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Discoverability Problem of Free-to-Play Mobile Games

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Gaining visibility is crucial to a mobile game's success. The competitive forces in mobile games market are strong, which pose challenges for game discovery. Low barriers to entry, minimal capital requirements and equal access to distribution platforms are some of the reasons the market is now flooded with staggering amounts of invisible, undifferentiated mobile games desperate for downloads.

The thesis will give a holistic view of the current discovery landscape of free-to-play mobile games. The main purpose is to come up with possible solutions to the discoverability problem faced by free-to-play mobile game developers by identifying the most influential discovery channels used by the mobile gamers. Potential marketing methods are discussed not only in comparison to the literature but to findings emerging from the secondary data to determine the most viable use of marketing resources.

The research design implemented in this work is a multi-method approach using both exploratory and descriptive research. Extensive literature review discussing mobile games, free-to-play business model, competition, marketing and consumer behaviour is conducted. Reliable industry surveys on application and mobile game discovery from four consecutive years are used as sources of secondary data.

It became evident that app stores and word-of-mouth were the most influential sources for game discovery. Interestingly, the two most influential discovery sources remained virtually unchanged during the surveyed years. Advertising and promotions were not reported as highly influential discovery channels. A highly valuable segment of mobile gamers were identified as sharers and whales, which the developers should try to attract by building social features and virality mechanics inside their games.

Marketing methods discussed include burst campaigns, featured position on app stores, app-store-optimisation, viral marketing, utilising video services, cross promotion and ad-networks. The mobile game developers should implement multi-channel marketing to optimise the chances of acquiring quality users.

Keywords	Mobile games, Free-to-play, Discovery, Competition, Marketing, Buying Process, Consumer Behaviour

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1 Introduction

The mobile games industry has seen explosive growth during the past years as smart phones and tablets have increasingly been adopted by the global population. The industry has matured over the years and is now reaching the point of saturation. There are millions of free-to-play mobile games fighting for the players' attention on app stores and thousands more are submitted each day. User acquisition costs have climbed sky-high and only few developers have large enough marketing budgets to engage in paid user acquisition. Large mobile game companies' titles keep dominating the top charts month after month and small developers' games drown in the flood of other zombie apps. Darwinism is at its full force in mobile game development – it is the survival of the fittest.

The researcher was employed by a small Finnish game studio and was in charge of the marketing activities such as planning user acquisition. It quickly became crystal clear that small mobile game developers with extremely limited marketing budgets had a hard time generating any downloads for their games. To add, most small game studios do not have in-house marketing expertise and some of those studios just develop a game and submit it onto app stores, hoping to generate downloads without any additional marketing support.

This research will try to offer possible solutions to the discoverability problem faced by game developers. Moreover, this work sheds light on player behaviour and tries to find the most influential and frequently used discovery channels, and what influences the player's decision to download a game. Once the most influential channels of discovery are identified, potential marketing methods are discussed to enhance the games' chances of being discovered by the targeted audiences.

In addition to studying the discovery landscape, the thesis also aims to provide a comprehensive view of the current state of the free-to-play mobile games market as a whole.

2 Literature Review

2.1 Mobile Games

It is useful to start by examining definitions and what is meant when referring to a mobile game. "Mobile games – more precisely, mobile network games – are narrowly defined as games conducted in handheld devices with network functionality. The two key elements of this definition are *portability* and *networkability*" (Jeong & Kim 2009: 290). Another definition from Techopedia.com (n.d.) defines mobile games as follows: "Mobile games are games designed for mobile devices, such as smartphones, feature phones, pocket PCs, personal digital assistants (PDA), tablet PCs and portable media players. Mobile games range from basic (like Snake on older Nokia phones) to sophisticated (3D and augmented reality games)." The broader definition of mobile games by Jeong & Kim (2009) also include mobile devices without networking possibilities such as calculators but the mobile games and devices referred to in this work mainly fall under the more narrow mobile game definition.

The first ever mobile games were embedded in graphic Texas Instruments calculators in the late 1980s (Entertainment Software Association 2012) but it was not until Nokia preinstalled Snake onto its mobile phone model 6610 in 1997 that attracted a worldwide audience: the first generation of mobile games was born. It is roughly estimated that some 350 to 400 million phones have offered Snake as a standard feature and it is still argued to be the most famous mobile game of all time (Wright 2008). After Snake's worldwide success, many similar games followed suite but the game programmers were severely restricted by the hardware of the time. Fortunately, mobile phone technology saw rapid advancements in the following decade from inventions like WAP (Wireless Application Protocol) which allowed access to the World Wide Web and rudimentary multiplayer options, to introducing first colour screens and the wider acceptance of Java programming language, all the while mobile phones were becoming more powerful to support more intricate software (Entertainment Software Association 2012; Langshaw 2011; Phone Arena 2011).

The revolution of mobile games sparked when Apple launched its first generation iPhone in 2007 because it paved the way for what was going to happen next. Albeit its

mobile operating system called the iOS supported ever more complex software and its touch screen user interface and accelerometer support allowed for more sophisticated mobile games to be developed in terms of motion controls (Langshaw 2011), it was not as technically superior to other handset devices of its time as argued (Clark 2014: 3). The underlying reason why iPhone became such a successful mobile gaming device was Apple's introduction of its App Store in July 10th 2008, which completely revolutionised the mobile game ecosystem by providing an easy-to-access platform for developers and customers alike to connect directly without the previous gatekeepers such as publishers and carriers/operators (Clark 2014: 3-4; Entertainment Software Association 2012; Wright 2009).

Addition to iPhones and iPads, there are of course other smartphones and tablets suited for mobile gaming such as the Galaxy line from Samsung, Windows 7 phone from Microsoft and Google's Nexus to name a few (Langshaw 2011). Mobile phones and tablets e.g. Samsung's Galaxy line using Android, a mobile operating system launched by the Open Handset Alliance, have a platform similar to Apple's App Store called Google Play which was also launched in 2008. Additionally, Amazon has launched its own Android app store in 2011 and Microsoft its Windows Phone Store in 2010 but their available content is not as extensive compared to App Store and Google Play (Entertainment Software Association 2012; Langshaw 2011; Statista 2015).

To highlight the evolution of mobile games and the processing power of mobile devices, the comparison of mobile games Snake from 1997 and Infinity Blade III from 2013 (figure 1 below) clearly shows the advancements in mobile technology.

Figure 1. Comparison of Snake to Infinity Blade III. Adapted from Kwalee (2012) & Sheridan (2013).

According to Tony Tamasi, Senior Vice President of Content & Technology for Nvidia, (Chester 2013), the next-gen smartphones could be capable of outperforming PlayStation 3 and Xbox 360 in terms of graphic processing. This leads to a whole other discussion on graphics versus gameplay.

2.2 Mobile Games Industry

The rise of the mobile games sector within digital games industry is probably the most intriguing change in the history of video games since the invention of first consoles, which brought the games from nerds' computer rooms to the centre of living room. With mobile games, the industry has shifted from targeting primarily "hard-core", "tech-savvy" and mostly young male players to delivering diverse experiences and playful activities serving different functions to increasingly more diverse audiences (Chatfield 2010: 61-62; Kultima 2010). Kultima (2010: 105) argues this expansion of target audiences to be a "normalisation of digital play" rather than a new phenomenon. She states that the other entertainment media such as TV shows and movies have been accepted and consumed by more heterogeneous groups than games, thus it is "normal" for games to reach a wider acceptance and consumption point as well.

According to Newzoo (2014a), a games market research firm, the whole games industry generated 75.5 billion dollars in revenues in 2013, out of which mobile games sector generated $17.6 billion, accounting for 23 per cent share of the whole video games industry as illustrated in figure 2 below.

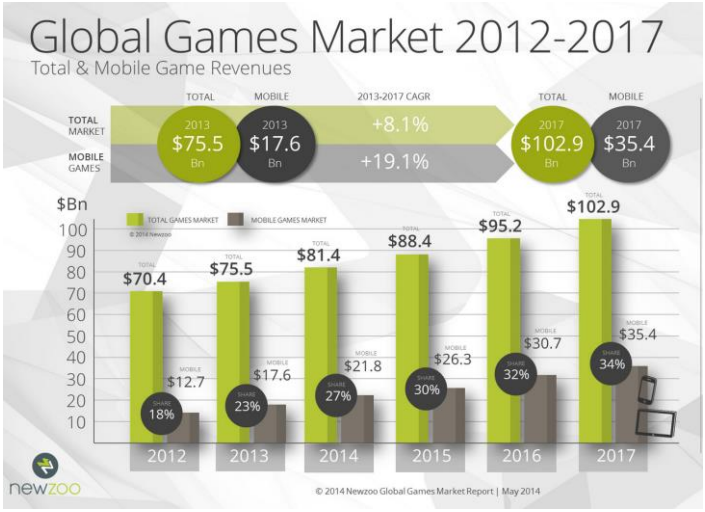

Figure 2. Global Games Market 2012-2017, Total & Mobile Games Revenues. Newzoo (2014a).

Newzoo (2014a) estimates the mobile games sector will grow to an impressive $35.4 billion by 2017, hogging one third of the global video games market, pushing the whole industry total to a staggering 102.9 billion dollars. As figure 2 depicts, the mobile games sector will have an estimated Compound Annual Growth Rate (CAGR) from 2013 to 2017 of +19.1 per cent, whereas the whole games industry will have a CAGR of +8.1 per cent.

The increased revenues are a direct consequence of the expanding player base, which has reached a total of 6.1 billion gamers globally (Newzoo 2014a). However, to measure growth and fully understand changes in the mobile games market, it is argued (Newzoo 2013) the amount of paying players and the growth in time spent playing games should also be included as key performance indicators. A good argument for this is the fact that free-to-play has become a dominant business model in mobile games and the amount of players does not correlate with paying players.

Nevertheless, the games industry has been one of the few industries unfazed by the recession, has shown growth since 2007 (Bulik 2008) and is still not showing any signs of curbing with mobile games leading the growth. With such growth prospects and success stories like Rovio's Angry Birds and Supercell's Clash of Clans, it comes as no surprise that there is a "gold rush" to the mobile games industry with new developers popping up one after another.

The evolution of mobile games industry can be described in three (3) distinct waves (Moller 2013): 1) *Carriers acting as gatekeepers*. Mobile game developers had to persuade the carriers in order to get their games on feature phones. 2) *Rise of an open marketplace*. Apple opened the App Store in 2008, eliminating the gatekeepers and giving every developer an equal footing. 3) *Saturation point*. As the industry has matured, and there are virtually no barriers to entry, the market is bombarded with a vast variety of games and developers are increasingly worried about their games being discovered. The developers have a good reason to be worried as Google pronounced in July 2013 that it had reached the 1 million mark in apps available in its Google Play app store (Rowinski 2013) and Apple's App Store followed in its wake in December the same year (Scott 2013).

A mobile games trend report (Newzoo 2013) mapped five (5) key trends that are currently leading the change in the global games market:

1. Multiple screens. Five years ago, gamers played mainly on two screens: the TV and the PC. Now the numbers of screens have doubled to floating screens (tablets & handheld consoles) and personal screens (smartphones). Already 21 per cent (EU) and 22 per cent (US) of gamers play games on all four screens.
2. Free games. Gamers are now used to getting game content for free before they decide to spend money. Free-to-play business model has proven to be successful. The next stop for free might be the TV screen.
3. Games are services. With in-game spending business models, monetisation takes place within the game on consumer's own terms, therefore publishers and developers need to engage the player as long as possible.
4. Business model balancing act. As games are now services, the business model needs balancing between value for the consumer and profit for the developer/publisher.
5. Global market place. The games market is now truly a global playground. Online connectivity allows companies to launch games anywhere on the planet. The emerging markets are important to game companies' strategy in order to secure growth.

These five trends need to be considered and recognised by developers starting from game design, and extended from marketing strategies to business strategies in order to be successful in the mobile games industry.

2.3 Free-to-Play

Seufert (2014: 1) provides the following definition of the freemium business model: "The freemium business model stipulates that a product's basic functionality be given away for free, in an environment of very low or no marginal distribution and production costs that provides the potential for massive scale, with advanced functionality, premium access, and other product-specific benefits available for a fee."

Free-to-play (F2P) is based on a freemium business model where the game and its functionality are given away for free and the revenues are generated with micro-transactions (In-App-Purchases) and/or in-game advertisement within the game. Free-to-play extends from mobile platforms to PC and consoles and is used in a variety of game genres e.g. Massively Multiplayer Online games (MMO's), social network games, casual games and multiplayer shooter games (Alha et al. 2014).

Free-to-play business model in digital games was largely pioneered by Asian MMO games the likes of Neopets (1999) and Maple Story (2003) which both had purchasable virtual items. Nexon, a South Korean based developer of Maple Story, was among the first companies to fully embrace the micro-transaction model (Clark 2014; Sheffield 2008).

Seufert (2014: 2) outlines three (3) realities of the freemium business model:

1. With a price of $0, the product is accessible to the largest number of people.
2. Some users will never convert to paying users.
3. A portion of users might end up spending more money with the product/service than they would have if the product/service was a one-time purchase.

Seufert (2014) specifies that only 5 percent of the customers ever monetise (spend money) on the freemium product/service, so a small base of customers need to generate enough revenue to support a large base of non-paying users in order for the company to be profitable. Actually, the number of paying customers in mobile games is even more depressing as a study of millions of mobile gamers by Swrve, a mobile-marketing-automation firm indicates: the figure has come down from 1.50 per cent in

January 2014, to a mere 1.35 per cent of players monetising in July (Takahashi 2014). Lovell (2013) also points out the same issue and states that the freemium business model has faced lots of criticism because the ratio between a huge audience of non-paying users and the small proportion of paying users is not seen as sustainable.

Aggressive monetisation methods combined with shallow gameplay are regularly seen as a trait of free-to-play. The developers need to balance between designing a game which is a fun experience to the player while persuading the player to spend money during game play, even though the player could continue playing for free (Alexander 2013; Alha et al 2014). Zagal, Björk and Lewis (2013) have written a research paper discussing some of the deliberate game design mechanics of adding hindrances to the game play, which intentionally slow down the game progress for the player unless they pay money. These game design mechanics are referred to as "dark patterns", and they cause negative experiences for players. These practises are at best questionable, as the goal of any responsible developer should be delivering fun, engaging experiences to the players rather than exploitative game mechanics for short-term profits (Alha et al. 2014).

Moreover, a portion of players consider free-to-play disruptive. Lin and Sun (2011) studied players' opinions and attitudes towards free-to-play and their findings suggest that players who were against free-to-play considered the model as unfair, the games less fun, decreasing the game play quality and disrupting the immersion in the game play. Paavilainen et al. 2013 (cited in Vankka 2014) discovered similarly negative results where players felt the games did not offer enough value in exchange for their money and thought that using real money to purchase virtual items in the game would imbalance the difficulty, thus impairing the whole gaming experience.

The industry professionals interviewed for the research paper by Alha et al. (2014) agreed that there is negativity towards free-to-play amongst players; however it was seen coming from a small loud minority. In fact, it was clear to the game professionals that there is a vast audience of mobile players who enjoy playing free-to-play games and are willing to spend money on digital content within the games.

That being said, another issue has surfaced concerning children and free-to-play. The European Commission has started investigating free-to-play games and especially the in-app-purchases made by children (European Commission 2014). European Commission is expecting Apple and Google to stop advertising games as free and make it more evident the games contain in-app-purchases. Google has since complied and no longer refers to free-to-play games as free, at least in European Google Play app stores (Johnson 2014). Similar issues surfaced in the US, where parents were billed for the purchases their children had unknowingly done while playing free-to-play games, resulting in a law-suit from the Federal Trade Commission. Apple settled the law-suit with paying $32.5 million to 37 000 different customers (Brandom 2014).

Game designers seem to widely agree on the fact that fee-to-play has made designing games more challenging (Luton 2013a; Luton 2013b; Jordan 2014; Grönholm 2014). Touko Tahkokallio, game designer from Supercell, tells his view (Grönholm 2014: 61): "Although free-to-play has many good features, such as trying the game for free, monetisation also restricts the game design. Personally, I see the game selection becoming more homogeneous as the greatest threat. Not all game types fit free-to-play as well. [translation mine][1]" Additionally, Peter Molyneux, game designer famous for Dungeon Keeper and the Fable series stated that "free-to-play is constraining our ability to be creative" (Jordan 2014) and Luton (2013b) writes that "F2P simply makes making games more difficult."

