

Revenue model development within the video game industry

A study into the evolution of video game revenue models

Abstract: Video games have substantially grown in both sales figures and mainstream popularity in contemporary culture. Through adoption of online purchasing and digital distribution methods, video games are no longer a niche hobby, but a global storytelling medium and industry. With growing audiences, however, video game studios face increasing challenges in relation to monetizing their video game titles. The purpose of this thesis is to explore how the adoption of online purchasing has changed the way video game studios develop revenue models for their titles. The problem area this study aims to contribute to reflects the limited and relatively fragmented academic knowledge on the process of revenue model development. To fulfill this purpose, this paper offers a theoretic framework that depicts revenue model development being influenced by three factors: "Player motivations and Types", "Developer considerations and practices" and "Online purchasing". Apart from the theoretic framework, the study applies a triangulation approach, which builds on cross-referencing empiric data collected from both industry experts, video game consumers and existing theories as described in the literature review. The findings of the study indicate the three main influencing forces are: consumer motivational factors, purchase intention modifying factors and developer adaptations in reaction to these behavioral patterns.

Keywords: video games, digital distribution, business models, revenue model, online purchasing

Authors:

Georgi Dakov

Gabor Fabian

Thank you!

We would like to express our sincerest gratitude to our supervisor for all the helpful feedback sessions and guidance we have received during our writing process.

We are also thankful for all our interview subjects who helped us make this thesis come to reality.

Finally, a big thanks to all our friends and family for the feedback, proofreading and patience under the past months.

Thank you to my mom, my sister and my grandmother - for being my rocks and making me the man I am today.

Definitions

Video game: software played for the purpose of entertainment on a PC, console or handheld device.

Video game developer: an actor specialized in creating video games.

Publisher: a company specialized in bringing to market the developed games.

Brick-and-Mortar Retailer: A physical distributor or chain of distributors selling games to consumers.

E-retailer: An actor without physical presence, selling through an online platform (such as Steam).

Retail copy: A boxed version of the game on a physical medium (CD, DVD or cartridge).

Digital copy: A virtual license connected to a user account provided by an E-retailer.

E-commerce: A revolutionary method of selling games on through digital means, often cutting out expensive production and middlemen.

Revenue model: A system of mechanics, elements and triggers within the game aiming to capture value from consumers.

Table of Content

1. Introduction	6
1.1 Problem Area	7
1.2 Purpose	7
1.3 Delimitations	8
2. Literature review	9
2.1 Previous studies on the subject	9
2.2 Theoretic Framework	10
2.3 Theme I – Video games and player motivations	10
2.3.1 Complexities and classifications of video games	10
2.3.2 Player Motivations and Types	11
Theoretic models on player motivations	11
Player types as defined through Social Cognitive Theory	11
2.4 Theme II – Business and revenue models	13
2.4.1 Theory of business model composition	13
2.4.2 Theory on business model enabling practices	13
2.4.3 Business model components	14
2.4.4 Revenue models within the gaming industry	17
2.4.5 Illustrative mini case study: World of Warcraft	20
2.5 Theme III - Online Purchasing:	20
2.5.1 Online Purchasing in the Video Game Industry	21
2.5.2 Factors that motivate shopping online	21
2.5.3 Factors that encourage online purchase intention	22
2.6 Theoretical framework:	24
Player motivations	24
Revenue models	25
Purchase intention and influencing factors	25
3. Method	28
3.1 Research Approach	28
3.2 Qualitative study	29
3.3 Quantitative study	30
3.4 Quality of the study	31
Reliability	31
Parsimony	31
Validity	31

4. Empirical results	32
4.1 Interview Responses	32
4.1.1 Revenue model development	32
4.1.1.a From Publisher to Developer	32
4.1.1.b Best Practices	34
4.1.2 Value-to-price balance	34
4.1.3 Transparency and Payment Methods	35
4.1.4 Metrics driven approach	35
4.1.5 Segmentation	36
4.1.6 Factors influencing online purchase intention	37
4.1.7 Illustrative mini case study - Steam, “the IKEA of the videogames industry”	40
4.2 Survey responses	42
4.2.1 Survey demographics	42
4.2.2 Industry-specific demographics	43
4.2.3 Open-ended questions	45
4.2.4 Attitudes towards video games	45
4.2.5 Consumer deterrents	47
4.2.6 Business related questions	48
4.2.7 Segmentation of respondents	50
5. Conclusion	52
5.1 Research sub-question #1	52
5.2 Research sub-question #2	54
5.3 Main Research Question	56
6. Discussion	58
6.1 Implications	58
6.2 Research Contribution	59
6.3 Critical Review	60
7. Appendix	61
7.1 Additional quantitative data	61
7.3 Interview Guide	67
8. References	68
8.1 Printed references	68
8.2 Digital references	71

1. Introduction

Video games have grown from a niched pastime to a fully developed, global industry whose products and services are outperforming traditional forms of entertainment on a regular basis. This immense growth is mainly attributed to the emergence and industry-wide adoption of online purchasing methods.

