the rewarding concept of microtransactions and the fixed packages leads to a high number of paying customers. The fulfilled psychological needs of the players together with the effects of the sunk cost effect lead to a relative high number of customers that are willing to pay for the premium service. Yet, Riot Games also effectively utilizes its non-paying customers by collecting data, selling advertising slots during tournaments and using them to attract whales. The general concept of freemium comes in handy for all the factors that lead to the games success and thereby the business model is perfectly suitable for Riot Games.

Further research of the general concept of micropayments and microtransactions, that are based on many psychological factors that influence the amount and frequency of those payments, are necessary. In order to understand how and why players do such purchases, further research should be conducted to see whether and if how much the success of League of Legends is based on that

construct. Since League of Legends is not the only successful multiplayer online battle-game that is based on a freemium business model, further research in the form of conceptual case studies could provide more insights of how these companies use the advantages of the business model. A comparison with Dota or Fortnite, the two biggest competitors of League of Legends, could provide further knowledge about the topic. In order to grasp the effectiveness of League of Legends business model, the actual conversion rate of the game should be analyzed, meaning to see how many players are willing to actually pay for the game.

A major limitation of the paper is the fact that only business model related factors were taken into evaluation. Since there are many other factors that strengthen or weaken the success of the game, the results give an incomplete picture. Other factors that contribute to League of Legends success are the well-balanced game design, the unique gameplay, the complexity of the game, the constant changes, the strong link between Riot and the community and huge amount of game related advertising and storytelling. Since the research methods focussed primarily on secondary data, further studies using primary data should be conducted.

REFERENCES:

1. **Anderson, C.** (2009), *Free: The future of a radical price*, 1st ed., Hyperion, New York.
2. **Arkenberg, C.** (2018), "On your marks, get set, game! eSports and the shape of media in 2019. TMT Predictions 2019", available at: <https://www2.deloitte.com/insights/us/en/industry/technology/technology-media-and-telecom-predictions/esports-viewership.html> (accessed 12 May 2019).
3. **Arkes, H.R. and Blumer, C.** (2000), "The Psychology of Sunk Cost", in Connolly, T., Arkes, H.R. and Hammond, K.R. (Eds.), *Judgment and decision making: An interdisciplinary reader*, Cambridge series on judgment and decision making, 2nd ed., Cambridge University Press, Cambridge, U.K, New York, pp. 97–113.

4. **Chen, W., Hua, Z., Zhang, Z.G. and Bi, W.** (2018), "Analysis of Freemium Business Model Considering Network Externalities and Consumer Uncertainty", *Journal of Systems Science and Systems Engineering*, Vol. 27, No. 1, pp. 78–105.
5. **Claypool, M., Kica, A., La Manna, A., O'Donnell, L. and Paolillo, T.** (2017), "On the Impact of Software Patching on Gameplay for the League of Legends Computer Game", *The Computer Games Journal*, Vol. 6, No. 1-2, pp. 33–61.
6. **Fields, T. and Cotton, B.** (2012), *Social game design: Monetization methods and mechanics*, Elsevier/Morgan Kaufmann, Amsterdam.
7. **Frederikson, E.** (2017), "Den store spørgeskema guide 2017", available at: <http://www.e-solution.dk/den-store-spoergeskema-guide-2017/> (accessed 12 May 2019).
8. **Goslin, A.** (2018), "The 2018 League of Legends World Finals had nearly 100 million viewers", available at: <https://www.rifthermal.com/2018/12/11/18136237/riot-2018-league-of-legends-world-finals-viewers-prize-pool> (accessed 7 May 2019).
9. **Hamari, J. and Sjöblom, M.** (2017), "What is eSports and why do people watch it?", *Internet Research*, Vol. 27 No. 2, pp. 211–232.
10. **Hayward, A.** (2019), "Red Bull to Sponsor League of Legends European Championship", available at: <https://esportsobserver.com/red-bull-sponsor-lec/#> (accessed 11 May 2019).
11. **Holm, A.B. and Günzel-Jensen, F.** (2017), "Succeeding with freemium. Strategies for implementation", *Journal of Business Strategy*, Vol. 38 No. 2, pp. 16–24.
12. **Kim, H.S., Hollingshead, S. and Wohl, M.J.A.** (2017), "Who Spends Money to Play for Free? Identifying Who Makes Micro-transactions on Social Casino Games (and Why)", *Journal of gambling studies*, Vol. 33 No. 2, pp. 525–538.
13. **Koch, O.F. and Benlian, A.** (2017), "The effect of free sampling strategies on freemium conversion rates", *Electronic Markets*, Vol. 27, No. 1, pp. 67–76.
14. **La Marín de Iglesia, Jose Luis and Labra Gayo, J.E.** (2009), "Doing business by selling free services", in Lytras, M.D., Damiani, E. and Ordóñez de Pablos, P. (Eds.), *Web 2.0: The Business Model*, Springer-Verlag US, Boston, MA, pp. 1–14.
15. **Lytras, M.D., Damiani, E. and Ordóñez de Pablos, P.** (Eds.) (2009), *Web 2.0: The Business Model*, Springer-Verlag US, Boston, MA.
16. **Marinescu, P., Toma, S-G. and Mihai, N.S.** (2010), "Pricing strategy used as a tool for building customer satisfaction in the retail sector", *Annals of Faculty of Economics*, Vol. 16, No. 1, pp. 1122-1127, available at: <http://steconomiceuoradea.ro/anale/volume/2010/n2/179.pdf> .
17. **O'Brien, S. and Kwet, M.** (2017), "#BlackFriday Announcement from Privacy Lab", available at: <https://privacylab.yale.edu/trackers.html> (accessed 9 May 2019).
18. **Pechtl, H.** (2014), *Preispolitik: Behavioral Pricing und Preissysteme*, utb-studi-e-book, Vol. 2643, 2., überarb. und erw. Aufl., UVK-Verl.-Ges, Konstanz.
19. **Pujol, N.** (2010), "Freemium. Attributes of an Emerging Business Model", *SSRN Electronic Journal*.
20. **Riot Games Inc.** (2017), "League of Legends Terms of Use", available at: <https://na.leagueoflegends.com/en/legal/termsfuse> (accessed 7 May 2019).
21. **Riot Games Inc.** (2018), "2018 WORLD CHAMPIONSHIP KOREA CITIES & DATES", available at: <https://eu.lolesports.com/en/articles/Worlds-Korea-Cities-Dates> (accessed 7 May 2019).
22. **Riot Games Inc.** (2019a), "New Player Guide. Getting started on Summoner's Rift", available at: <https://na.leagueoflegends.com/en/game-info/get-started/new-player-guide/> (accessed 11 May 2019).