Despite the criticism and challenges free-to-play has generated, it has become the dominant business model in the mobile games market, and most of the top grossing mobile games are free-to-play. The transition from premium to free-to-play was complete by June 2011, when the free-to-play games' revenues overtook premium games' share of revenues (Valadares 2011). As seen in figure 3 (see page 10), the top ten grossing mobile games in Apple's App Store in October 2014 were all free-to-play games containing in-app-purchases. The same top grossing ranks in Google Play Store also had only free-to-play games at top ten charts. When looking at top 100 charts for the same month for both App Store and Google Play Store, there were only two paid

[1] "Vaikka free-to-playssa on paljon hyviä ominaisuuksia, kuten juuri pelikokeilun ilmaisuus, niin monetisaatio myös rajoittaa suunnittelua. Itse näen suurimpana uhkana, että pelivalikoima homogenisoituu. Kaikki pelityypit eivät toimi yhtä hyvin free-to-playssa."

mobile games in App Store and only one paid mobile game in Google Play Store, the rest on the top 100 charts were all free-to-play (Distimo.com 2014).

Rank		App	Price	IAP
1 –		Clash of Clans Supercell		
2 –		Candy Crush Saga King.com Limited		
3 –		Game of War - Fire Age Machine Zone, Inc		
4 –		Puzzle & Dragons GungHo Online Entertainment, Inc.		
5 –		モンスターストライク mixi, Inc		
6 –		Hay Day Supercell		
7 ▲ 3		刀塔传奇-剑圣的觉醒 龙图游戏		
8 ▼ 1		Boom Beach Supercell		
9 –		Farm Heroes Saga King.com Limited		
10 ▲ 1		LINE LINE Corporation		

Figure 3. Top grossing mobile games. Top overall in all countries. October 2014. Distimo.com (2014).

The leader boards from Distimo.com (2014) emphasize how successful the free-to-play model in mobile games market has proven to be. The research by Alha et al. (2014), where fourteen game professionals were interviewed on free-to-play, concludes that although free-to-play generated some mixed feelings between the respondents, it was still regarded mostly positive by developers. Tahkokallio also said in his interview (Grönholm 2014: 61) that he sees free-to-play as a positive challenge, and he is sure that new monetisation models will be invented. Luton (2013b) agrees and writes "What we have now [free-to-play] isn't the endgame in making money from games; it's just the best next step of a long march." Nevertheless, Alha et al. (2014) raise a valid question shared by Peter Molyneux (Jordan 2014) regarding the future of the whole games industry, whether free is the only way to provide games in the future as the new generations are now conditioned to expect games for free.

2.4 Competition

App Developers Conference survey (News.ubm.com 2013), with 250 developers surveyed found out that piracy and discoverability were regarded as the two key issues facing app developers; however discoverability was cited as the number one problem within the app development market. As Nicholas Lovell argues (2013: 2), "the real disruptive threat comes from competition, not piracy." There are millions of mobile game developers globally and more are entering the market incessantly.

According to a study by Evans Data, a market researcher for software development industry, there are currently 8.7 million mobile software developers in the world (Schick 2014). However, there is no exact information on the percentage of mobile developers who focus solely on developing mobile games, although research by Vision Mobile (2014) suggests that figure to be 2.3 million. Theoretically, each of these mobile developers could start a one person game studio and enter the market, as Toni Fingerroos did by founding his own studio Fingersoft, and single-handedly taking the world by storm with his mobile game title Hill Climb Racing.

It is not just competition from every existing potential mobile developer out there one needs to look out for but also game studios that were previously only developing AAA-titles for console and/or PC. The steadily climbing production costs of AAA titles have led to polarisation of the industry, leaving the giants and indie studios afloat but squeezing out the middle-sized developers. The bankruptcies of studios like UK based Real-Time Worlds have resulted in talent transferring from console and PC space into mobile sector and creation of new independent mobile game studios (Clark 2014: 7; Lovell 2013: 63-64). Furthermore, AAA studios like Finnish Remedy have also ventured into mobile games sector with a launch of their first free-to-play mobile game Agents of Storm (Honkala 2014).

Kim Soares (2014), the CEO of Kukouri Mobile Entertainment, points out the extreme polarisation of mobile game sector in terms of revenue generation. He writes in his article in Pelit-magazine that the top ten grossing mobile games on the charts generate more revenue than the next 500 games on the chart put together, while the top three make more than the other top ten games altogether. Research by Gartner, the world's

leading information technology research and advisory company, predicts that "only 0.001 per cent of consumer mobile apps will be considered a financial success by their developers through 2018" (Gartner 2014).

Moreover, the sheer number of mobile games submitted to Apple's App Store each month is overwhelming, data indicates 11 463 submissions of games into App Store in October 2014 alone and the highest peak ever was reached in August 2014 with 13 137 mobile games submissions. Interestingly enough, the monthly mobile games submissions did not reach ten thousand yet in year 2013 but since March 2014 the ten thousand games submissions have been broken each month (Pocketgamer.biz 2014). Unfortunately, most of these apps fail. A report by VentureBeat (Koetsier 2014) states that out of the sheer number of submitted mobile apps, 70 per cent generate less than 5000 downloads and Bouchard (2012) writes that while almost one billion apps are downloaded onto devices monthly, one in four of those apps will never be used.

2.4.1 Bertrand Competition

Joseph Bertrand (1822-1900) was a French mathematician whose economic competition model based on price is known as Bertrand competition. His competition model surfaced when he critiqued the competition model of another French economist Antoine Cournot (1801-1877). Bertrand critiqued Cournot's decision to use firm's production volume as a variable in competition, and made his own model using price as the main variable (Anderson 2009; Lovell 2013).

In Bertrand model the companies compete on setting the price lower than competitors' rather than limiting the production volume to raise prices and profits. Bertrand model assumes the products are homogeneous and that consumers will buy from the firm with lower prices. The model also assumes that the marginal costs for the firms are the same (Anderson 2009; Lovell 2013).

Anderson (2009) and Lovell (2013) discuss the current competitive situation in mobile game industry as a prime example of Bertrand competition where in a competitive market price falls to the marginal cost. According to Bertrand competition, companies

will lower prices to gain more market share and keep on undercutting one another until the price reaches just above the cost of production.

Mobile games are distributed digitally in online markets with endless shelf-space and rather than a retail boxed-product, the quantity of digital goods can be increased without additional costs to the developer, thus driving the marginal cost towards zero. As bandwidth costs, software developers' kits, distribution platforms and cloud storage are becoming cheaper and even free, the cost of production is close to nothing, thus driving the prices down.

The economic rule of Bertrand competition has led the mobile game industry to "race to the bottom", resulting in an era of free-to-play. When App Store was launched in 2008, initially some of the games were priced as high a as $9.99 but soon competition started lowering the prices "all in the name of discovery" (Lovell: 46).

In the beginning, the algorithm for App Store's top rank chart only considered the number of downloads, which also influenced developers' pricing strategies, so if the developers wanted their game to be discovered in the app store, the price had to come down in order to generate enough downloads to chart. Electronic Arts used this cleverly to its advantage in 2010 just before Christmas by cutting the prices of seventy (70) of its mobile games to $0.99, e.g. titles like Need for Speed Shift that were regularly priced at $12.99. Cutting the prices led to massive amounts of downloads driving twelve (12) EA's games to top 100 charts and in front of millions of eyeballs, once the new iPhone and iPad owners opened their new devices and started looking for games after Christmas (Appchatter 2010).

2.4.2 Porter's Five Forces

"Porter's Five Forces Framework helps identify the attractiveness of an industry in terms of five competitive forces: (i) threat of entry, (ii) threat of substitutes, (iii) power of buyers, (iv) power of suppliers and (v) extent of rivalry between competitors" (Johnson et al. 2014: 41). Figure 4 below illustrates the model.

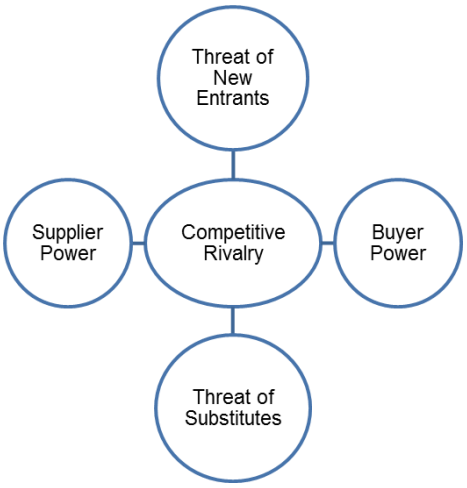

Figure 4. Porter's Five Forces model. Adapted from Johnson et al. (2014: 42).

The following part will go over the five (5) competitive forces in a bit more detail. Theory part for Porter's Five Forces is from Johnson et al. (2014: 41-49). The implications for free-to-play mobile games industry follow the identification of each competitive force.

i. The threat of entry

How easy it is to enter the industry influences directly the amount of competition. Thus the industries with high barriers to entry are seen as attractive in Porter's model because they keep competition at bay. Porter lists five (5) different barriers to entry:

- Scale and experience.
- Access to supply or distribution channels.
- Expected retaliation
- Legislation or government action
- Differentiation

As mentioned earlier in part 2.2, the annual growth rate of mobile games sector is rapid and shows no signs of curbing. According to Porter 2008 (cited in Suter 2012) the rapid growth rate of an industry does not necessarily translate into an attractive industry. Quite the contrary, the growth of the sector and the success stories of some developers attract more hopeful entrants to the industry, which has very low barriers to entry.

In free-to-play mobile games industry, the economies or diseconomies of scale do not have an effect, at least in terms of producing units when the product is bits of data transferred digitally and the amount of units can be infinite without extra costs to the developer (Fischer 2014).

There is no high capital expenditure required, as hardware technology has become more affordable and some game development engines such as Unity are free now. Currently, production costs of a mobile game is significantly lower than those of AAA games, however as mobile devices evolve and become more efficient the players' expectations will rise and the need for a higher capital expenditure will also, raising the barrier to entry in the future (Futurebooks 2011).

The experience curve gives an advantage to incumbents, the existing players, over new entrants because they already have experience with free-to-play model and know-how on monetisation and retention. Nevertheless, it does not act as a high barrier to entry alone because new entrants can still enter the market due to other low barrier factors such as access to same distribution channels. New entrants have the equal opportunity to distribute via e.g. Apple's App Store or Google's Play store as any other incumbent (Fischer 2014; Futurebooks 2011; Suter 2012).

Moreover, "it is difficult to retaliate in a form of price war when the products in free-to-play mobile game industry are already free" (Fischer 2014). However, the evolving mobile game mega studios could retaliate by increasing their marketing expenditure towards user acquisition, thus discouraging new entrants with lesser marketing budgets. Currently, there are also no legislation or government regulations to restrict entry to the market. Finally, differentiation in mobile games is challenging as competitors follow successful titles and then quickly come up with clones of the new and differentiated games (Fischer 2014).

ii. The threat of substitutes

"Substitutes are products or services that offer a similar benefit to an industry's products or services, but have different nature" (Johnson et al. 2014: 45). The aim is to consider threats coming from outside the incumbent's industry rather than focusing on competition within the incumbent's own industry.

Evident substitute products posing a threat to mobile games sector incumbents include games developed for consoles and PCs, which offer a similar yet improved gaming experience. In addition, mobile games are mostly designed for short playing sessions to fill "dead space" e.g. while waiting for the bus or while waiting for the commercials to end on TV, hence social media sites, news sites, e-readers, magazines and even books pose a substitute threat. The mobile games also offer entertainment, thus the time consumers allocate to other forms of entertainment such as TV shows, movies or music substitute for the mobile games (Fischer 2014; Suter 2012).

iii. The power of buyers

Buyers are the incumbent's immediate customers. The power of buyers is likely to be high if either of the following conditions prevails:

- Concentrated buyers
- Low switching costs

In the mobile games industry, the end consumer is the immediate customer because distributing platforms have bypassed the middlemen. Concentrated buyers refer to a few customers whom account for the majority of the sales, which is exactly the situation in mobile games; a few paying customers spending enough to support the vast non-paying portion.

Low to zero switching costs prevails in mobile, as buyers have no monetary value invested in the download of a free-to-play game and can easily switch between products of one developer to another if the game fails to entertain them, by simply downloading new game(s) for free from one of the app stores. Additionally, the buyer power is heightened with the vast amount of mobile game apps available. However, increasing brand-loyalty towards certain game developers and/or game franchises lowers the bargaining power of buyers by increasing psychological switching costs (Fischer 2014; Futurebooks 2011)

iv. The power of suppliers

"Suppliers are those who supply the organisation with what it needs to produce the product or service" (Johnson et al. 2014: 46). The bargaining power of suppliers is probably high if the following conditions apply:

- Concentrated suppliers
- High switching costs
- Supplier competition threat

Because mobile games industry operates in form of e-commerce providing digital goods, identifying supplier power is a bit more challenging. However, the most evident suppliers would be the hardware and engine suppliers but companies offering the distribution channel to the market such as Apple, Google, Amazon and Microsoft could be regarded suppliers as well. There are only a few engine suppliers for mobile developers like Unity, and lately CryENGINE and Unreal, so these concentrated suppliers have power over developers. The distribution channels are also concentrated suppliers leaving developers in a weak negotiating position for terms and revenue cuts. Currently Google and Apple take a 30 per cent share of the developers' generated revenues (Fischer 2014).

The high switching costs would occur if the developer would not want to interact with the suppliers and for instance build their own engine or distribution platform (Fischer 2014). Moreover, switching from other operating platform to another would mean porting the game to the new platform, which would also result in switching costs. Switching costs from Unity to another engine would be significant as Unity offers a free version of its engine.

Supplier competition threat implies that the suppliers have the power to cut out the buyers acting as middlemen, which is called forward vertical integration (Johnson et al. 2014: 46). Unity and Google have started to develop games as well rather than just supply the game developers with development tools and a distribution channel. However, as Unity still needs developers as buyers and Google needs developers to supply its app store with more products and to generate profit for them, the forward vertical integration of these suppliers is not the biggest threat to profitability (Fischer 2014).

v. Competitive rivalry

"At the centre of five forces analysis is the rivalry between the existing players- 'incumbents' in an industry. The more competitive rivalry there is, the worse it is for incumbents. Competitive rivals are organisations with similar products and services aimed at the same customer group…" Johnson et al. (2014: 41). There are five (5) different factors to competitive rivalry:

- Competitor balance
- Industry growth rate
- High fixed costs
- High exit barriers
- Low differentiation

As concluded earlier, free-to-play mobile games industry does not require high capital investment; therefore the high fixed costs factor does not affect competitive rivalry in the industry. The exit barriers in the industry are also relatively low due to same reason. The high growth rate of the industry is a positive factor when looking solely at competitive rivalry because the incumbents can grow with the market rather than try to capture market share from other incumbents in low growth or declining industries (Johnson et al. 2014: 42).

According to Porter (cited in Suter 2012) when incumbents are roughly equal in size, the competition intensifies. The statement was true in free-to-play mobile industry not too long ago, however it has gradually changed as the most successful mobile game studios top the static top charts month after month. As the CEO of mobile game company SGN Chris DeWolfe points out (Campbell 2014) "it's [mobile games market] not a fragmented market anymore. It's about powerhouses. It has begun to create a chasm between the really large mobile players and the others." Moreover, low differentiation in mobile games is evident, and Porter states homogeneous products/services lead to zero-sum competition, which in turn cuts the profitability (Suter 2012).

The main purpose of Porter's Five Forces is not to merely list the forces but to gain insight on whether the industry is a good one to compete or not (Johnson et al. 2014: 48). The competitive forces affecting the profitability in mobile industry are rather

strong, and especially the low barrier to entry should make possible entrepreneurs think twice about entering the industry as Johnson et al. (2014) state that low entry barriers are precisely the wrong reason to choose an industry because the market is prone to be highly or perfectly competitive, as is the case in free-to-play mobile games.

2.5 Marketing

2.5.1 Transaction Approach VS Relationship Approach

Many scholars (Huotari & Hamari 2012; Stenros & Sotamaa 2009), industry representatives (Campbell 2014; GamesIndustry.biz 2008; Sheffield 2008) and authors (Clark 2014; Lovell 2013; Seufert 2014) discuss the shift to games as services, rather than products. Stenros & Sotamaa (2009: 7) call it the rise of the service paradigm where "the implication is that players crave a wider spectrum of services, not just digitally distributed game content". Additionally, Clark (2014: 6) thinks that the shift to free-to-play and the rise of games as services go hand-in-hand: "With a freemium game we are no longer selling the gameplay itself…We have to focus on selling things that players want to help improve their playing experience."