By leveraging the newly emerged technological advancements, developers are able to offer their products and services in a more convenient and cost-effective way than ever before. Consumers also benefit from the dynamic market landscape, with greater access and variety of games available to them. This adoption of online purchasing methods also meant that products had to be accompanied by business models that incorporated these methods, a significant challenge for an industry still in its relative youth. As a result, developers had to adjust their commercial practices and orientation, while consumers had to explore a tumultuous market through experimentation with a variety of titles.

The following figures illustrate the impact of videogames on the global economy. Presently, active players around the world are estimated to be around 1.2 billion, which accounts for 33% of all connected users (Spill Games, 2013). Illustrating the degree of growth in sales, according to PriceWaterhouseCoopers, the industry will grow from \$70.3 billion to an estimated \$90.1 billion by year 2020 (PwC, 2012), which outpaces growth projections for the music industry from \$42.9 billion to \$47.7 billion for the same period (Statista, 2017).

A prime example, *Grand Theft Auto V* (Rockstar Games, 2013), has become one of the fastest selling entertainment products of all time, grossing over \$1 billion worldwide during its initial 72-hour launch window (Ukie, 2017). It has become a common occurrence for a title to overtake an equally popular blockbuster movie in sales during its opening week. Despite not having the same demographic reach as more traditional entertainment forms, revenue figures indicate that videogames are close to becoming the new dominant entertainment medium (IGN, 2012).

This impressive growth in sales and customer reach was mainly fueled by the recent shift from physical to digital distribution. Presently, over 74% of players in the US purchase their software digitally rather than in physical form (Statista, 2017), a distribution, which was 80% to 20% in favor of physical form just eight years ago. “Brick and mortar” retailers are increasingly outcompeted with GameStop, amongst the largest of them, being forced to shut down over 190 stores in 2017 alone (CNN, 2017).

1.1 Problem Area

Through online purchasing and digital distribution, logistical and manufacturing costs that constituted a significant barrier to entry were profoundly lowered. Consequently, video game development as a commercial practice became more available to smaller studios (Guardian, 2016), especially on the PC platform. This resulted in established publishers, such as Electronic Arts, Sega and others having to compete with indie developers. Furthermore, both indie developers and mainstream publishers needed to adapt to changing consumer purchase habits, as a result of online purchasing and digital distribution.

With the above shift, new forms of monetization and revenue models were developed. It is here that the authors introduce the study's problem area:

There is fragmented academic knowledge on the process of revenue model development in the context of the shift towards online purchasing.

Exploring this process empirically and from a marketing perspective is relevant as a similar shift from physical copies of titles to digital ones is forming and about to occur in another branch of the video game industry, namely consoles. Thus, learnings on the effects of online purchase behavior on revenue model development may prove pertinent in the near future.

There are three reasons as to why revenue model development has not been thoroughly addressed in academic literature: Firstly, restructuring in revenue models within the video game industry occurred in a short, but dynamic span of time. Secondly, every revenue model is a reflection of an individual title's strengths and weaknesses, hence it is difficult to apply to other titles. Thirdly, the video game industry is highly dynamic, where collected knowledge is quickly outdated.

1.2 Purpose

The purpose of this thesis is to study the effects of online purchasing on revenue model development in the context of the video game industry. To fulfill this purpose, the study will utilize a triangulation research approach, building on a theoretic framework and empirical data collected from both developer, as well as consumer perspectives, in regards to monetization of video games. Thus, the main research question is formulated as:

“How does business-to-consumer online purchasing affect video game revenue model development?”

Supplementing the main research question, the following sub-questions are as follows:

- *What contemporary practices and considerations are essential for a successful revenue model according to developers?*
- *What factors influence consumer purchase intentions in relation to revenue models in videogames?*

In line with the main research question, the complementary sub-questions and the triangulation logic, the thesis will follow an ontological structure around these three areas:

1. A literature review will offer a foundation based on academic sources on the three topics of: “Player motivations”, “Revenue models” and “Online purchasing”, outlined in the theoretical framework.
2. A series of semi-structured interviews with industry experts will exemplify current practices and considerations regarding revenue model development.
3. A quantitative survey will showcase consumer preferences and attitudes towards these models.

1.3 Delimitations

The limitations are motivated by time, resource and access constraints. The aim of the thesis is to explore the effects of online purchasing on revenue models and their development. Other elements of the business model will be presented for the sake of completeness for the reader, however the research will primarily focus on revenue models.

Secondly, given that online purchasing is a crucial element of this study, the emphasis of empirical studies and literature review will be focusing on what motivates purchase intention. Furthermore, the technical implementation and coding, which facilitates online purchasing, will not be reviewed. Traditional retail revenue models will also be presented as a point of comparison to online focused ones.

Thirdly, this study will focus on video games as entertainment products, thereby excluding activities other than purely recreational. Such additional purposes could include: educational, military, elderly care and so forth. The omission of these functions is motivated by the substantially different customer needs and approaches, which if included in the study, could potentially blur the lines between purchase motivations.