23. Riot Games Inc. (2019b), *"The Howling Abyss"*, available at: <https://na.leagueoflegends.com/en/game-info/game-modes/howling-abyss> (accessed 11 May 2019).
24. **Russ, H.** (2019), *"Global esports revenues to top \$1 billion in 2019"*, available at: <https://www.reuters.com/article/us-videogames-outlook/global-esports-revenues-to-top-1-billion-in-2019-report-idUSKCN1Q11XY> (accessed 7 May 2019).
25. **Shaul, B.** (2016), *"Infographic: 'Whales' Account for 70% of In-App Purchase Revenue"*, available at: <https://www.adweek.com/digital/infographic-whales-account-for-70-of-in-app-purchase-revenue/> (accessed 10 May 2019).
26. **Shi, S.W., Xia, M. and Huang, Y.** (2015), *"From Minnows to Whales. An Empirical Study of Purchase Behavior in Freemium Social Games"*, *International Journal of Electronic Commerce*, Vol. 20 No. 2, pp. 177–207.
27. Spotify AB (2019), *"Spotify Premium"*, available at: <https://www.spotify.com/us/premium/> (accessed 9 May 2019).
28. SuperData Research Holdings, I. (2019), *"SuperData Digital Games and Interactive Media Year in Review – 2018"*, available at: <https://superdata-research.myshopify.com/products/year-in-review> (accessed 10 May 2019).
29. Tencent Holdings Limited (2019), *"2018 Annual Report"*, available at: <https://www.tencent.com/en-us/articles/17000441554112592.pdf> (accessed 10 May 2019).
30. **Tohanean, D. and Toma, S.-G.** (2018), *"Innovation, a key element of business models in the Fourth Industrial Revolution"*, *Network Intelligence Studies*, Vol. VI, No. 12, pp. 121–130.
31. **Toma, S.-G. and Marinescu, P.** (2012), *"Business models based on corporate social responsibility: The case of global pharmaceutical companies"*, *"Ovidius" University Annals*, Vol. XII, No. 1, pp. 1221–1225.
32. **Toma, S.-G. and Tohanean, D.** (2019), *"Green business models: The case of a German automaker"*, *Quality-Access to Success*, Vol. 20, Issue 2, pp. 635–640.
33. **Tran, K.** (2018), *"Why the esports audience is set to surge – and how brands can take advantage of increased fans and viewership"*, available at: <https://www.businessinsider.com/the-esports-audience-report-2018-11> (accessed 10 May 2019).
34. **Verhovnik, O.** (2019), *"Spotify Werbung: Welche Einblendungen gibt es und wann erscheinen sie"*, available at: <https://trusted.de/spotify> (accessed 9 May 2019).
35. **Voigt, S. and Hinz, O.** (2016), *"Making Digital Freemium Business Models a Success. Predicting Customers' Lifetime Value via Initial Purchase Information"*, *Business & Information Systems Engineering*, Vol. 58 No. 2, pp. 107–118.
36. **Wagner, T.M., Benlian, A. and 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*, Vol. 24 No. 4, pp. 259–268.
37. **Xing Se** (2019a), *"Datenschutzerklärung. 5. Wer erhält Daten zu Ihrer Person?"*, available at: <https://privacy.xing.com/de/datenschutzerklaerung/wer-erhaelt-daten-zu-ihrer-person> (accessed 9 May 2019).
38. **Xing Se** (2019b), *"Daten und Fakten. Fact Sheet"*, available at: <https://corporate.xing.com/de/unternehmen/daten-und-fakten/> (accessed 9 May 2019).
39. **Yin, R.K.** (2018), *Case study research and applications: Design and methods*, Sixth edition, SAGE, Los Angeles, London, New Dehli, Singapore, Washington DC, Melbourne.