As there is a consensus across the literature that games are evolving into services, and are digital in nature, the traditional marketing plans need to be reconsidered. "While basic marketing principles – such as positioning and segmentation- will remain, digital channels will extend and accelerate how marketers engage consumers" (Wertime & Fenwick 2008: 29). Nevertheless, Clark (2014) and Hamari & Lehdonvirta (2010) discuss the merging of classical marketing theory with game design and how designers still need to be aware of the core marketing mix variables such as 4P's (Price, Product, Promotion, Place).

Grönroos (2007) outlines an alternative view in marketing: customer management in service competition. For service competition, Grönroos (2007: 6) offers the following definition "competitive situation where the core solution is the prerequisite for success, but where the management of a number of services, together with the core solution, forms a total service offering and determines whether or not the firm will be successful." In other words, the core product/service needs to be good enough in

order to attain business and even a competitive advantage but to reach sustainable competitive advantage the core offering needs to be supplemented by the development of customer relationships encompassing various services.

Grönroos (2007) argues that in traditional marketing theory acquiring new customers and making sales are the main goals with not much consideration of repeat customers or building relationships with them. He labels the traditional marketing theory as transaction marketing. Grönroos continues to explain that in today's highly competitive and increasingly more global markets where acquiring new customers is costly, it is equally important to focus on keeping current and repeat customers satisfied and retained, thus a transaction oriented marketing approach is not viewed effective or appropriate. Instead, Grönroos (2007) writes that the interactions and relationships between parties (service provider and customer) are considered the core of marketing and if these relationships are managed appropriately, the sales will follow.

In video games, the transaction marketing model works well with boxed games sold in retail stores. With boxed games, the marketers merely need to persuade the customer to pass the threshold to complete a one-time purchase and beyond that transaction, the marketing efforts or game design are not designed to build further relationship with the customer (see table 1). With free-to-play business model, where the entry to the game is free, the marketing efforts along with game design aim to build relationships with customers as well as aid the customer in transitioning between the relationships stages of acquisition, retention and monetisation (Hamari & Järvinen 2011).

Table 1. Business models and the shift in customer relationship building emphasis. Adapted from Hamari & Järvinen (2011: 14).

Game type	**Primary revenue**	**Pricing**	**Design emphasis**	**Relationship emphasis**
Boxed games	Retail	Single price	Attractiveness, lots of initial content	Acquisition
Free-to-play games	Virtual good sales, in-game advertising	Microtransactions	Virality, incentivising game mechanics	Acquisition, retention, monetisation

2.5.2 Customer Relationship Management

Customer relationship management (CRM) is a holistic marketing-led approach to building and sustaining long-term business with customers, which was formed by a combination of direct marketing, relationship marketing, database marketing and one-to-one marketing approaches. Electronic customer relationship management (e-CRM) refers to using digital communication technologies rather than traditional communications (Chaffey & Ellis-Chadwick 2012: 312-314).

The main concept of CRM is to deliver tailored and timely marketing communications to individual customers (or customers with similar needs) by collecting databases of past, current and potential customers and creating different segments of the target customers by value, their behavioural patterns and their current position in the customer relationship lifecycle. Additionally, customer relationship management paradigm includes four (4) marketing activities (see figure 5 for supporting activities):

1. Customer selection
2. Customer acquisition
3. Customer retention
4. Customer extension

By studying the four marketing activities in figure 5, it is evident that choosing the right media channels in each stage is crucial in generating quality traffic. However, the challenge for each business is to identify the most cost effective channels.

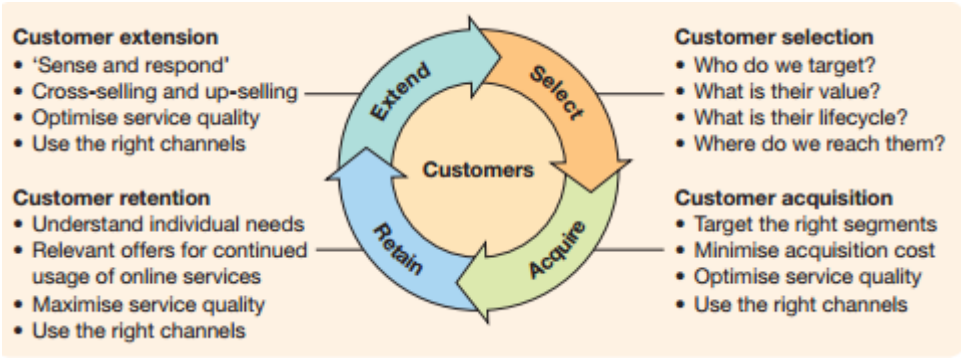

Figure 5. The four classic marketing activities of customer relationship management. Chaffey & Ellis-Chadwick (2012: 324).

2.5.3 Customer Relationship Lifecycle

Citing Grönroos (2007: 269-270) there are three (3) distinct phases in the customer relationship lifecycle: 1) the initial phase, 2) the purchasing phase and 3) the consumption (or usage) phase.

Grönroos (2007) suggests that identifying the present position of a customer in the lifecycle has great implications on marketing objectives and the chosen marketing activities as they will differ at each phase. In the initial stage, the customer is not yet aware of the company or its services, therefore the marketing objective is to spark interest through, for example, promotion to nudge the customer into the next stage, the purchasing process.

The customer in the purchasing process then evaluates the company's value proposition in relation to other companies', and if the customer should choose to accept the promise, they make the first purchase in order to try the service, thus moving on to the final stage of the process, the consumption. During the consumption process, the promises made in the purchasing process should be fulfilled leading to a positive perceived service quality and customer satisfaction. Naturally, the customer might exit the lifecycle circle at any point without transitioning to the next phase, and ultimately after the consumption phase the customer might either become a repeat customer or if the perceived quality was negative, leave completely.

In free-to-play, however, it is arguable that there are two purchasing processes: the process leading to the decision to download a free game, and the process to purchase virtual items within the game itself. As some players can go through the whole customer relationship lifecycle without ever making a purchase or the game can be solely supported by ad revenue, the purchasing process referred to in this work pertains to the former.

2.5.4 Player Lifecycle

Clark (2014: 63-70) portrays player lifecycle, which shows the player's engagement levels with a game service. Player lifecycle has four (4) phases as illustrated in figure 6 below, which are: 1) discovery 2) learning 3) engaging and 4) churning. The figure also shows the player lifecycle in comparison to the technology adoption lifecycle and the gap, or "chasm", found between the innovators/early adopters and the early majority, and in between the phases of discovery/learning and engaging.

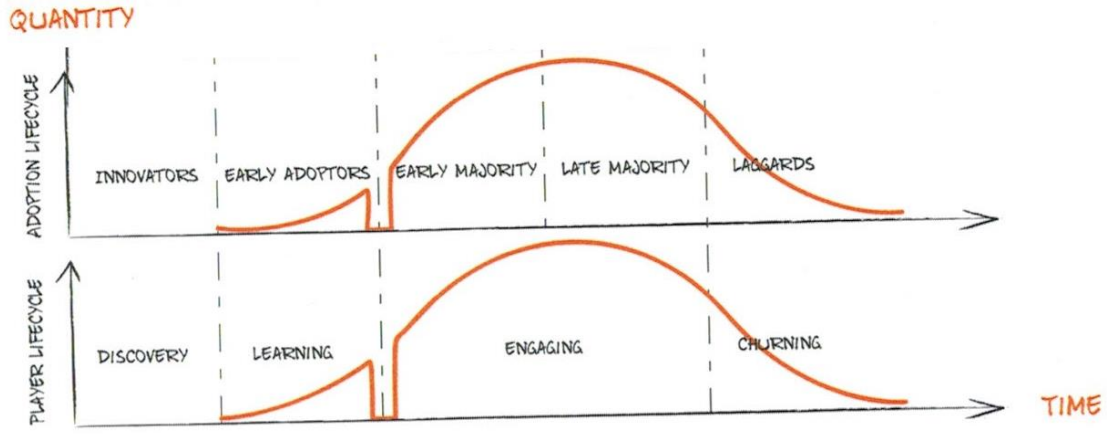

Figure 6. A comparison of technology adoption and player lifecycle. Adapted from Clark (2014: 63).

Geoffrey Moore, writer of the transformational "*Crossing the Chasm*", describes the technology adoption lifecycle as "the evolution of any given community's acceptance of a disruptive innovation" (Schawbel 2013) and his book "describes the gap between the adoption patterns and preferences of different user segments" (Mohr Davidov Ventures 2014). In Moore's work, the early user segments are combined of technology enthusiasts (innovators) and visionaries (early adopters) and the early majority is combined of pragmatists (Chasm Institute 2014). Clark (2014) suggests that these user segments in video games are hard-core gamers (innovators, early adopters) and the casual gamers are the early majority, and these user segments differ in their behaviour, needs and abilities to accept a game service.

1) *Discovery.* In player lifecycle, a player who is in the discovery phase first has to be made aware of the game by using the appropriate channels ranging from word-of-mouth to app store optimisation, creating an interest to play while setting

expectations. In this phase, it is of upmost importance to make the exposure as enticing as possible, which will make the player feel the game is worth to invest their time and possibly money into. Additionally, acquiring the game should be made effortless. (Clark 2014; Luton 2013c: 143)

In the discovery phase, the traffic can come from multiple different sources like advertising or viral traffic, however the majority of players who are exposed to the game offering at this phase do not follow-up with a desired action which is download the game and start engaging (Luton 2013c: 143). Thus, the number of downloads at the discovery phase is not the ultimate measure of success because some players could have up to 75 games on their devices, out of which only a few might be used regularly and roughly half of the games installed are either ignored or uninstalled immediately. The success rather depends on the number of people who, after downloading, actually play the game. (Clark 2014; Millman 2014; Ohayon 2012)

2) *Learning*. As games are analogous to experience goods, goods that have to be experienced first to be able to appreciate the value in them (Shapiro & Varian 1999: 5), the learning phase of the player lifecycle is an extremely delicate process where the player has started to learn whether the game fulfils the expectations set earlier. This phase is rather fragile, especially in free-to-play games, as everything that hinders the enjoyment of the gameplay such as obtrusive placement of ads, pushing to monetise too early or a steep learning curve of the game may result in a backlash of players quitting the game and moving onto the next one (Clark 2014).

In addition, the learning phase is crucial in deepening the players' engagement with the game service and transition into active users (Clark 2014). The gap in between the learning phase and engagement phase as illustrated in figure 6 (refer to page 23) denotes a relatively large proportion of players who never cross the chasm into engaged users but exit the game instead. To get over the chasm, and transition into engagement, requires full adoption of the game service by the player. Furthermore, Hamari and Järvinen (2011: 10) pinpoint the learning phase as sort of a bottleneck during which supportive user retention activities towards further engagement should be started.

3) *Engaging.* Once, and if, the player crosses the chasm and becomes an active user, the level of engagement can be further measured by tracking the frequency of use, which tracks the player's average amount of game sessions in a day. In this phase, the ratio between Daily Active Users (DAU) "the number of unique players playing on a given day" as well as Monthly Active Users (MAU) "the number of unique players playing in a given month" (Luton 2013c: 20) is also important to draw conclusions of how regularly a proportion of players return to the game.

The engagement is the most valuable phase of the player lifecycle both in terms of revenue generation and creating evangelists for the game, who will in turn help with acquiring new players. Clark (2014), while working at Papaya Mobile, discovered that repeat players who monetised well started spending money after engaging with the game for approximately 8-12 days, which is quite long. The goal for the developer is to provide the player with enough content, new features, activities and a delightful gameplay experience in order to retain the customer for as long as possible to be able to tap into this highly valuable audience. Moreover, Clark (2014) reminds that all the segments, whether paying or non-paying players, should be supported as they are all valuable, although not necessarily in terms of revenue. The non-paying users who are engaged with the game are more accepting of in-game advertising, as they understand it to be a necessary evil in order to play the game for free, and they could also opt-in for incentivized advertising or sharing to gain in-game currency or other rewards.

4) *Churning*. Although free-to-play games are looked at by most developers as continuous services, for which new updates and content are made by a live-team, at some point it is inevitable that players will leave the game service for good, called churning. It is important to manage churning phase appropriately because churning players provide a lot of information if the company has implemented suitable analytics software into the game. The metrics gathered can tell a great deal about the reasons behind churning, whether it is a too steep learning curve at level two in the game or frequency or placement of ads etc. Studying these metrics will help the developers tweak the marketing efforts or game design according to gathered data, further improving retention. The players, who enjoyed the game, hopefully continue to recommend the game after churning and also create hype for the upcoming titles from the same developer. (Clark 2014; Luton 2013c)

2.5.5 The Buying Process

To be able to manage marketing efforts properly, the goal is to understand how consumers respond to different marketing methods. Thus, extensive research has been conducted regarding consumer behaviour and the buying process. There are numerous factors, which affect the consumer's response to marketing and other stimuli. First of all, the buyer's cultural, social, personal and psychological characteristics come into play and for the most part, these factors cannot be controlled by means of marketing. Secondly, the buyer's decision process, the stages consumer goes through when making a decision to purchase, affects the buying behaviour. Moreover, the buyer's decision process can be supported with marketing (Kotler et al. 2008: 238-240).

In the buyer's decision process, there are five (5) distinct phases: 1) need recognition, 2) information search, 3) evaluation of alternatives, 4) purchase decision, 5) post purchase behaviour. The buyer's decision process is illustrated in figure 7.

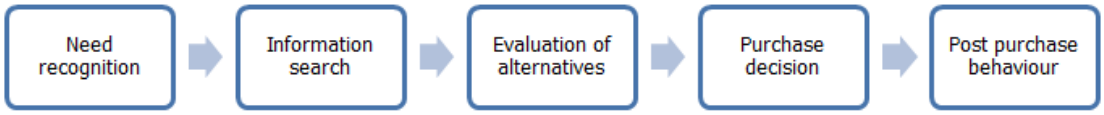

Figure 7. Buyer Decision Process. Kotler et al. (2008: 265).

The buyer does not necessarily transition through each stage in each purchase they make but rather skip or reverse some of the stages, especially with routine purchases. Nevertheless, the buyer decision model shows all the stages which customer usually go through when facing a new and more complex decision concerning a more expensive purchase. The time it takes for the buyer to cross the phases in the process can also vary greatly, more routine low involvement purchases such as buying milk can take a few minutes, whereas purchasing a house could take years. (Kotler et al. 2008: 265)

1) *Need recognition*. In the first stage of the buyer's decision process, a need or problem arises, which the customer then will seek to satisfy or solve. There are two sources which can trigger a need, which are internal stimuli and external stimuli. The

internal stimuli arise from buyer's physiological needs such as thirst or hunger. The external stimuli can be caused in several ways, for instance peer pressure, advertisement exposure or smell or sight of a delicious food item (Kotler et al. 2008: 265-266)

Abraham Maslow's "A Theory of Human Motivation" written in 1934 discusses the hierarchy between different needs and he argues that people will try to satisfy them in order of the strongest needs. The Maslow's hierarchy of needs in order of importance are physiological needs, safety needs, social needs, esteem needs, cognitive needs, aesthetic needs and self-actualisation needs (Kotler et al. 2008: 256). Purchasing and consuming goods satisfy some of these needs and create an emotional response, therefore: "The purchase of goods in this hierarchy of needs can be thought of as the search not to own something physical, but to own a thing that facilitates an emotional state." (Luton 2013c: 8)

2) *Information search*. During the second stage, the buyer is inclined to search for more information about possible products/services which might satisfy the need or solve the problem. The customer can either be in the stage of heightened attention to information concerning the products, or look for information actively themselves from various sources such as personal sources like family and friends, commercial sources like advertising and internet, public sources like rating and reviews by other consumers or the press. Not all the sources are equal in terms of level of effectiveness or influence; consumers tend to give more value to information received from personal sources, and those sources become even more influential when purchasing services. (Kotler et al. 2008: 266-268)

3) *Evaluation of alternatives*. In the third stage, the buyer will use the gathered information to evaluate different alternatives in terms of offered benefits and product attributes. The consumers will have their own personal opinion on the importance of attributes, although they might consider several. Moreover, the set of beliefs customer holds towards a certain brand, the brand image, will have an impact on how the consumer perceives the attributes. (Kotler et al. 2008: 269-270).