Fourth and final, the study will observe the effects of shifting consumer behavior and revenue model development only in the context of the PC platform, with consoles and mobile being only addressed in comparison. This limitation is applied, as this shift has mainly occurred on the PC platform. With signs of a similar realignment about to occur on the console games, PC developers have insights that could be applied to the console market in the future.

2. Literature review

The review establishes a theoretic foundation by collecting and presenting existing academic knowledge from the fields of video games, revenue models and online purchasing within the video game industry. Each of the three themes will present fundamental definitions as well as complimentary related theories. Firstly, player motivations and types will be presented and discussed; secondly, the review will explore existing the basic framework of business models and emphasize revenue model variety; thirdly, online purchasing and factors that influence purchase behavior online will be outlined. The chapter concludes with a theoretical framework, tying together the problem area, research questions and relating the studied academic theories together into one cohesive system.

2.1 Previous studies on the subject

The literature review chapter contributes an overview of relevant research articles, building on these during the analysis. However, due to the limited number of academic studies conducted on the industry, it stands for clarification that sources on theoretic constructs such as definitions of “video games” and “revenue models” have been partially addressed in previous thesis initiatives, albeit from differing perspectives and with alternative focuses. Credit is given to two theses that explore related topics to this study: “In-game advertising: Making or Breaking the Computer Gaming Experience” by Berg and Schager (Stockholm School of Economics, 2006) and “Business Models for Video Games” by Olsson and Sidenblom (Lund University, 2010). Even though dated at the time of this study, these authors have uncovered reputable theoretical and bibliographical sources, which help in establishing some of the fundamental concepts in understanding the video game industry. Furthermore, two main books were used as references: *The Video Game Business* by Nichols (2014, Palgrave Macmillan) and *The Video Game Industry - Formation, Present State and Future* by Zackariasson and Wilson (2012, Routledge).

The literature sources were acquired through the use of a number of databases such as Stockholm School of Economics Library, Stockholm University’s Library, Gothenburg University’s Library. Supplementary materials were acquired through Ukie - the UK interactive entertainment association as well as DGA - the Dutch gaming association. Facts, figures and case studies were supplemented through several of the renowned video game news websites such as Gamespot, Rock-Paper-Shotgun, as well as INDIGO.

2.2 Theoretic Framework

As outlined, the purpose of this thesis is to study the effects of online purchasing on revenue model development in the context of the video game industry. In order to introduce the different dependencies and connections that shape revenue model development, the authors put forward a literature review based on three themes: Firstly, the authors introduce video games as commercial offerings and player motivations to examine the different incentives that shape title preference in consumers. Secondly, the fundamental components of business models are introduced, with an emphasis on revenue models and their variety. Thirdly, the factors that promote or detract from online purchase intention in video game consumers are introduced. Finally, a theoretic framework outlines the interdependencies between player motivation, developer operations and online purchasing practices to revenue models.

2.3 Theme I – Video games and player motivations

The Oxford Dictionary defines video games as: “A game played by electronically manipulating images produced by a computer program on a monitor or other display” (Oxford, 2017). According to a report by OECD, two dimensions make up and define the industry: The first is *connectivity*, which can either take the form of online or offline, while the second dimension is *platform*, distinguishing between PC, console (e.g. Microsoft’s Xbox or Sony’s PlayStation), mobile and handheld. The former dimension aims to define capabilities and supporting infrastructure, the latter looks at the device prerequisites on the customer level.

2.3.1 Complexities and classifications of video games

Video games are complex commercial offerings, particularly in relation to more traditional forms of entertainment. This intricacy originates from the composition of video games, which involves collaboration between diverse and specialized skillsets, such as storywriters, designers, artists, programmers, marketers and retailers. In a saturated entertainment market with ample substitutes, video games offer one of the most technologically advanced forms of pastime (Nichols, 2014). This unique position necessitates a specialized commercial approach, as this relatively new industry is at the intersection of not only traditional storytelling, but also involves technological aspects as well (Zackariasson, 2012). Development often takes years and involves millions of dollars of invested capital, with often-uncertain outcomes (Zackariasson, 2012). As the industry is in a state of constant technological and commercial innovation, guidelines and common practices are seldom available and are often up to experimentation from developers (Nichols, 2014). Lastly, videogames and their surrounding ecosystem can be viewed as either products, services or a mix of the two (Shostack, 1977).

2.3.2 Player Motivations and Types

In discussing factors that influence purchase intention, it is necessary to define player types and incentives to partake in this entertainment medium. Still very little is known about how consumers select and evaluate video games according to the *Player Types and Quality Predictions Theory* (Weber & Shaw, 2008). Nevertheless, it is important to study these preferences as they relate to purchase intentions. Consequently, the lack of industry standards in customer segmentation is compelling developers to make multi-million dollar gambles based on hunches and educated guesses (Weber & Shaw, 2008). Therefore, in studying the effects of online purchasing on revenue models development, it is necessary to consider the different player types and their corresponding motives.