4) *Purchase decision*. In the fourth stage the buyer has reached a decision on which of the products or brands will serve their needs most appropriately and proceed to actually purchasing the product. However "preferences and even purchase intentions do not always result in actual purchase choice." (Kotler et al. 2008: 271). Furthermore, there are two factors which might interrupt proceeding to the actual purchase, attitudes of others and unexpected situational factors such as sudden unemployment or bad customer service at the point of sale. (Kotler et al. 2008: 271)

5) *Post purchase behaviour*. The last stage of the buyer's decision process is to evaluate whether the customer is satisfied with their purchase. There should be no gap between consumer's expectations and the product's perceived performance, and ideally the perceived performance should exceed expectations resulting in customer delight. By ensuring that customers are satisfied, or better yet delighted, the formation of profitable relationships is established as well as repeat customers who advocate the product to others. (Kotler et al. 2008: 272)

2.5.6 Impact of the Internet on the Buying Process

The emergence of the internet has had an impact on the whole buying process of consumers, from buying decision process to other buying behaviour, as discussed in literature (Chaffey & Ellis-Chadwick 2012: 80-88; Chaffey & Smith 2013: 107-111).

The buyer's decision process for new products influenced by the internet is depicted having six stages instead of five, adding "action (sale or use of online service)" as number five, consequently moving "post purchase/post sale" as number six in the process (Chaffey & Ellis-Chadwick 2012: 83-83; Chaffey & Smith 2013: 107-108).

The internet has created an overflow of information whereas before the information was more diminutive, and according to Google's chairman Eric Schmidt (cited in Marketo 2013) "there was 5 Exabytes of information created between the dawn of civilization and 2003, but that much information is now created every two days and the pace is rapidly increasing." And thus, it is no wonder the consumers are beginning to learn how to tune out the clutter of information around them and instead search for information they value themselves. Furthermore, when the information is abundantly

available everywhere creating an information overload, the attention of consumers is scarce (Marketo 2013). The phenomenon is called attention economics, which was pioneered by a Noble prize-worthy economist Herbert Simon who stated "a wealth of information creates a poverty of attention" (Shapiro & Varian 1999: 6).

The figure 8 below showcases the unforeseen changes the internet has induced. Before, when the information was not widely available via digital channels, vendors would broadcast information to large, often undifferentiated, masses of consumers. The buyer then had to contact the vendor in order to find more information, while the sales would try to initiate the transaction. (Marketo 2013; Shapiro & Varian 1999: 6-8)

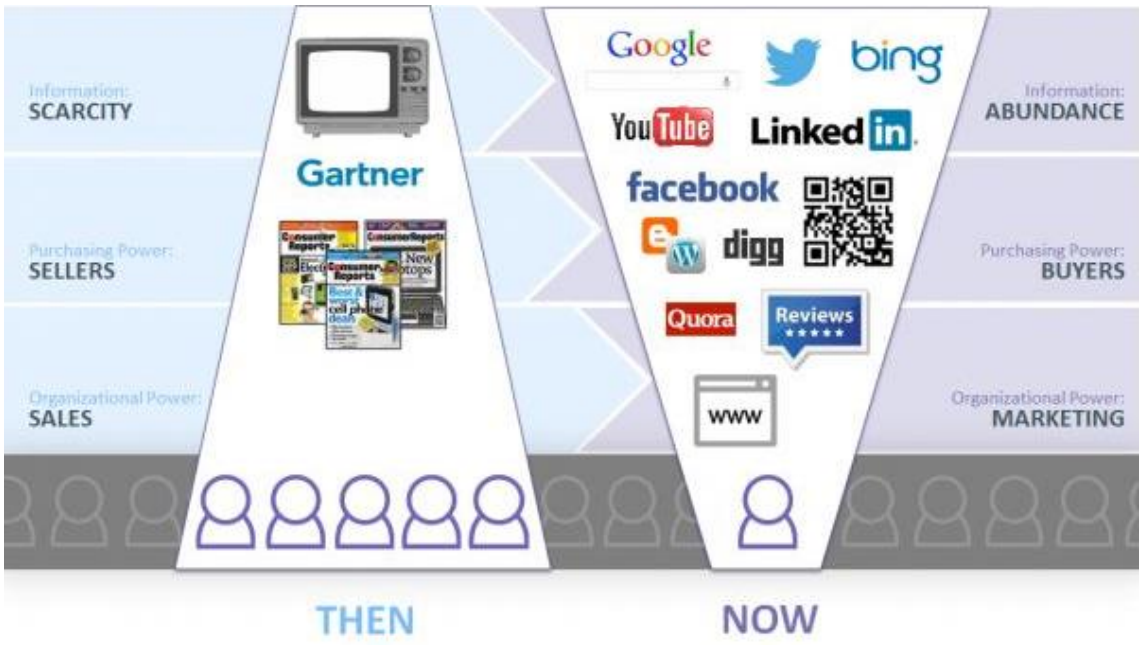

Figure 8. Unprecedented Changes in Buying. Marketo (2013).

Today, with the abundance of information, the buyer can use various online sources to find relevant information through search engines, social media and other channels without ever contacting the vendor. In addition, the previous mass-marketing technique has now shifted to one-to-one marketing, where the vendor can target a specific buyer with customised communications. (Marketo 2013; Shapiro & Varian 1999: 6-8)

Moreover, the internet can be harnessed to support each individual stage of the buying process (Chaffey & Ellis-Chadwick 2012: 84-87). The figure 9 below summarises the

internet marketing techniques and the relevant communication objectives at each stage.

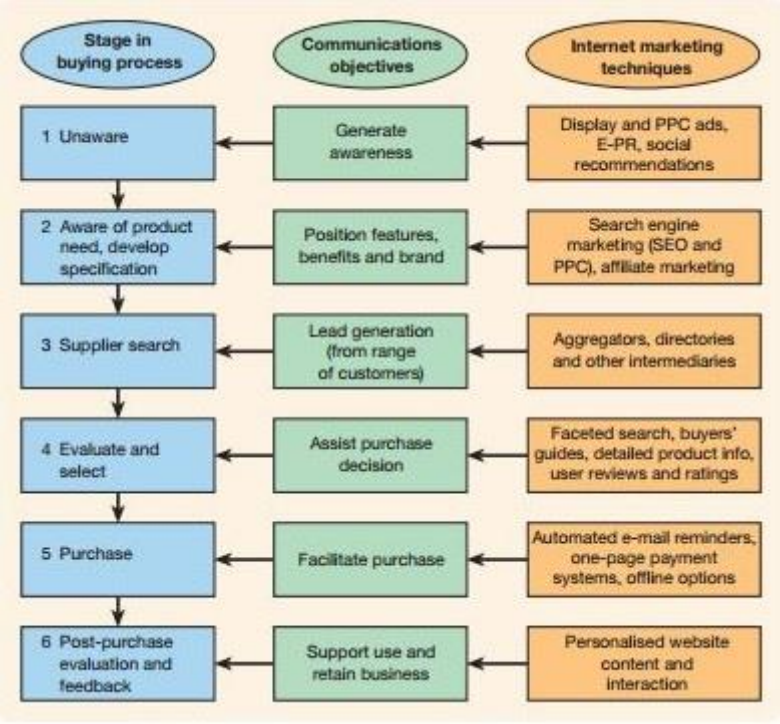

Figure 9. A summary of how the Internet can impact on the buying process for a new purchaser. Chaffey & Ellis-Chadwick (2012: 84).

1) *Consumer: unaware. Company: generate awareness (of need, product or service).*
The company's goal is to build awareness via paid search marketing, display advertising, and favourable mentions and recommendations in social media channels as well as through PR (Chaffey & Ellis-Chadwick 2012: 84-84).

2) *Consumer: aware of need, develops specification. Company: position features, benefits and brand*.
At this stage, consumers start to think which products/services will offer the expected features and benefits, therefore influencing customers through search engine marketing and affiliate marketing is beneficial. In addition, the company should have permission marketing incentives in place, e.g. opt-in e-mail newsletters, which might help in creating interest better than traditional channels (Chaffey & Ellis-Chadwick 2012: 85-86).

3) *Consumer: supplier search. Company: generate leads (engage and capture interest)*.

The company needs to identify the mediums which customers use for searching about the product, and recognise that the internet helps the customer in evaluating more suppliers in more detail than traditionally. Thus, the company needs to be visible in each medium whether search engines, aggregators or affiliate intermediaries (Chaffey & Ellis-Chadwick 2012: 86).

4) *Consumer: evaluate and select. Company: assist purchase decision*.

The website can help in persuading the customer with relevant content such as detailed info about the products or reviews and rankings from other customers. The website can also build brand awareness and trust, if the company is previously unknown to the customer (Chaffey & Ellis-Chadwick 2012: 86-87).

5) *Consumer: purchase. Company: facilitate purchase*.

The company should make the purchase as effortless as possible for the customer and support different payment options. Factors like security guarantees, free deliveries or different delivery choices for example can help in facilitating purchases (Chaffey & Ellis-Chadwick 2012: 87).

6) *Consumer: post-purchase evaluation and feedback. Company: support product use and retain business*.

The internet helps in retaining the acquired customers by conveying value-added services such as free customer support, feedback from the customers, direct marketing through e-mail, cross-selling and repeat selling based on customer's tracked buying behaviour (Chaffey & Ellis-Chadwick 2012: 87).

2.5.7 User Segmentation

Seufert explains user segmentation in his work as follows (2014: 76):

> User segmentation is a technique used to personalize and optimize the product experience for different use cases and tastes; it involves separating users into groups based on predefined characteristics and exposing each group to the product experience that mostly resonates with the group. User segmentation is one of the primary means by which freemium products optimize the user experience at the level of the individual user, and it is an important strategy for effectively monetizing a product within the constraints of the 5% rule [see page 7].

What is more, differentiating or segmenting users into cohorts based on similar variables will not only help in developing the product experience and monetisation but creating specific target audience groups for delivering tailored marketing communications such as acquisition and retention campaigns (Chaffey & Ellis-Chadwick 2012: 449-450). In marketing literature, the following four (4) major variables have become quite established: geographic segmentation, demographic segmentation, psychographic segmentation and behavioural segmentation (see e.g. Kotler et al. 2008: 411). However, relationship marketing literature adds more variables such as segmenting users by their relationship with a company, by value and by the lifecycle stage (Chaffey & Ellis-Chadwick 2012: 450). The different user segmentation and examples of targeting attributes are illustrated in table 2 below:

Table 2. A range of targeting and segmentation approaches for a digital campaign. Adapted from Chaffey and Ellis-Chadwick (2012: 450).

Targeting variable	**Example of online targeting attributes**
1. Relationship with company	New contacts (prospects), existing customers, lapsed customers
2. Demographic segmentation	Age, gender, social group, geographic location
3. Psychographic or attitudinal segmentation	Attitudes to risk and value when buying, e.g. early adopter, brand loyal or price conscious
4. Value	Assessment of current or historical value and future value
5. Lifecycle stage	Position in lifecycle, related to value and behaviour, i.e. time since initial registration, number of products purchased, categories purchased in
6. Behaviour	• Search term entered into search engine • Responsiveness to campaigns in different channels (channel

	preference) • Purchase history in product categories including recency, frequency and monetary value

Differing from Kotler et al. (2008) Chaffey and Ellis-Chadwick (2012) have included geographic location as part of demographic segmentation rather than a segment of its own.

1) *Relationship with company*. New, existing and lapsed customers are differentiated and the marketing implication is to identify whether it will be cost effective to target them with separate communications or different content aimed at each. (Chaffey & Ellis-Chadwick 2012: 450)

2) *Demographic segmentation*. The most common method for segmentation where the purpose is to recognise the age, gender, social group or location of the user. In gaming context, players are also segmented by which device they use, e.g. smart phone, tablet or handheld console, and even differentiated between the brands. Demographic data is applicable in making generalisations, such as game's popularity in a certain country/region or identifying a percentage of certain device users. However, demographic data is not very useful on its own because it merely describes the current user base and drawing conclusions on someone's behaviour through attributes such as gender or age is not reliable. The upside to demographic data is that it becomes available right away when the player starts the game, whereas behavioural data needs time to accumulate through product engagement. (Clark 2014: 172; Seufert 2014: 79)

In terms of marketing, demographic data can help in purchasing display advertising, identifying the segments pay-per-click search ads are displayed to (Chaffey & Ellis-Chadwick 2012: 450) as well as help the marketer's decision whether to localise the marketing communications (Seufert 2014: 80).

3) *Psychographic or attitudinal segmentation*. The aim is to differentiate people into similar groups related to their social class, lifestyle, attitudes, values and personality characteristics (Kotler et al. 2008: 415; Hamari & Tuunanen 2014; 31). Chaffey & Ellis-Chadwick (2012:450) provide an example of this segmentation as attitudes to risk and

value when buying, e.g. early adopters. Clark (2014, see page 23) suggested hard-core gamers to be those early adopters and in fact, it is quite typical to segment players as hard-core gamers and casual gamers in the literature as well as in popular discussion (Ip & Jacobs 2005 cited in Hamari & Tuunanen 2014: 34; Juul 2009). In a games market sector report by Casual Games Association (2013: 10) another additional segment, "mid-core", was presented. In the same report, the mobile gamers self-identified with the segments with following statements:

- (Hard)-Core: "Gaming is an important part of my life and I spend a large amount of my spare time gaming. I enjoy immersive action-packed games the most, and like to compete with other gamers."
- Mid-Core: "I play games regularly, favouring immersive games. I do not spend great lengths of time gaming and don't spend a large amount of money on it. However if I would have more spare time I would probably spend more time and possibly money on games."
- Casual: "Although I enjoy games, my time spent or interest in them is limited. I mainly play games to pass the time and don't invest a lot of money in them."

Nevertheless, this segmentation basis has received some criticism (Bateman et al. 2011 cited in Hamari & Tuunanen 2014: 34; Kultima 2010: 106) for being too broad and rather representing a scale of engagement than homogeneous player types. Thus, this psychographic player segmentation model could also be a part of behavioural segmentation describing usage rates (light users, medium users, and heavy users). According to Chaffey & Ellis-Chadwick (2012: 450-451) the psychographic and attitudinal attributes are important in developing appropriate communications and identifying suitable channels for reaching these segments, although the targeting is less straight-forward than e.g. in value targeting.

4) *Value segmentation*. The core of relationship marketing is to target the scarce resources and tight marketing budgets towards the most valuable customers. The most valuable customers are categorised in terms of profit they generate for the company as well as their expected lifetime values[2] (Chaffey & Ellis-Chadwick 2012: 340, 450).

[2] Lifetime value is the total net benefit that a customer or group of customers will provide a company over their total relationship with a company (Chaffey & Ellis-Chadwick 2012: 342).

Terminology developed by Peppers and Rogers (2002, cited in Chaffey & Ellis-Chadwick 2012: 341) distinguish three (3) different value groups which are most-valuable customers, most-growable customers and below-zero customers. The communications approaches are different in relation to each group. Peppers and Rogers (2002, cited in Chaffey & Ellis-Chadwick 2012: 341) portray the proportion of each value group as a pyramid, where the lifetime value of customers increase the proportion of valuable customers decrease.

Segmenting users by their value has become a popular practice in mobile game companies operating with free-to-play business model. The terminology for value segments in free-to-play (Lovell 2011) are the whales, dolphins, minnows and the, unflattering term, freeloader (non-paying player). The whales are the most-valuable customers who spend the largest amounts of money in a game monthly and account for only a diminutive proportion of the players[3]. The dolphins spend a medium amount per month, although considerably lower than whales. The minnows spend the lowest amounts financially. Thus, the dolphins and minnows could be grouped into most-growable customers because they are profitable in terms of their lifetime value (given that the cost of acquiring these users was less) yet could be extended to become more valuable. The vast proportion of freeloaders, however, does not spend any money in a game and they fall into below-zero (unprofitable) customers accordingly. (Lovell 2011; Peppers & Rogers cited in Chaffey & Ellis-Chadwick 2012: 342).

Furthermore, the renowned Pareto's 80:20 law (Chaffey & Smith 2013: 96), where 80 per cent of company's sales come from only 20 per cent of their customers, holds true in mobile games market. Seth Godin (2001, cited in Chaffey & Smith 2013: 96) recommends companies to dismiss 70 per cent of their customers in order to gain increased profits. In fact, some game companies who run sophisticated analytics software in their games are able to identify those players who are unlikely to convert into spending users and sell them to mobile ad networks (Seufert 2014: 218-219).

Clark (2014: 172) criticises the mobile games industry's overdependence on the value segmentation model. He states it only results in developers focusing all the efforts on

[3] Study by Applifier suggests that 1 per cent of players are whales but they generate 29 per cent of total revenues (Sinclair 2014).

the paying users and ignoring the potential value of non-paying users. Instead of "dismissing" the non-paying users like Seth Godin suggested, the developers should realise the freeloaders help to create the game's community, share their gaming experiences with friends and could also convert to paying users later in their playing lifecycles (Clark 2014: 68).

5) *Lifecycle stage*. Identifying the customer's stage in the lifecycle is worthwhile in order to direct communications to a customer with a certain user status by customised on site-messages or via event triggered e-mails. The position in lifecycle relates to also value and behaviour, for instance in regards of level of engagement, and number or categories of purchases made (Chaffey & Ellis-Chadwick 2012: 228, 451). The player lifecycle stages were discussed extensively in part 2.5.4 (see page 23), and the players in the engaging phase could be further segmented into highly engaged, mildly engaged and those who are likely to churn (Seufert 2014: 78).

6) *Behavioural segmentation*. In this segmentation model, the purpose is to divide customers into groups who express similar behaviour patterns such as usage rage, benefits sought, or response to a product (Hamari & Tuunanen 2014: 31; Kotler et al. 2008: 412). Segmenting users by behaviour is the most effective method for targeting users, especially in digital marketing (Chaffey & Ellis-Chadwick 2012: 451). By using behavioural segmentation, the objective is to affect the customer's future behaviour with customised, individual messages, which are based on the customer's past actions (Seufert 2014: 78; Chaffey & Ellis-Chadwick 2012: 451).

Pertaining to video games, researchers have conducted numerous studies to characterise player behaviour and motivations to play (see e.g. Bartle 1996; Hunicke et al. 2004; Kallio et al. 2011; Lazzarro 2004). Game developers should be familiar with at least Bartle's four player types (Socializers, Killers, Achievers and Explorers) because it is a seminal model of player behaviour within virtual worlds, which helps in creating a deeper understanding of the players' expectations and needs.

Although knowledge of these game studies regarding player behaviour and motivations serve as a starting point in segmenting the player base, the developer needs to gather individual player's behavioural data as well. Luton (2013c: 115) suggests applying play

tracking, which will supply the developers with information on player's behaviour on a more granular level such as which missions they complete and in which order, how far the players are in the game and the length of a game session. Gathering behavioural data will give tremendous customer insight and basis for segmentation.

Chaffey and Ellis-Chadwick (2012: 229) write that companies need to identify their customers' multichannel behaviours. Some customers are more influenced by the online channels and some by the traditional channels, and some rely on mixed-mode buying[4]. Chaffey and Ellis-Chadwick (2012: 29-30) list online media channels into six (6) categories: 1) search marketing including search engine marketing, paid search and pay-per-click, 2) online PR such as favourable mentions in social media blogs, feeds and communities, 3) online partnerships like affiliate marketing, 4) display advertising such as banners and rich media ads, 5) opt-in e-mails or push notifications, and 6) social media/viral marketing campaigns. Traditional channels include advertising (TV, print media, radio), events and word-of-mouth to name a few.

Moreover, Williams (2012) suggests that developers could segment users by these acquisition channels and optimise the channels which deliver the highest return on investment (ROI) per user. He reminds that with analytics software it is possible to track players from different sources like viral or cross-promotion. However, differentiating traffic from various offline channels is hard if not impossible.

[4] The process by which a customer changes between online and offline channels during the buying process (Chaffey and Ellis-Chadwick 2012: 39).

3 Research Methods

3.1 Research Design

According to literature (Malhotra, Birks and Wills 2012: 98; Zikmund et al. 2010: 54-57) there are three major classifications of research designs: exploratory, descriptive and causal research. Exploratory research is an unstructured approach which provides understanding of marketing phenomena that are difficult to measure or clarifies the problem further to develop appropriate research questions and hypotheses. Exploratory research results often need further research because they can be quite speculative. Descriptive research aims to describe market characteristics or functions whereas causal research seeks to identify cause-and-effect relationships. Descriptive and causal research designs are more conclusive and aim to measure clearly defined marketing phenomena and deliver confirmatory and actionable results. Descriptive and causal research samples are large and aim to be representative and are often quantitative in nature.

The research approach in this work is problem based, the author tries to identify the problems and formulate possible solutions based on research findings. The research design used is multi-method research; both exploratory research and descriptive research are used to gather information. The author decided to include surveys covering a four-year-period rather than only the most recent survey, as the history needs to be known to be able to make predictions about the future. Surveys with large samples of respondents from four consecutive years up to the most recent one also aid in drawing more accurate conclusions of the topic.

A thorough literature review was conducted to understand theories and phenomena relating to the topic and to give substantial background information to help with the analysis of the research findings.

All of the data are gathered from reliable, most up-to-date online and offline secondary sources such as industry professionals' blogs, published books and periodicals, published work by academic scholars, reports by trusted industry research firms,

renowned industry related websites as well as presentations held by industry professionals at game events.

3.2 Online Secondary Data Sources

The Nielsen Company is a global marketing research firm, specifying in consumer behaviour. Nielsen conducted a survey comprising of a sample of 4705 (n=4705) mobile subscribers who had downloaded a mobile application within past 30 days. All the respondents completed a survey online in September and October 2011. The survey data is part of Nielsen's *Mobile Media Report* which sheds light on the U.S. mobile audience behaviour and the mobile commerce as a whole.

Forrester is a market research firm which conducts surveys to businesses and to the public, with a special attention to technology and its implications. Forrester ran a *Consumer Technology Online Survey* with 13 517 (n=13 517) European respondents, ages 16 to 92 years-old. The survey was held in September 2012.

Applifier, a mobile marketing company, has fielded two surveys targeted solely to mobile gamers. The first survey held in March 2013, had 1790 (n=1790) North American respondents. The second survey was ran in February 2014, and the respondent sample was 3000 (n=3000) North American mobile gamers. The aim for both of these surveys is to give descriptive information on discovery landscape and player attitudes, behaviours and awareness. Both survey samples included both Android and iOS users.

Electronic Entertainment Design and Research, EEDAR, a video game research and consulting firm, ran the most recent consumer survey on mobile gamers' attitudes and behaviours in August 2014. The sample consisted of 3500 (n=3500) North American (U.S. and Canada) mobile gamers and it measured over 250 variables related to mobile games and gaming behaviour. The sample consisted of Android, iOS and Windows operating system users.

4 Research Findings

4.1 Survey by Nielsen 2011

The survey by Nielsen differentiates between Android and iOS users' discovery channels. Searching the app store is equally important to both Android and iOS users and is the number one source for app discovery at 63 per cent. Recommendations from friends and family are also a very influential channel of discovery, a bit more to iOS users (61 per cent) than Android users (53 per cent). Third party websites, in-app-promotions, traditional and digital advertising are all mentioned as sources of discovery, however not one channel becomes close to the influence of app store search and word-of-mouth from friends and/or family.

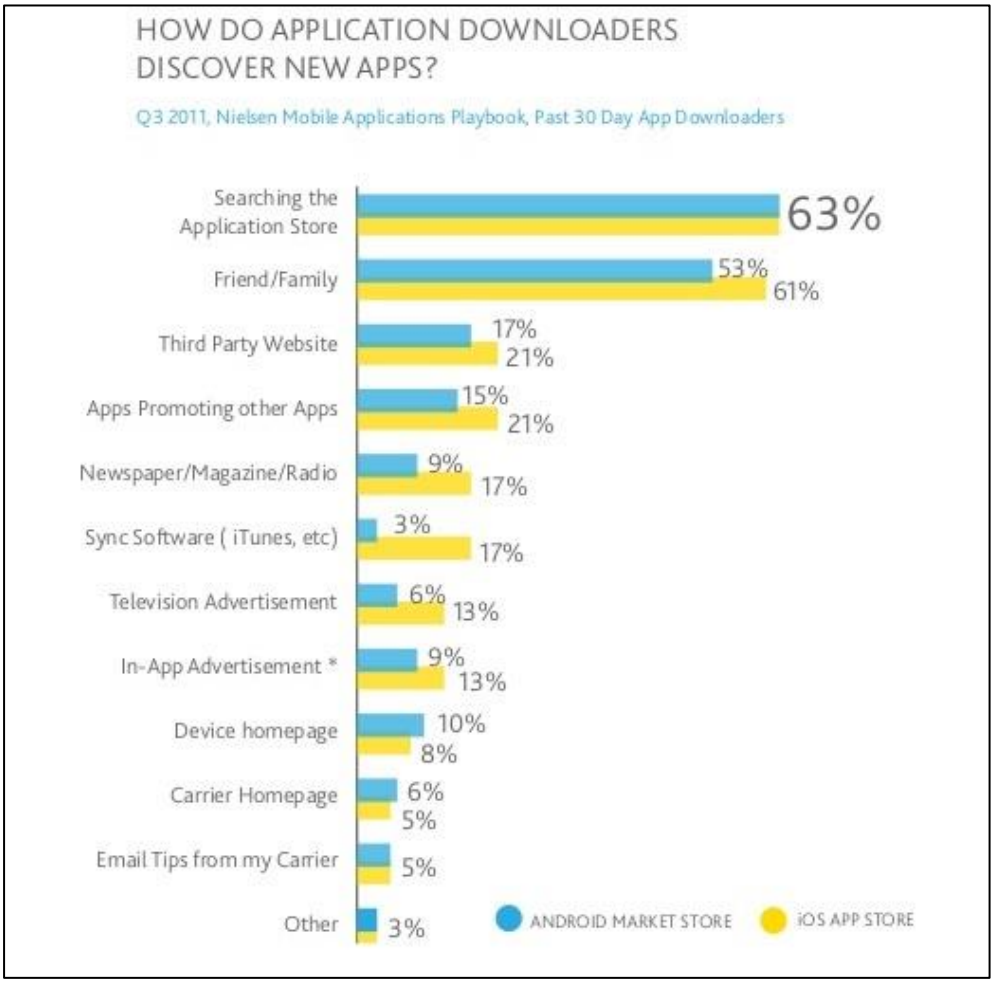

Figure 10. How do application downloaders discover new apps? Nielsen (2011).

4.2 Survey by Forrester 2012

Forrester's survey finds general app store browsing as number one source of discovery for both iOS (63 per cent) and Android users (58 per cent). Speaking with friends or family is rated the second most influential source both for iOS (50 per cent) and Android (41 per cent). Third most influential discovery channels are the top rated and most popular charts found in the app stores, 34 per cent of iOS users and 25 per cent of Android users found out about an app this way. Interestingly, almost an equal proportion of Android users (23 per cent) said they learned of an application simply because the device came preinstalled with the application (20 per cent of iOS users agreed). Facebook and other social networking websites emerge as discovery channels (iOS 19 per cent, Android 15 per cent). Traditional and digital advertising are seen as less influential sources.

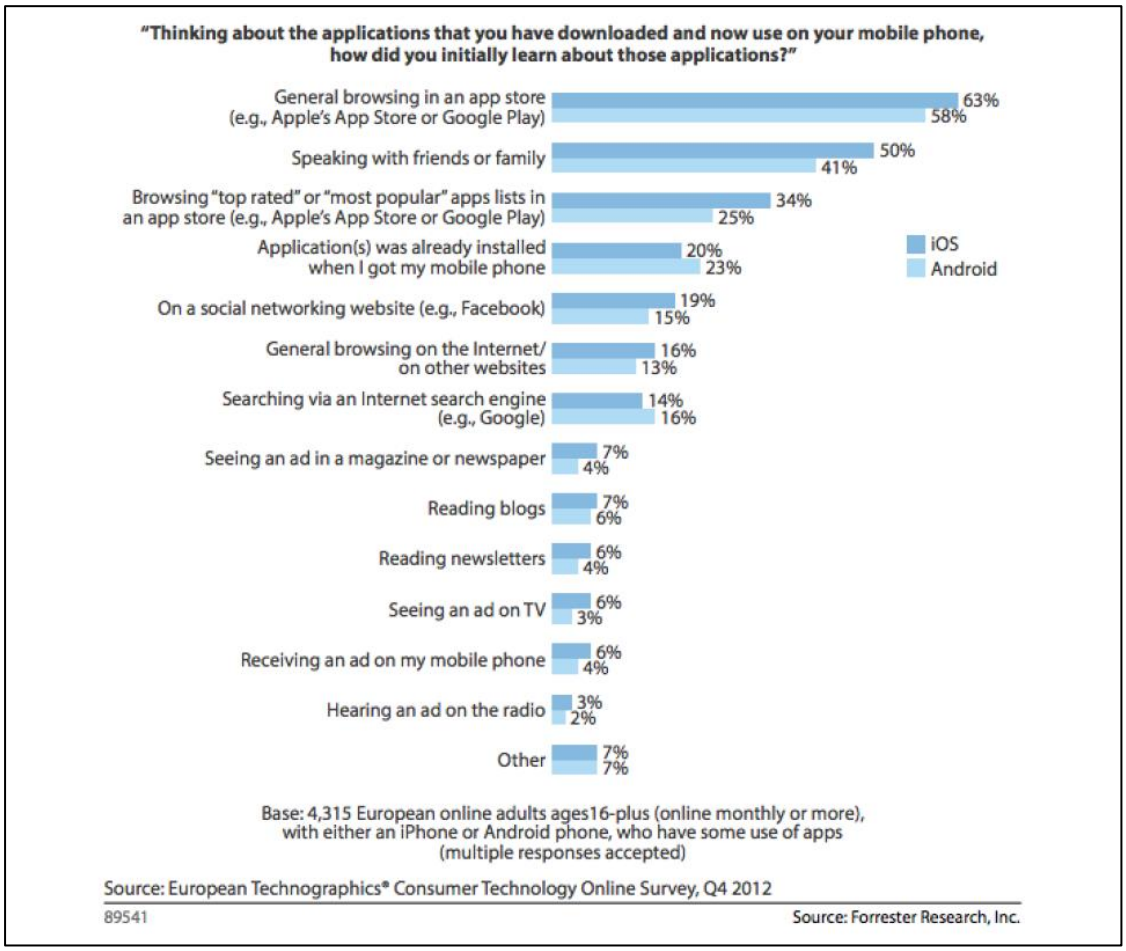

Figure 11. "Thinking about the applications that you have downloaded and now use on your mobile phone, how did you initially learn about those applications?" Forrester (2012).

4.3 Survey by Applifier 2013

Survey conducted by Applifier found that 43 per cent of the respondents found reading user reviews to be highly influential in their decision to download a particular game, making it the most influential channel. The second most cited source is hearing about a game from a friend or family member (36 per cent). Third channel is tied at 25 per cent between seeing a friend or family member play the game and the search results in app store.

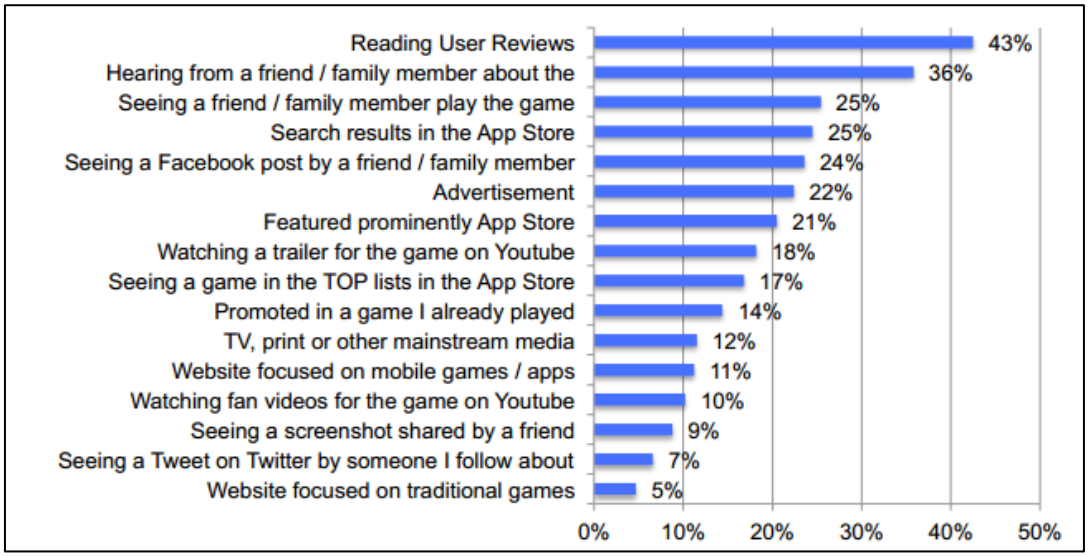

Figure 12. "For the last five games you have downloaded, what was highly influential in your decision to get that game?" Applifier (2013).