Theoretic models on player motivations

Advancements within the field of psychology can offer a potential explanation as to why people play video games. Vorderer, Hartmann & Klimmt (2003) suggest the use of the *Gratifications Model*, which builds on the notion that basic needs, individual differences and contextual societal factors combine into many differencing situations to which gratifications are sought from video games. Motivations discovered in their study range from “to pass time”; “to escape reality”; “to have fun” and “to socialize”.

Another approach towards defining motivation for playing video games is through applying the *Self-determination Theory*, as suggested by Ryan, Rigby & Przybylski (2006). This theory suggests that people play videogames because these satisfy basic psychological needs for “autonomy” – where tasks are performed for personal gain; “competence”- where a challenge is overcome through skill and finally “relatedness”- when a player feels connected to others. It is suggested by the article that these factors together account for the “pull” or “attractiveness” of a game.

Player types as defined through Social Cognitive Theory

Weber & Shaw conducted a study in 2008 on the campus of Michigan State University. Based on the existing literature in *Social Psychology* and their empirical findings, the authors concluded that there are six distinct player types, with corresponding motivational factors. These are classified the following way:

- **Player Type 1: *Hedonists***

These players are characterized by strong enjoyment incentives, pursuit of novelty, self-improvement and approachability. Hedonists have a somewhat strong desire for control in their lives and are self-focused.

Example: A player who enjoys their own time and isn't focused on other players.

- **Player Type 2: *Competitors***

Competitors desire self-improvement and competition with others while ranking social interactions with other lowly ranked players. They usually strive for high scores.

Example: A player who enjoys competition and defeating opponents.

- **Player Type 3: *Organizers***

Just like *Socializers* and *Team Players*, *Organizers* are highly social and desire an elevated level of self-improvement and social feedback, at the same time they are less interested in competition.

Example: Players who likes to organize events for the benefit of their peers.

- **Player Type 4: *Rebels***

Rebels are interested in competing with others, however they are more flexible and care little for what other players think about them.

Example: A player who is willing to win using any means necessary.

- **Player Type 5: *Team Players***

Team Players are very social and value self-improvement. Just like *Organizers*, *Team players* have a strong desire for self-efficacy and social interactions. Specifically, *team players* prefer to play against opponents and engage in competition with them.

Example: A player who likes community gatherings and competitions, but generally is more relaxed than an *Organizer*.

- **Player Type 6: *Socializers***

Socializers are players that rank social interactions and self-improvement above all. They are highly flexible and are not interested in competitions within the game environment.

Example: A player who enjoys gaming primarily as a means of engaging in new experiences with others.

Weber & Shaw (2008) argue, that even if a media scholar were to explain these motivational factors and player types to a video game developer, said developer would still need to make multi-million dollar hunches and guesses about translating these factors into game elements. Thus, the commercial launch of a title will include a level of unavoidable uncertainty for stakeholders despite knowledge about player types and their motivational factors. Nevertheless, player motivation is closely tied to title preference, which is in turn related to revenue model preference. Thus, justifying exploration into the relation between player motivations and revenue model development, as outlined in the theoretic framework.

2.4 Theme II – Business and revenue models

The following theme of the literature review discusses theories and definitions on the fundamental components of business models and as well as academic observations on the practices that shape them. Further building on these theoretic concepts, revenue models and their related practices are introduced and emphasized. In illustrating the specialization of the video game industry, the literature review moves on to outlining the wide variety of revenue models currently in circulation.

2.4.1 Theory of business model composition

Chesbrough and Rosenbloom (2002), proposed that business models serve the following seven functions:

- Articulation of the value proposition.
- Identification of a market segments and specification of the revenue model mechanism.
- Definition of the value chain structure as a requirement to create and distribute the offering and complementary assets needed to support position in the chain.
- Details the revenue mechanism by which the firm will be paid for the offering.
- Estimates the cost structure and profit potential.
- Describes the position of the firm within the value network, linking suppliers and customers.

In fulfilling these functions, business models need a complex structure with specialized components. Osterwalder & Pigneur (2010) define business models in the following way: “A business model describes the rationale of how an organization creates, delivers, and captures value”. Where models are composed of nine distinctive building blocks: customer segments; value propositions; channels; customer relationships; revenue streams; key resources; key activities; key partnerships and finally cost structures. In order to illustrate these building blocks and the business landscape they collectively create, each will be discussed below in greater detail, from the developer's perspective, complemented with illustrative examples from the industry.

2.4.2 Theory on business model enabling practices

By utilizing Osterwalder & Pigneur's (2010) theory on business model generation, the literature review offers an academic perspective on the composition of business models. This study emphasizes the development process of revenue models, thus necessitating the establishment of a theoretic perspective on the practices that shape revenue models. To this end, the authors introduce Mason & Spring's (2011) theory on “*sites and practices of business models*”, which suggests three distinct levels within business models:

- *Strategic* - where individuals share ideas on the firm's direction and goals.
- *Organizational* - how different actors translate the goals into practical implementation.
- *Individual* - how business models defines individual exchange actions.

By introducing this theory and adapting its specific components, the authors establish a theoretical overview, which explores developer practices within revenue model design. For the purpose of this study, focus is provided on the second, organizational level of the practice, which reflects the wide variety of developer sizes within the studied industry. The application of this theory will be further addressed in the theoretical framework, concluding the literature review.

2.4.3 Business model components

The following segment explores in detail the business model components, as uncovered by Osterwalder & Pigneur (2010), in their study about business model generation. Each component is introduced through its academic definition and illustrated with industry examples.

Customer segments

Customers provide the demand for products and services, exhibiting significant influence over the areas of focus and surrounding activities in relation to design, development and revenue structures. Far from homogenous, they are often steered by: benefits sought, purchasing power and demographics. These characteristics are utilized by companies in targeting customers, steering them towards a desired state and creating potential to achieve loyalty for repeated purchases. The gaming industry is unique due to its young core target audience (Statista, 2017) and recent global establishment (OECD, 2005). For this reason, the videogames industry, the customers it serves and their demand can be viewed as still under constant development.

Value proposition

The value proposition's main purpose is to attract customer attention and provide incentives to choose one product over another (Osterwalder & Pigneur 2010). Its focus lies on: price, design, performance, packaging, complementary services and offerings. Companies can choose how broad or narrow they want to focus their efforts, to efficiently allocate their resources. Value propositions have been constantly changing in the past decade, offering not only higher entertainment value, but also increased levels of convenience to target audiences (Guardian, 2016).

Channels

The role of channels is crucial in communicating the value proposition to customers. With the advent of Internet and digital distribution, these mediating channels have been significantly reshaped from traditional forms towards more digitalized ones. For the video game industry, this reshaping has brought significant benefits, ranging from clearer and more immediate customer reach, real-time global sales figures and customer feedback. These channels within the electronic entertainment industry today can be more focused and even individualized to each customer, based on previously recorded interest, activity and past purchases (Accenture, 2014).

Customer relationships

Loyalty and repeated purchases are the cornerstones of long-term profitability and competitiveness within the industry (Osterwalder & Pigneur, 2010). In acquiring and retaining customers, publishers and developers need not only to create excitement around their products, but also deliver matching offerings that fulfill the underlying needs and expectations. Within the gaming industry, well-functioning customer relations are key in understanding demand, developing, testing and launching products. Customer relations can lead to significant cost savings, as they are the foundation of a self-sustaining state. Other benefits include active relationship with videogame customers, resulting in feedback, co-creation aspects and brand ambassadorship (Venturebeat, 2013).

Revenue stream and cost structure

In justifying development costs and efficiently monetizing consumers, matching revenue streams are designed. In the video game industry, these streams are diverse and intricate. The basic form of the revenue model, called *retail purchase* involves a one-time monetary transaction between the buyer and the seller, which can be further modified into more sophisticated models, such as: *subscription*, *freemium* and *mixed models*. The emphasis is on matching supply, the value proposition of the game with demand, the perceived need, while justifying associated cost and leveraging customer willingness to pay. The above-mentioned models will be discussed in greater detail in the upcoming chapter on revenue models.

Key resources

Key resources comprise of the existing, and potential future possibilities that can be utilized or realistically implemented by the developer. Besides financial resources, there are intellectual, human, physical and relational resources. Intellectual resources can range from previously launched titles, supporting services, aggregated market and customer data. Human resources are also highly valuable, talent groups range from programmers, designers, artists,

to marketers and accountants. Physical resources include: IT infrastructure, development sites and manufacturing equipment. Finally, relational resources include internal and external connections and their value potential, between developers, publishers, retailers and financiers.

Key activities and partnerships

According to Mason & Spring (2011), business models not only depict the internal and external actions of companies, but they also shape most actors around them, thereby these models can also be seen as framing devices. Additionally, it is argued that business models are constantly changing and thereby dynamic in nature. The continuous adaptation to digital distribution was and still is disruptive for the videogames industry, starting with the large-scale adoption of online purchasing in the early 2000's. As the underlying technological factors, have yet to consolidate, developers need to constantly readjust to the fast-moving state, where both internal capabilities, external influencing factors and consumer demand changes on a yearly basis.

In conclusion, the above-presented components together create a highly interconnected system, which is visualized in *Figure 1*. The central module of *Value Proposition* is the closest and thereby most visible to the consumer, however the additional building blocks are just as vital with their supporting roles. Each company has a unique combination of how these components are built up and prioritized. The state of the connections is in constant motion, as novel opportunities arise, with new consumer segments, emerging key partners, resources and so on. For the video game industry, the *Distribution Channels* component has experienced a radical up-shake, in the form of rapid shift from physical to digital distribution, which will be discussed in greater detail in the third theme, titled *Online Purchasing*.