Applifier grouped all the different methods of finding games into four (4) categories (see figure 13): 1) traditional word-of-mouth, such as reading user reviews, hearing from a friend and seeing a friend play the game, 2) online word-of-mouth, like social sharing through Facebook post, watching fan videos or game trailers on Youtube, screenshot shared by a friend or seeing a Tweet on Twitter, 3) advertising, promotions and websites, like websites focused on mobile games or traditional games, mainstream media such as TV or print, advertisement or promoted in another game (cross-promotion) and 4) App Store, including search results, featured spots, top lists.

Figure 13. Four main categories of mobile game discovery. Applifier (2013).

Applifier's survey indicates that both traditional and online word-of-mouth mechanisms comprise of 57 per cent of mobile game discovery within respondents.

Applifier's survey also recognises a highly valuable segment called the "sharers", who rate social features and sharing activities like watching shared content, inviting friends to play, sharing video replays, screenshots and achievements from the game as "extremely important". Additionally, these sharers spend more time gaming, download more games monthly, are more likely to discover games through online word-of-mouth (see figure 14) and are also more likely pay for the games compared to rest of the sample. These sharers accounted for 20 per cent of the surveyed sample (see appendix 1 for the other figures on sharers).

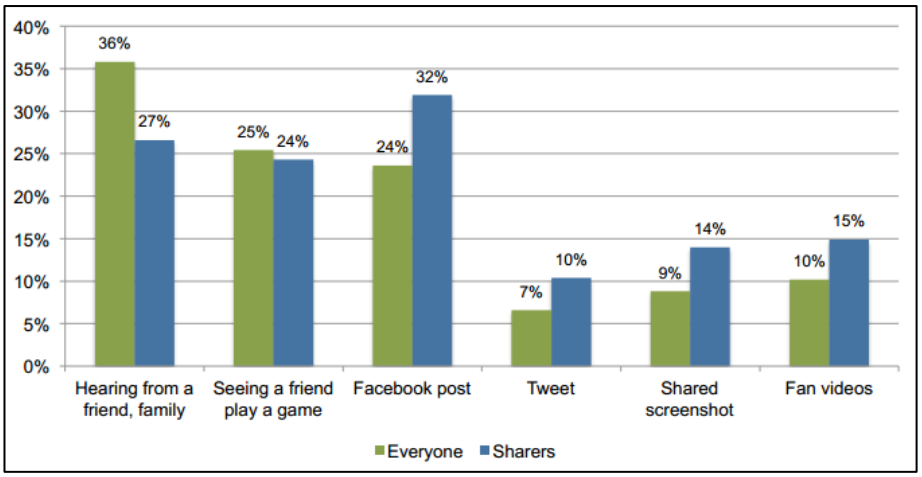

Figure 14. Difference in influence with traditional WoM and online WoM discovery channels by user segment. Applifier (2013).

4.4 Survey by Applifier 2014

Follow-up survey by Applifier identifies top five sources of discovery and they all fall under categories of traditional word-of-mouth and exposure in the app stores. The sixth most influential source is seeing a video of the game (18 per cent "frequently", 39 per cent "sometimes" use the source).

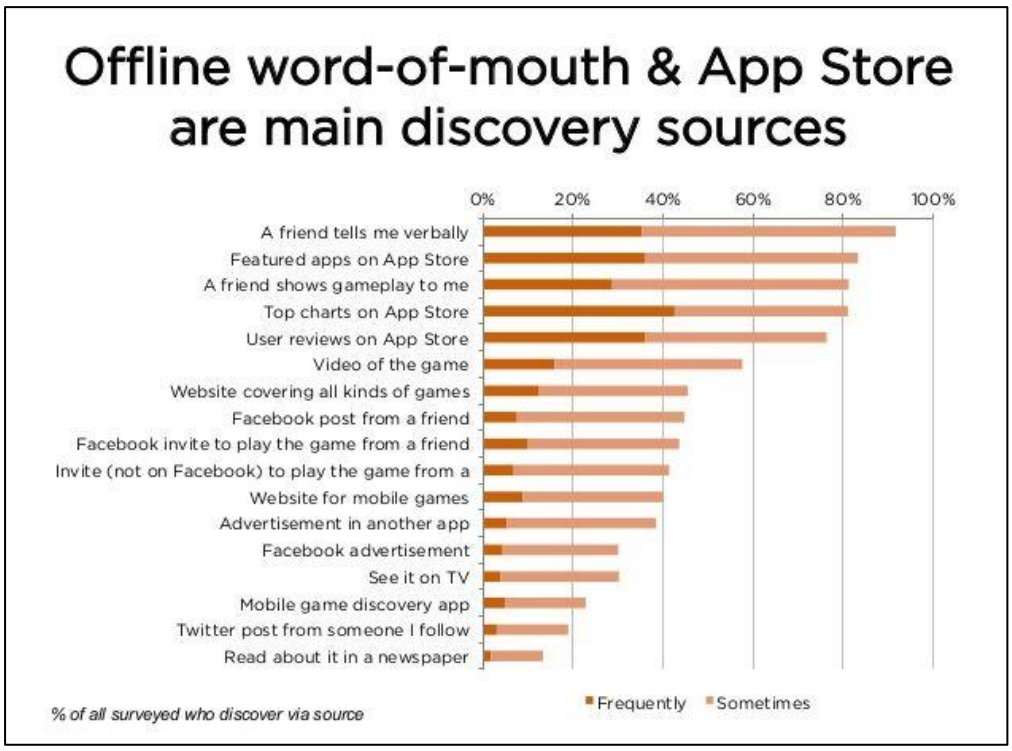

Figure 15. Percentage of all surveyed who discover via source. Applifier (2014).

Applifier's survey finds that heavy payers, the whales, share content more frequently than moderate and non-payers. They actively seek new games through several channels and are twice more likely to discover games via gameplay video than moderate payers and are more affected by online word-of-mouth (see appendix 2 for figures on whales).

4.5 Survey by EEDAR 2014

Survey ran by EEDAR categorises discovery sources into five (5) categories: social, storefront, social network, paid acquisition and media. The most often used source is app stores' top charts (43 per cent), followed by word-of-mouth (36 per cent), featured app (35 per cent) and saw someone play (33 per cent). Friend's Facebook posts were often used as a discovery source by 21 per cent and video services by 19 per cent.

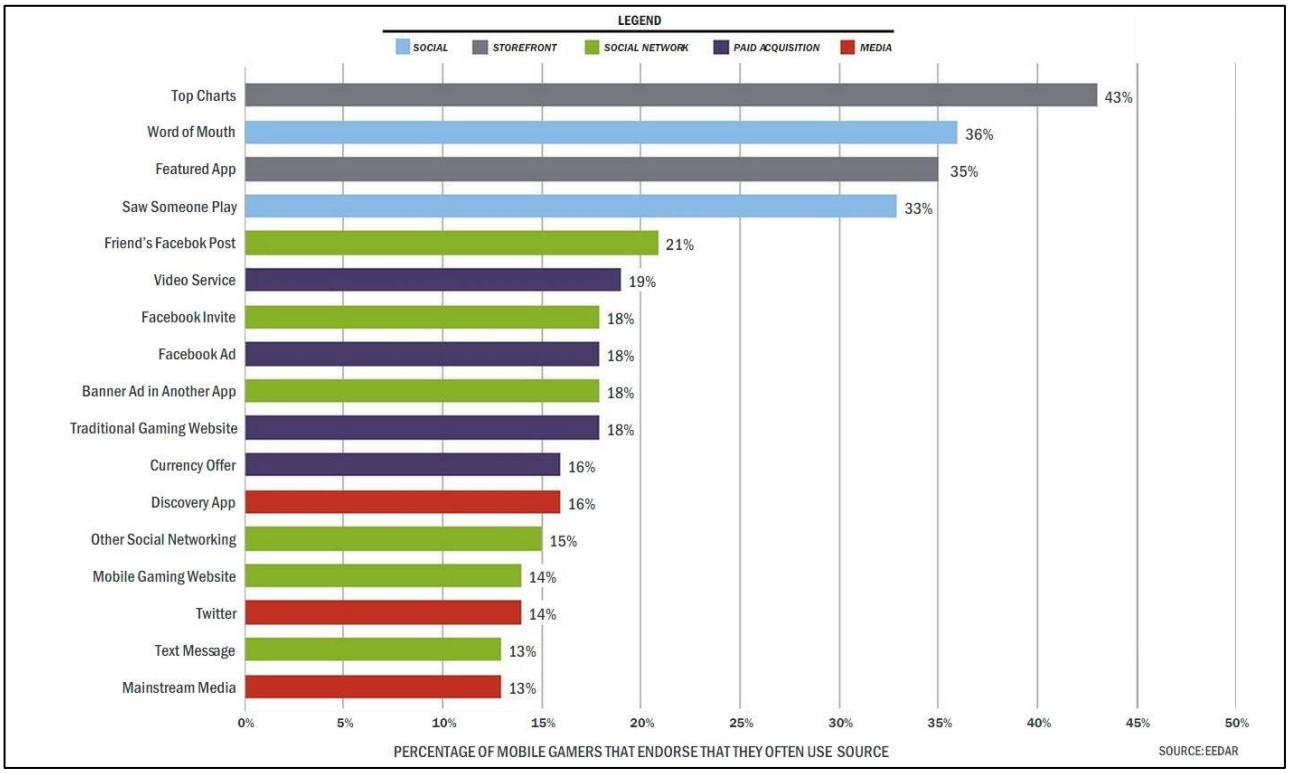

Figure 16. Percentage of mobile gamers that endorse that they often use source. EEDAR (2014: 25).

EEDAR also categorises the reasons mobile gamers download mobile games into four (4) distinguished categories: social, storefront, game aspect and media. Cost is overwhelmingly the most influential reason why players download mobile games (66 per cent). Game genre, friend recommendations, graphical quality and hearing people talk about the game are also rated highly influential. Game aspects, social and storefront were immensely more influential reasons than media.

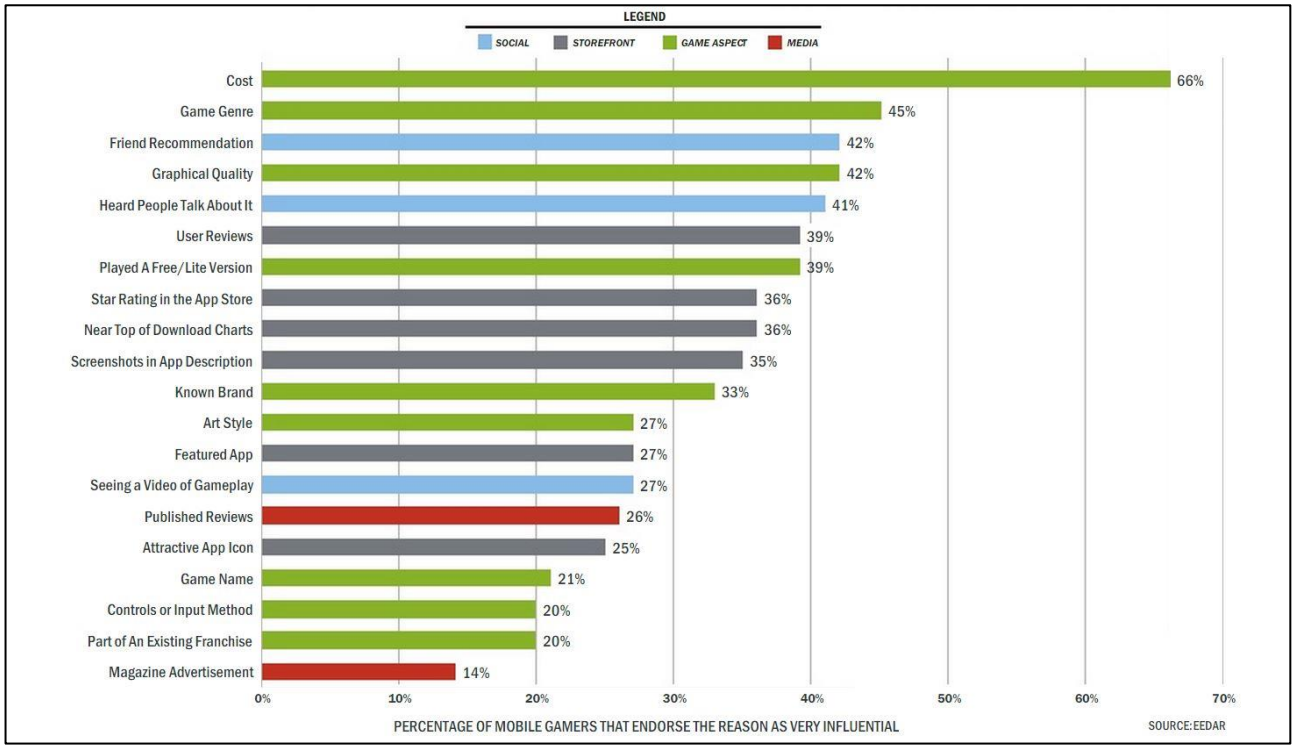

Figure 17. Reasons mobile gamers download mobile games. EEDAR (2014: 27).

EEDAR's survey also recognises sharers as a segment. Heavy sharers make up 40 per cent of the surveyed sample and are more profitable. The survey suggests that out of heavy sharers 30 per cent are heavy payers, 55 per cent moderate payers and only 15 per cent non-payers. Whereas out of all other mobile gamers surveyed only 5 per cent are heavy payers, 40 per cent moderate payers and a large share of 55 per cent are non-payers (EEDAR 2014: 29).

The survey finds that 38 per cent tell their friends about the game verbally and 29 per cent show friends gameplay. Facebook sharing is also quite popular, as well as rating and reviewing the game on the storefront.

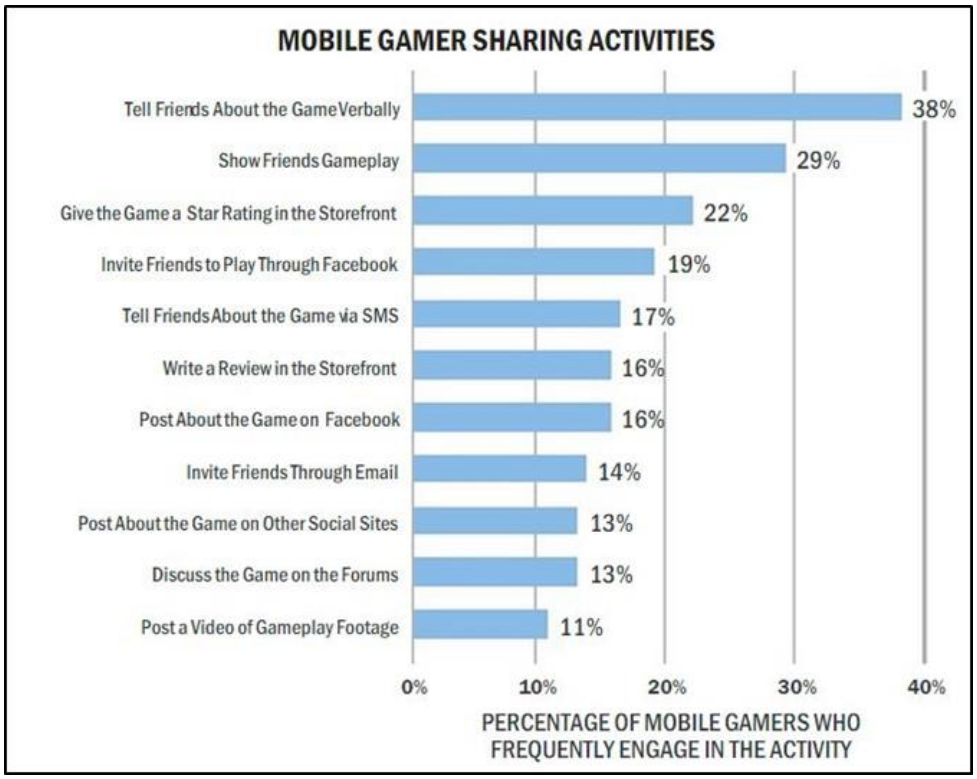

Figure 18. Mobile gamer sharing activities. EEDAR (2014: 29).