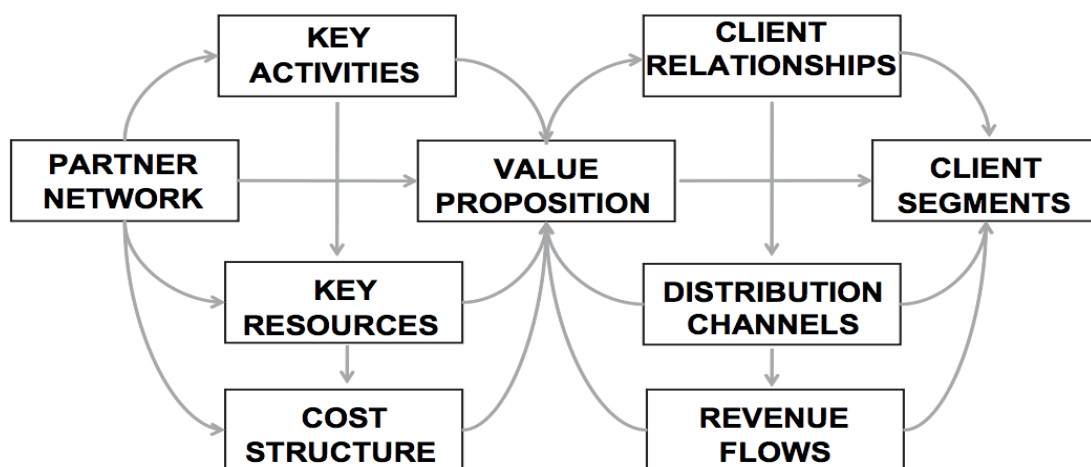


Figure 1 - Osterwalder's business model composition (Chesbrough, 2010).

2.4.4 Revenue models within the gaming industry

Retail Purchase model

This revenue model refers to the customer receiving the product for a one-time monetary transaction, with lifetime access to it. This revenue model was dominant during the pre-Internet era. The retail purchase model often builds on physical data-carriers, such as digital discs or cartridges, offered in packaging decorated with corresponding artwork. Content-wise, such games usually offer a single-player narrative as the main attraction, with occasional secondary multi-player elements. Physical distribution has been on a steady decline from 80% in 2009 to just under 44% in 2015 (Statista, 2016). The opposite, corresponding trend is visible for online distribution, with a steady increase, 2014 being the year digital distribution overtook the leading role from the physical medium for the first time. Such games are often closer to the product-end of the scale than to the services-end.

Digital distribution model

Digital distribution refers to a revenue model in which content is forwarded without the use of physical media, typically through downloading via the Internet. A revenue model that utilizes digital distribution differs from the traditional retail revenue models in the nature of its offerings as well as payment methods. By allowing video games to be distributed and deployed as digital data, many of the intermediaries between the developer studio and the consumers (such as publishers, physical distributors) can be removed from the equation, thus lowering the price for the products and increasing profit margins, as they do not have to cover costs for all intermediaries. A mini-case describing the largest online distribution platform, Steam, is supplemented in the qualitative analysis chapter.

“When creators don’t have to put their work through the gauntlet of middlemen, with everybody down the line taking their cut of the profits, they can sell those games much more cheaply.”

Chris Kohler, Wired.com, 2012

Subscription model

Under a subscription-based model, the customer stays financially committed to a title and receives its benefits under a predefined contract period. It builds on lower initial investment from the consumer, but in perpetuity amounting to a larger aggregate sum (US Gamer, 2013). This model incentivizes developers to keep the quality at a constant level and thereby make customers incentivized want more, renew their subscriptions and keep their dedication to the title (HBR, 2016). However, this aspect of the business model can also significantly raise operating costs (The Economist, 2014); thereby requiring additional planning in regards to the longer product life cycle. In contrast to single purchase games, the subscription-based model

is closer to the service-end of the spectrum and further from the product-end (Shostack, 1977). The recurrent subscription costs are motivated with additional developer expenses related to the model, which are required to maintain the supporting infrastructure behind the scenes, such as servers, bandwidth, storage requirements and support staff (Kotaku, 2014).

Freemium model

Within the freemium model, customers enjoy an initially free-of-charge, but often limited access to a title. These limitations are later allowed to be partially or fully unlocked in exchange for financial transactions (Business Insider, 2015). Such models target consumers with lower willingness to pay. In contrast to the retail purchase model, the idea behind the freemium model is to leverage consumer uncertainty and initial low willingness to pay (Business Insider, 2015). Development costs and uncertainty are significantly higher compared to the two prior models, as there are no guarantees of recuperating investments. The freemium approach allows attracting a wider variety of consumers, however with a lower conversion rate than other models. Usually a small, but dedicated segment (The Escapist, 2014), often ranging from 1% to 3%, justifies the development costs, due their willingness to pay, with a larger, free-rider segment enjoying many of the offered complimentary features without ever paying.

“Only a handful of consumers pay (for freemium games), for our titles the rate was around one paying customer for every 100 players.”

Interview with B., sales analyst.

Players often have the option to either spend a large amount of their time “grinding” or alternatively purchase time saving boosts through micro-transaction. Among the three main business models, freemium stands closest to the service-end of the scale (Shostack, 1977), as it requires constant updates, support and developer attention.

Microtransactions model

Micro transactions are usually utilized as part of the freemium model and allow the monetization of the restricted game environment by removing limitations bit-by-bit (Forbes, 2013). The monetization strategy of this model builds on providing minor enhancements to the player's experience for a seemingly insignificant amount of monetary exchange, often on regular basis (Techradar, 2015). Games utilizing micro transactions are purposefully designed, by creating artificial demand for players to purchase such improvements or alternatively spend a substantial amount of time in the game world (Kotaku, 2014). The model however is not without controversies, as consumers often attach negative associations to this particular monetization model due to perceptions relating to retailer opportunism in the form of over-charging, “pay-to-win” design and corporate greed (Cnet, 2013).

Advertising model

Besides leveraging consumer willingness to pay, developer studios also have the option to monetize their games by embedding advertisements in them. This business model mainly builds on business-to-business interactions and can be considered a complement to the main revenue stream the title is designed around (Berg, 2006). Video games naturally lend themselves as a favorable medium for advertisements, as they actively engage players (Adweek, 2014), especially when compared to more traditional, passive channels, such as TV, radio or printed ads; additionally, the presence of these ads can also enhance immersion and player experience when placed correctly. Strategic placing of ads can increase the sense of reality in games, if the depicted place in the real world also contains advertisements, such banners around stadiums in sport games (Berg, 2006). On the other hand, the element of unexpectedness can also increase awareness around the ads. As an example, in the 2012 US presidential elections, the candidate Barack Obama was amongst the very first to target a specific audience (NPR, 2012) by including political messages in the racing simulator: *Need For Speed Carbon* (Electronic Arts, 2006).

Player-to-player trading model

The *player-to-player* trading model is different from the previously discussed ones, as it mostly focuses on consumer-to-consumer interactions. Games often have their own virtual ecosystems, including a digital economy, which allows players to purchase either functional or decorative items for their characters (Bloomberg, 2016), aimed at enhancing immersion and overall experience (Psychology of Games, 2010) allowing individualization and even serve as status symbols (Balkin-Noveck 2006). These items are either created by the developer or by the players themselves. Certain titles are designed around such trading systems, where in-game digital cash can be exchanged for actual currency and vice versa (Osathanunkul, 2015). Game development companies make money from these purchases, by regulating the supply and demand of such items. Transactions take place between players and non-player characters programmed to represent the interests of the developer.

Mixed Models

Revenue models can be used not only in their pure forms, but also in combination with specific monetization mechanics to match products with their capabilities and highlight their features. Besides simple retail models, revenue models can be enhanced, by including pre-orders, subscriptions, micro transactions, freemium elements, and time-limited tryouts. These elements can be mixed in a variety of ways (Perry, 2008), providing a competitive edge over other titles. Developers decide the mix, where other stakeholders such as publishers and financiers can also have an influence (Fortune, 2015). Decisions are made based on number of

factors, which includes: tradeoff between short and long-term profitability; previously launched products; existing title portfolio and lastly, the “gut-feeling” of the developer regarding how the game will fit into the marketplace (Business Insider, 2015). As a result of the number of possible revenue model combinations, unknown factors, influencers and constantly changing market landscape, developers are in a difficult position to choose the correct model for their titles.

2.4.5 Illustrative mini case study: World of Warcraft

One of the defining titles for video game industry during the 2000’s was *World of Warcraft* (Blizzard Entertainment, 2004). This game mainly utilizes the subscription model; however, it also complements it with elements from others, thereby it can be viewed as an essentially mixed model. Besides the main subscription model, the game utilizes retail purchase (starter box set); episodic expansions (every 18 months) and freemium elements (try-out for new players). Today, this highly successful title has over 10 million active players paying a monthly fee of \$15 (Blizzard, 2017) in addition to the upfront \$20 cost of the base game, and its expansions at \$45 each (Blizzard Entertainment, 2017). The freemium element allows new, still undecided players to try out most of the features offered by the game, without financial commitment, further increasing the appeal of the title. As a result of Blizzard’s success with their mixed business model, the game has not only introduced six expansion pack, but also spin-off titles, such as *Hearthstone* (Blizzard Entertainment, 2017) and even a feature film (Universal Pictures, 2016).

The variety of listed revenue models represents the drive for developer studios to differentiate their offerings and adapt their monetization strategies to suit the customers better. It also serves to illustrate that revenue models are complex elements that are shaped by a number of different factors from consumers, to developers and payment methods, thus enhancing the relevance of the presented theoretic framework.

2.5 Theme III - Online Purchasing:

The final theme of the literature review establishes a theoretic foundation by collecting and presenting existing academic knowledge in relation to factors that promote purchase intention online in the context of the video game industry. Firstly, factors that influenced the global growth of online purchases will be presented; secondly, the theme will explore factors that increase the likelihood of an online purchase; thirdly, factors that reduce the probability of an online purchase will be outlined.