5 Discussion on Research Findings

5.1 App Stores

The research clearly shows that app stores continued to dominate as discovery sources regardless of the operating system used and the year surveyed. Searching and general browsing in application stores were even rated more influential discovery sources than recommendations from friends and family during the years 2011 and 2012. User reviews on app stores, top charts, app store search and featured positions all play a significant role in how players initially find out about games. In the most recent survey by EEDAR (2014), top charts in the application stores were rated the most influential source of discovery.

App stores still having such a major influence in mobile game discovery is bad news for the developers because of the astronomical costs related to achieving a favourable ranking in top charts. Without achieving a position in the top charts or featured app position, the game is virtually invisible in the store. The industry has started to call these invisible non-ranking apps "zombie apps" (Judge 2015) initially because of the sheer number of mobile games in the zombie category.

It is not surprising, that in the most recent surveys (Applifier 2014 & EEDAR 2014) players reported finding games through top charts and featured positions rather than through general browsing and searching the app stores. The volume of new game submissions into app stores each day is overwhelming, thus players' attention is becoming scarcer and they rely on quick and reliable sources for new games. In fact, players spend only three to ten minutes to find a new game to download (Application Developers Alliance 2013).

Thus it can be argued that mobile players show strong habitual buying behaviour[5] as they receive information passively through app stores' top charts and featured positions, and the market leaders try to encourage this habitual buying behaviour by dominating the charts. That being said, 33 per cent of respondents in EEDAR's survey

[5] Consumer buying behaviour in situations characterised by low consumer involvement and few significant perceived brand differences (Kotler et al. 2008: 263).

also showed variety-seeking buying behaviour[6] as they reported a known brand being a very influential reason for downloading a game. In such cases, the players might switch between game brands for the sake of variety and to find something different, rather than discontent of a certain game brand. The smaller mobile game developers with tighter marketing budgets should try to boost variety seeking behaviour by targeted advertising, which offer reasons to try a new game.

Addition to word of-mouth and viral marketing techniques (discussed later in this work), the mobile game marketers can implement other marketing strategies to improve the game's visibility on app stores to drive more organic traffic.

5.1.1 Burst Campaigns

Burst marketing campaigns, where marketing expenditure is concentrated into a short time period, are a commonly used marketing strategy to climb up the charts (Henschel 2013). The ranking algorithms vary between Apple's, Google's, Windows' and Amazon's app stores, however the amount of downloads is a shared factor. The algorithms take into account a mixture of user engagement, star ratings, user reviews, revenues generated, uninstalls and click-through-rates on search (Fiksu 2014: 15; Perez 2013). The exact algorithms of each store are proprietary information.

The goal of a burst campaign is to buy as many downloads as possible in just a couple of days. Henschel (2013), the CEO of leading mobile analytics company Adeven, reminds to strategically place these days in a way that most downloads are achieved on a Saturday or a Sunday in order for the game to be visible on the charts when the players have the most time to browse the app stores for new games. Henschel (2013) also adds that bursting strategy is more effective in Apple's App Store than on Google Play due to Apple's algorithm tracking the momentum of downloads in the first couple of days and Google's algorithm the total amount of downloads.

The problem with this strategy is that buying large amounts of downloads is extremely costly. The market leaders with deep pockets can easily buy their way into top charts

[6] Consumer buying behaviour in situations characterised by low consumer involvement, but significant perceived brand differences (Kotler et al. 2008: 264).

whereas smaller companies do not have the kind of marketing budgets to start bidding-wars with the giants. Additionally, users acquired through paid channels are not usually loyal users. The burst campaign strategy relies on bringing lots of organic downloads on top of the paid channels, as the visibility in the stores increase. Luton (2013c: 136) also states another problem with burst campaigns: the game can quickly fall from the top charts as soon as the marketing expenditure stops and what he calls the "yoyo-behaviour". The paradox of app stores is that a game needs downloads to get more downloads.

5.1.2 Featured position

Getting your game featured on app stores is the Holy Grail of discovery. The featured position places the game icon on the front page of the store and in front of millions of users as they open the app store. The featured position increases the download amounts immensely, for instance *Battle Bears Royale* (a game by SkyVu) saw a 1900 per cent increase in new users after being featured by Google Play (Reyburn 2013).

Unlike top charts, the featured positions at Apple's App Store and Google Play are not determined by an automatic algorithm but their own editorial teams. Having contacts at Apple or Google will help greatly in getting featured, thus a lot of lobbying of these teams is going on. Networking at industry events and trying to build a relationship with these contacts is important. Moreover, teaming up with a publisher who already has contacts at Apple or Google is another option. Rovio achieved this by working with Chillingo, a well-connected British game publisher who managed to pull the right strings with Apple and got Rovio's *Angry Birds* featured as the game of the week on the Apple's App Store (Chapman & Whittington 2014). However, by cooperating with a publisher, the developer loses a lot of control over the game and 30-50 per cent share of the revenues.

Building a fun, innovative and high quality game which supports the platforms' technical features and new operating system updates could also gain attention from the editorial teams. Moreover, winning competitions such as Apple's design competition most likely result in a featured position, which Frogmind's *Badland* is a great example of (Karjalainen, Lehtonen and Niipola 2014: 226). Additionally, making seasonal

content for app stores, launching exclusively an iOS or an Android game, following the developer guidelines to detail and only using trusted ad networks to promote your game all improve the chances of a feature position (Pratt 2014; Sarath 2014).

5.1.3 App-Store-Optimisation

The impact of the internet on the buying process was extensively looked at in the literature review (refer to pages 28-31) and Chaffey & Ellis-Chadwick explained that search engine marketing (search engine optimisation and Pay-Per-Click) could be used to position features, benefits and brand and help in stages of need recognition and information search. App-Store-Optimisation, ASO for short, is the new search engine optimisation of mobile game marketers. ASO is the process of optimising the game's title, description, keywords, icon etc. to rank higher on the search results within app stores.

App-Store-Optimisation is often overlooked by developers who do not have marketing experience in-house, and they do not spend adequate time in planning the game's title, description, game icon and screenshots when submitting the game to app stores. A knowledgeable marketer understands that ASO plays an important role both in heightened app store visibility as well as a mean to convey the game's value proposition. The results of EEDAR's (2014) survey proves this as user reviews, star ratings, name of the game, screenshots and attractive app icons were reported as very influential reasons for the download decision. Furthermore, ASO is relatively inexpensive compared to other marketing techniques improving app store visibility, although it can be time-consuming when managed properly.

Moreover, ASO is critical even for developers with big marketing budgets who can acquire users via paid channels because the buyer's decision process can be interrupted before proceeding to the actual download of the game if the customer is dissatisfied with the game's reviews or screenshots on the app store's page.

Multiple sources (Bouchard 2012; Funnke 2014; Kissmetrics 2014; Rampton 2014) list the following actions important for ASO:

1. App title, description and keywords
2. App icon
3. App type and category
4. Screenshots
5. Ratings and reviews

Again, the number of downloads also affect the rankings in search results. Luton (2013: 152-153) suggests running multivariate testing campaigns, where each variable such as different keywords, game titles or app icons are tested by tracking Click-Through-Rates of players to find out which variables trigger the greatest response. Torsten Reil (2013), the CEO of NaturalMotion, said in his presentation at Fondia Gaming Event that they made and tested a staggering 95 different versions of the app icon for their game *CSR Racing* before choosing the one which performed the best.

Developers can employ plugins like *Appirater* on iOS which automatically pops up inside the game and asks the player to review the app or give a star rating. The message should be targeted at the most loyal users to ensure positive reviews and higher star ratings, for instance based on length of game sessions or how many times the game was launched for the past month (Bouchard 2012; Heitzman cited in Rampton 2014).

To get more players to review the game, it is acceptable to give incentives such as virtual items inside the game in exchange for a review or rating. However, the mobile game marketer should never bribe the players to give only a positive or five-star rating. This practice is extremely frowned upon by all of the app stores and audiences. EA sparked a public outcry by implementing shady review tactics in its free-to-play mobile game *Dungeon Keeper* as the players only had two options: to leave a five-star rating which appeared on Google Play store or leave a 1-4 star rating, which only opened up an e-mail to send to the developer rather than leaving the rating to Google Play publicly, resulting the game only having unauthentic five star reviews on Google Play (Hamburger 2014; Rose 2014).

5.2 Word-of-Mouth and Viral Marketing

Word-of-Mouth recommendations from friends and/or family both online and offline were constantly reported as highly influential sources for discovery. The results match what was discussed earlier in the literature review about the buyer's decision process (see page 27) in information search stage: consumers give more value to information from personal sources and those sources are even more influential when purchasing services, in this case free-to-play mobile games. A great example of the power of word-of-mouth is the notorious *Flappy Bird* which had no marketing budget, built-in viral mechanisms or even levels. The game was so infuriatingly challenging compared to other free-to-play mobile games that it quickly started to gain attention and went viral.

Viral marketing[7] is a significant source for game discovery. A high percentage of mobile gamers surveyed by Applifier and EEDAR reported discovering games through seeing someone play the game in person or hearing friends talk about the game. Viral messages via social networks such as Facebook posts and invites by friends, tweets on Twitter by someone they follow, or watching game videos on YouTube were influential both in discovery and as reasons to download the game.

Giordano Bruno Contestabile, who is the VP of product management and revenue at Tilting Point Media, states (cited in Luton 2013c: 138-139): "Players acquired organically by word of mouth or viral growth are usually more valuable than players acquired through paid channels (and they're free!)" The reason why these players are more valuable is that they downloaded the game not because of ad-exposure or in-game incentive but through genuine interest in the game, hence being more likely to convert into loyal users.

Moreover, the developers should provide the players with forums, chat rooms and social network groups to encourage discussion of the game and forming friendships with other players (Luton 2013c: 150). King's (creator of the popular *Candy Crush*

[7] A marketing message is communicated from one person to another, facilitated by different media, such as word of mouth, e-mail or websites. Implies rapid transmission of messages is intended (Chaffey & Ellis-Chadwick 2012: 673)

Saga) Tommy Palm (cited in Campbell 2014) notes that players stay in the games for extended periods of time where their friends are, in other words they initially come for the game but stay for the friends. Although building game communities is essential, Chillingo's sales director Levi Buchanan (cited in Cambpell 2014) suggests the developers only give players the tools and let them build communities on their own rather than pushing it down on them.

Some games are viral by nature (for example online multiplayer games), and viral mechanics need to be built into other games. The developers need to realise that these viral mechanisms have to be planned early on in the game development and integrated into the gameplay rather than just adding superficial "share on Facebook" buttons after the game has been developed. By building seamless social features into the games, the likelihood of attracting the highly valuable player segment "sharers" increases.

The surveys show that Facebook is more popular in both discovery and sharing content than Twitter. However, both social networks should be supported by the game. Additionally, inviting friends to play the game via e-mail should be easy. Ideally, the players find the game so impressive and fun they want to share it with others but virality can also be incentivised by offering players in-game currency or virtual items in exchange for sharing content from the game or inviting friends to play. These incentivised virality methods should be carefully implemented and targeted because they might end up alienating players who are in the fragile learning phase of the player lifecycle (see page 24), as some players might feel exploited if the game pushes the players to share too eagerly. Moreover, poorly planned virality mechanics might cause backlash from the non-players who get spammed with Facebook invites.

Marketers should try to identify the players who are in the engaging stage of the player lifecycle (refer to page 25) and prompt them towards sharing activities. Retaining users is key, and in turn these engaged users will help in acquiring new players. Developers can better retain the players by offering updates and new content as well as reward loyal users with occasional gifts inside the game. If the game fails in retaining players long enough for them to begin engaging, all the carefully executed in-game viral mechanics are rendered ineffective.

5.2.1 Sharers and Whales

Both Applifier and EEDAR recognised a valuable segment called sharers who rated social features and sharing activities extremely important. Applifier also found out that whales are important for virality as they were more likely to share content than moderate and non-payers. From the viewpoint of CRM (see page 21) the marketers should try to target these ideal segments by collecting behavioural data and building profiles for the sharers and whales as well as track the sources where they come from and optimise the marketing spend towards these channels.

While offline word-of-mouth was rated the number one sharing activity, many respondents frequently engaged in online word-of-mouth activities like sharing posts on Facebook, inviting friends to play through Facebook or e-mail, writing reviews, discussing the game on the forums and posting about the game on other social sites. The results are good news for the marketers as both sharers and whales reported discovering games through these online word-of-mouth channels more often than the rest of the players.

5.2.2 Gameplay Videos

Game videos have emerged as a highly influential discovery source during the years surveyed, as the mobile device technology has become more sophisticated and better capable of supporting videos.

In Applifier's survey in 2013, watching gameplay video on Youtube was reported highly influential in the buying decision only by 10 per cent of the surveyed sample whereas in 2014 seeing a video of the game was already ranked the sixth most influential source for discovery, 18 per cent said they frequently discovered through source and 39 per cent said they sometimes used the source. Applifier's survey also stated that whales were twice as likely to discover games via gameplay videos. Likewise, EEDAR's survey in 2014 ranked video services the sixth most often used source for discovery, as 19 per cent of respondents used source often. Additionally, 27 per cent of the respondents said that seeing a video of the gameplay was a very influential reason for

downloading the game. Additionally, paying gamers are more eager to watch live video streams and online videos compared to non-payers (Newzoo 2014b: 6).

Although game videos are watched by many mobile gamers and they improve discovery immensely, it is under-utilised as a sharing activity. Only 11 per cent of EEDAR's respondents said they frequently posted gameplay footage. The reason could be that the game does not support video capturing and sharing in a convenient way or the player does not see the value in sharing videos.

To solve the problem, Applifier (now part of Unity Technologies) has developed a free mobile game replay platform called Everyplay, which automatically records the gameplay in the background and the player can conveniently share instant replays of their gameplay to YouTube, Facebook, Twitter and even via e-mail. Everyplay also supports the front camera and microphone to capture player reactions and commentaries but these are opt-in features.

Everyplay has built its own community where players can post the videos, create their own user accounts, explore new games, follow games and other players and comment and like posted videos. Mobile game studios like Rovio, Frogmind, Grand Cru and Fingersoft have integrated Everyplay into their games. To emphasise the influence of game videos, Fingersoft's *Hill Climb Racing* has almost 1,9 million video replays on Everyplay and close to 5,5 million members in the community. Sharing video replays can be incentivised by offering in-game goods, however it is smarter to prompt sharing of the video replay after meaningful gameplay moments take place such as clearing a difficult level or after earning an achievement (Everyplay 2014). Everyplay should be integrated to drive viral growth and organic downloads, the developer has nothing to lose as Everyplay is a completely free service.

Much like forming street teams[8], some marketers get in touch with the influential players who run their own channels on YouTube and Twitch. Twitch is a live gameplay video broadcasting platform with approximately 55 million visitors per month (Dashevsky 2014). YouTubers and Twitch streamers have become important marketing

[8] Street teams are groups of players that are involved in promoting the game through chat rooms, forums and their own sites in return for perks, such as merchandise or in-game items (Luton 2013c: 141).

channels, thus the developers need to consider what type of game works well in a gameplay video (Grönholm 2015). The more subscribers/followers the influential YouTubers or Twitch broadcasters have, the more money they usually expect in order to feature your game in their videos. For example, PewDiePie who is a Swedish video gamer and YouTuber, has over 35 million subscribers in his channel. According to some sources (Soares 2014), PewDiePie gets paid 50 000 dollars to make a twenty-minute video about a certain game. Fortunately, not all YouTubers and Twitch streamers ask for money, however many expect to get other rewards like merchandise or early-access to the game.

5.3 Advertising and Promotions

Advertising and promotions did not get high percentages as influential discovery sources. However, Clark (2014: 173) reminds that consumers are notorious for not recognising and admitting the influence of advertising. Clark also says that there is always room for bias in the surveys when the players check multiple influences.

5.3.1 Cross-promotion

Cross-promotion[9] is often used in mobile game marketing. In its most simple form, cross-promotion is implemented to drive users from one of the developer's own games to another, e.g. cross-promote the new game title in the older game. However, if the developer only has one game or few users, the developer can cooperate with other developers to build a network where players are shared by cross-promotion. Luton (2013c: 150) writes that it is common to see some indie developers going beyond banner ad swapping by sharing characters and even locations between game titles.

Many marketers settle for cross-promoting with other game developers or existing cross-promotion networks. It would be beneficial to consider other cross-promotional opportunities between different products, outside of games. For example, game studio Wargaming cross-promoted their game title *World of Tanks* with Sony Picture's movie

[9] The process by which a developer entices users of one of its products to adopt another of its products (Seufert 2014: 220).

title *Fury*, which is a movie about a Sherman tank crew in World War II. The presumption was that players who enjoy playing a game about tanks are also interested in a movie about tanks, and vice versa. The game promoted *Fury* (see figure 19 below) with a poster placed inside the game and offering a purchasable M4A3E8 Sherman tank from the movie, with "fury" written on the gun. The crew which came with the purchase of the Fury tank was named after the characters in the movie. The promotion was run both on PC and mobile game version of the game. In turn, a trailer for *World of Tanks* was showed in the movie theatres and codes for *World of Tanks* were placed inside copies of the film for the UK DVD release, which were applicable for in-game rewards and bonuses (Wotblitz.eu 2015).

Figure 19. Cross-promotion of the movie *Fury* in *World of Tanks*. (screenshot taken from World of Tanks game during the promotion in November 2014)

5.3.2 Ad Networks

There are numerous ad networks available for developers e.g. Chartboost, TapJoy, Flurry, Facebook, AdColony, Google and the list goes on. The majority of these ad networks work on a bidding system (Bracher 2014) where developers set a price they are willing to pay for acquiring users. Luton (2013c: 135) clarifies that higher bids mean your game ad receives a priority status over the lower-bidding ads and they are also served more regularly. According to Fiksu Indexes (Fiksu 2015) mobile marketing costs reached an all-time high in January 2015 with Cost Per Install, which measures cost per app installs directly linked to advertising, rising to $1.28 on iOS and $1.53 on

Android. Bracher (2014) says ballooning CPIs are a direct result of larger mobile game companies bidding against each other for the market share of impressions available on the ad networks. Often, small developers cannot afford to compete in these bidding wars. Nevertheless, if the developer has an adequate marketing budget to acquire users through paid channels, the company should track each ad network's performance with great detail.

Due to value segmentation (discussed in literature review page 34-36), the large developers with large user bases are the ones selling their players to these ad networks. The sold players were analysed to have low profitability potential, hence players bought from mobile ad networks can be of low quality. This adverse selection further complicates the paid user acquisition efforts.

Fiksu (2014) suggests using the marketing spend towards a range of ad networks, social media platforms, incentivised networks and video ad networks to generate traffic through variety of sources. Additionally, by using multiple ad networks the marketers can optimise the marketing expenditure towards the best-performing sources, given that the company has the ability to track users from different ad sources. Selecting the right mix of paid media channels is trial-and-error-game because there is no mix which is right for all the apps. The marketers should calculate the lifetime values of their players to be able to run ROI positive marketing campaigns.

6 Conclusion

The discovery sources which emerged could be categorised into four categories: app stores, traditional word-of-mouth, online word-of-mouth and advertising/promotions. What became evident in the results was the two most influential channels affecting the buyer's decision process have remained virtually unchanged for the past four years (2011-2014), which could imply that there will be no sudden changes to the influential position of the two. The power of app stores and word-of-mouth is undisputed.

It is also clear that mobile game players have increasingly shorter attention spans and they spend little time searching for new games to play, rather passively receiving information via app stores' top charts and featured positions. Ironically, the mobile game industry's evolution shows signs of regressing back to the times when phone carriers acted as gatekeepers and the developers had to persuade them to get theirs games on feature phones. Now the new gatekeepers are the app stores who decide which games to feature on the front page.

In all likelihood, gaining visibility through app stores will become even more challenging and costly over time, even with burst campaigning and App-Store-Optimisation. Therefore, the game developers and marketers should concentrate on improving word-of-mouth discovery by integrating social features into the games and harness the viral power of gameplay videos. However, solely relying on word-of-mouth and viral marketing for discovery is naïve. The best solution would be to implement multi-channel marketing with appropriate analytics software to identify the best-performing channels and audiences and then directing the marketing spend towards those channels.

Solving the discovery problem is a puzzle with millions of pieces, there is no definitive answer to it. As long as the majority of mobile game players flock to over-crowded app stores to find new games, the game developers will have a hard time competing for visibility. At times an occasional viral hit like *Flappy Bird* will emerge to stir the pot. Nevertheless, mobile game industry is a highly dynamic market where disruptive technologies can change the whole discovery landscape instantly. For example, Virtual Reality technologies like Oculus Rift or Microsoft's HoloLens, which bring high-definition

holograms to real world, could possibly be the next disruptive forces in the video games industry.

6.1 Quality of the Research

The results of this study answer the research questions set in the beginning. The aim was to find out how mobile games players discover new games and based on the findings discuss most viable marketing strategies for each channel. The author is satisfied with the results and due to multi-method research design, which also included descriptive research, the results are actionable.

The researcher recognises several limitations in the thesis. The first limitation is that all the data used in the work are secondary, thus the data were initially gathered for another purpose. In addition, the respondents in the surveys mainly came from North America and only one survey had European respondents. Therefore, the results are probably not directly applicable to other geographical markets.

Conducting interviews with industry professionals to gather primary qualitative information would have improved the quality of the research. However, it was challenging to reach the right persons to interview, although the author works in the industry. Ultimately the decision was made to conduct the research based solely on secondary data.

Moreover, not all possible marketing methods were discussed. For example, the author did not discuss traditional media channels such as TV, print media or radio or discuss product placement. However, due to time and scope limitations the most viable marketing methods for the most influential channels were covered.

Lastly, due to mobile game markets constantly changing, the results can become obsolete rather quickly if new disruptive technologies enter into the market.

6.2 Implications for Further Research

This study discussed potential marketing solutions to the current discoverability problem faced by the free-to-play mobile developers due to intense competition in the market. The mobile game market could be studied further from the viewpoint of what business strategies to implement in order to achieve competitive advantage.

Additionally, this research only briefly mentioned the role of publishers in user acquisition efforts. The disadvantages and advantages of working with a publisher in order to gain visibility could be researched.

Furthermore, while reading about ad tracking technologies it became apparent that there are several ad tracking solutions available, which all employ different approaches. The research could try to find out how ad tracking influences the results of app marketing, and possibly provide comparisons, disadvantages and advantages of ad tracking technologies which are currently available.

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Sharer Figures, Applifier Survey 2013

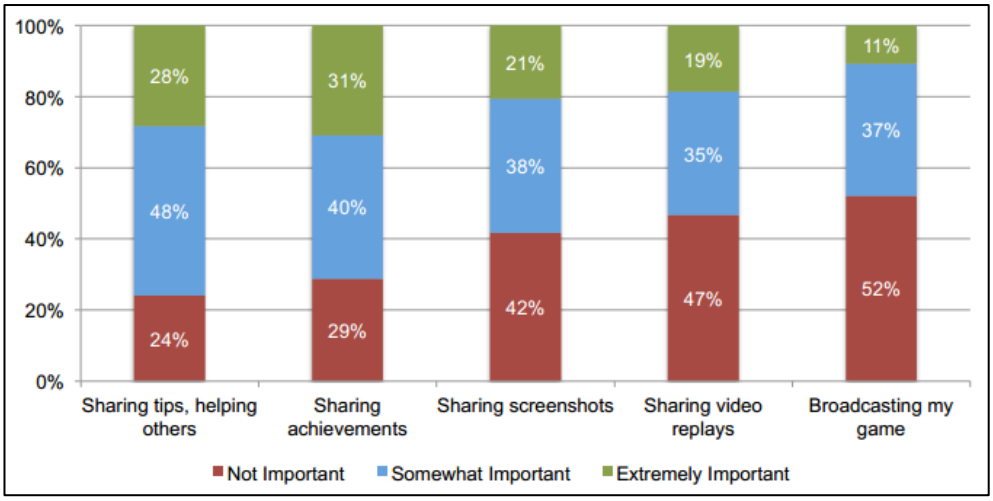

Figure. Different features and their importance to players. Applifier (2013).

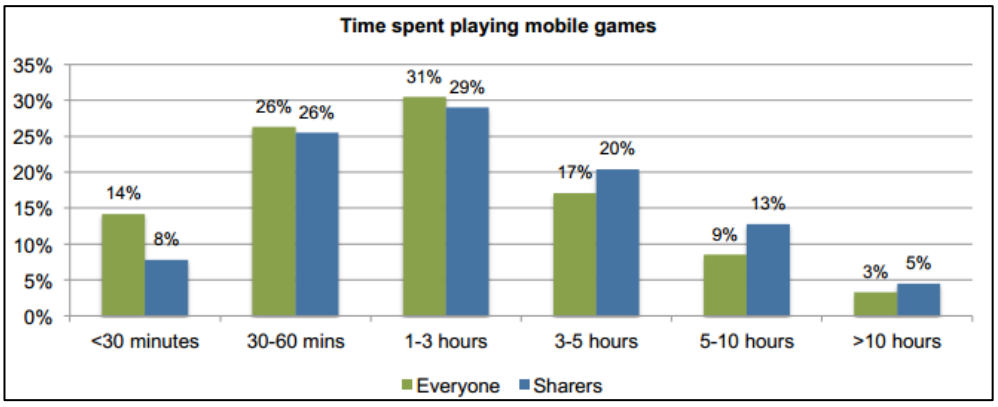

Figure. Time spent playing mobile games. Applifier (2013).

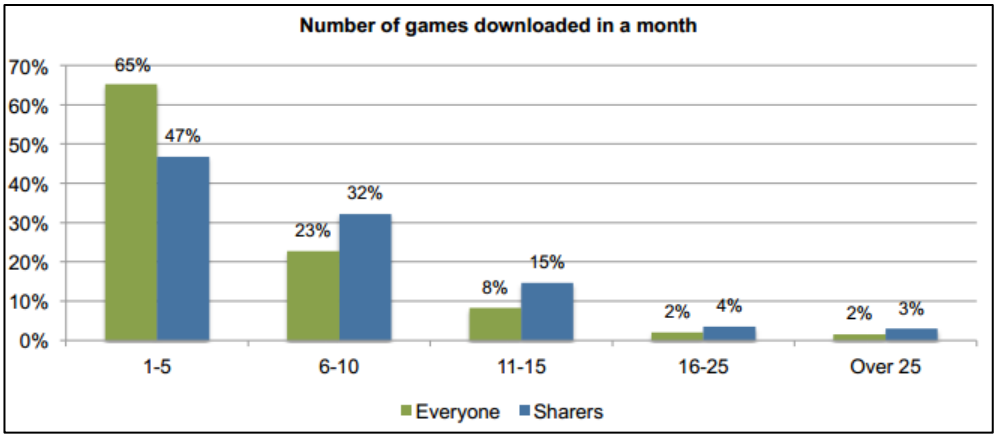

Figure. Number of games downloaded in a month. (Applifier 2013).

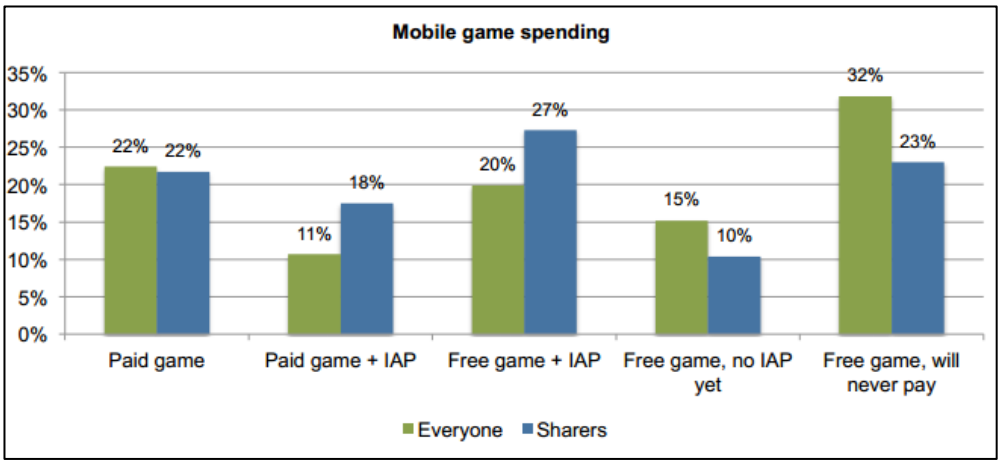

Figure. Mobile game spending. (Applifier 2013).

Whale Behaviour, Applifier Survey 2014

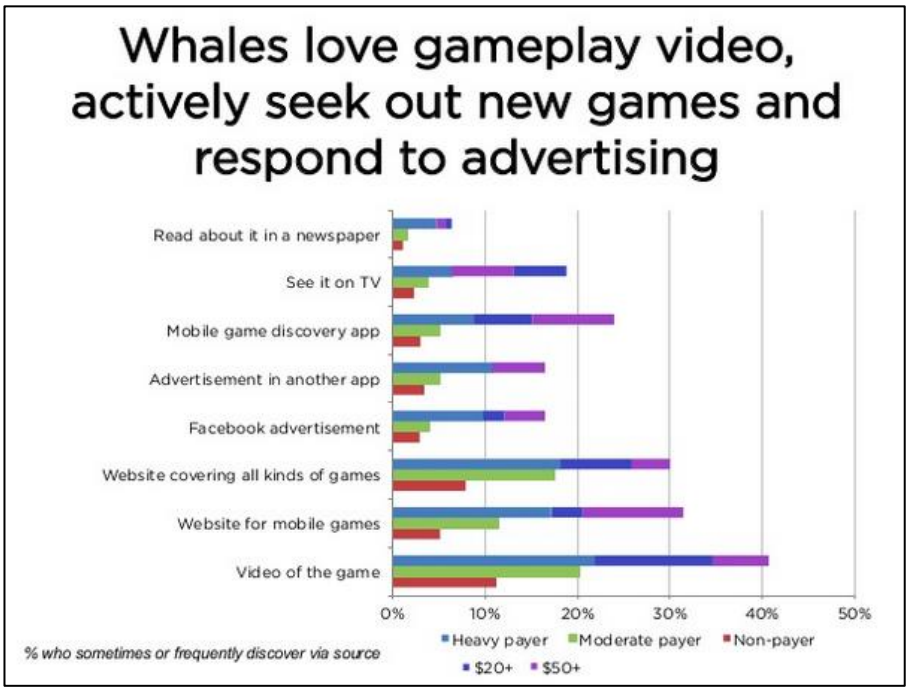

Figure. Whales love gameplay video, actively seek out new games and respond to advertising.

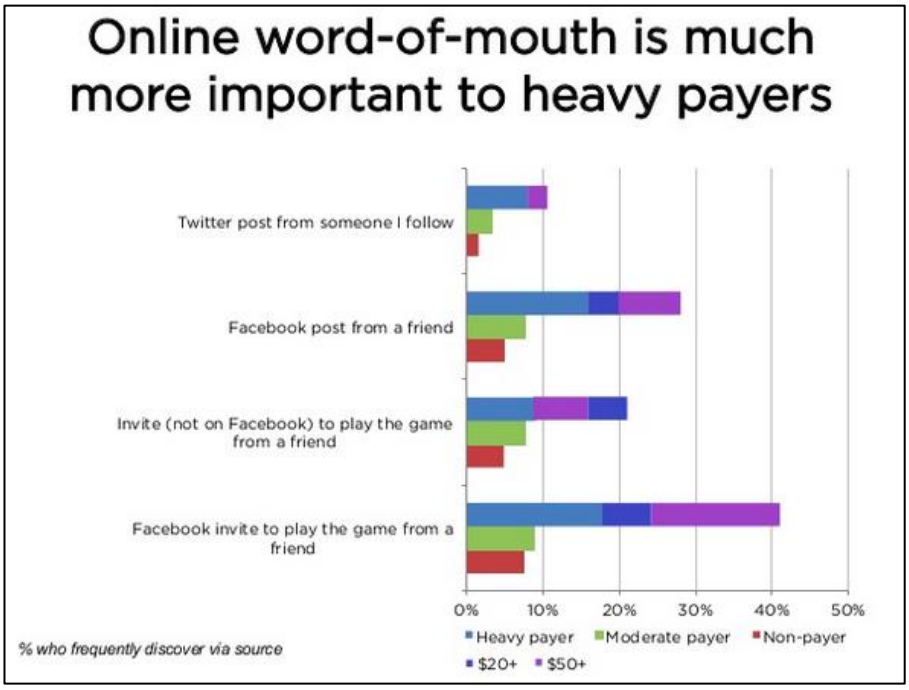

Figure. Online word-of-mouth is much more important to heavy payers.