“We are in the middle a social, business and cultural revolution. At the center of this change is the Internet, and more specifically, e-commerce.”

- Bernard Jaworski, 2001

2.5.1 Online Purchasing in the Video Game Industry

The digital entertainment industry, specifically video games, is one of the industries, which has been greatly influenced by the rise of online purchasing. The distribution of video games through the Internet offers a swathe of new possibilities for the entire industry, which prior was usually built around the relationship between video game developers and publisher, who financed and organized the distribution and sale (Prince & Roth, 2004).

“The worst days (for video game development) were the cartridge days. It was a huge risk – you had all this money tied up in silicon in a warehouse somewhere, so you’d be conservative in the decisions you felt you could make, very conservative in the IPs you signed, your art direction would not change, and so on. Now it’s the opposite extreme: we can put something on Steam, deliver it to people all around the world and make changes. We can take more interesting risks”.

– Gabe Newell (Rock, Paper, Shotgun, 2007)

Digital distribution greatly reduced production, distribution and storage costs for the advantage of the developer. This allowed independent companies to sell and distribute their games without having to negotiate deals with publishers (Kohler, 2004).

The video game industry was greatly expanded, as developers were no longer required to rely on conventional boxed sales to see profit, and could see success through the sale of games, which would normally not be accepted by publishers for distribution. The power had shifted from publisher to developer (Michael Prachter, 2004).

Online purchasing has revolutionized consumer behavior as well. For consumers, the advantages of online transactions through the Internet are several. Buyers can easily compare prices and conditions between different suppliers, products and services (Da Costa, 2011).

2.5.2 Factors that motivate shopping online

In understanding the adoption of online purchasing and the revolution in the development of video game revenue models, it is noteworthy to examine the theory of factors that motivate consumer to shop online as opposed to offline. Dhoklakia’s (2001) theory, *Factors Driving Consumer Intention to Shop Online*, illustrates the attractiveness of online purchasing to consumers in several ways. It suggests that intention to shop online is influenced by a number of variables including: convenience, price, and product categories (Burke, 1997; Peterson et. al., 1997). A study by Chiang (2001), examining the effects of price, product type, and convenience on consumer intention to shop online, found price and convenience to influence consumers’ intention but reported no main effect for product type. These variables are described in greater detail below:

- **Convenience**

Unlike traditional shopping, the distinct characteristic of online shopping is its convenience and it has been found to be the major motive for consumers to shop electronically (Jarvenpaa & Todd, 1997). In their survey, Jarvenpaa and Todd (1997) found that convenience was the single most salient benefit of online shopping. In the context of the video game industry, convenience was facilitated by fast delivery, access upon title release without leaving home and direct communication with developers.

- **Price**

One of the major motives drawing consumers to shop online is the promise of greater savings. In fact, 85% of consumers look for price information when shopping online (Reed, 1999). Online or offline, price is unquestionably one of the most important cues utilized during a consumer's decision-making process (Dhoklakia, 2001). Exemplified by regular discounts on titles on online sales platforms, otherwise unavailable in boxed offers, and bundling of titles with significantly lower price points.

- **Product Type**

One notable implication is that “the suitability of the Internet for marketing to consumers depends to a large extent on the characteristics of the products and services being marketed” (Peterson et. al., 1997) A common way to classify the products is *search* and *experience* goods. Adapting Nelson theory on online goods, a title is defined as a “search good” when full information for dominant product attributes can be known prior to purchase. On the other hand, *experience* good is defined as when full information on dominant attribute can only be known with direct experience. Alba et. al. pointed out that a key difference between online and offline shopping is the ability of online consumers to obtain more information about both price and non-price related information, as a result of reduced search cost.

2.5.3 Factors that encourage online purchase intention

- **Perceived Trust**

Existing studies indicate that perceived trust plays a vital role in online purchasing due to the minimal face-to-face interaction between retailers and consumers in the online setting (Mohseni & Sreenivasan, 2014). Trust can be described as the consumer perception towards online retailer's behavior based on their ability, kindness and honesty (Chervany & McKnight, 2001). In the online environment, most consumers assume that large companies are more reliable and can influence their trust feeling and purchase intention via online (Koufaris & Sosa, 2004). Consumer online purchase intentions may increase when they perceive that their privacy information is protected (Kim & Shim, 2002). Liat & Wuan's (2014) theory, *Factors Influencing Consumers' Online Purchase Intentions*, conclude that online vendors should focus on having long-term relationship with their customers by

delivering trust and transparency. In other words, consumers would tend to engage in online purchase behavior if they perceive the online merchant is trustworthy and confident in the process of the transaction (Liat & Wuan, 2014).

- **Perceived usefulness**

Perceived usefulness is defined as the extent to which consumers feel the online website could add value and efficacy to them when performing the shopping activity (Lai & Wang, 2012). The perceived usefulness of the website usually depends on the efficiency of technological characteristics, such as advanced search engines and the personal service provided by the platform (Kim & Song, 2010). Information, as well as high quality goods must be provided to the customers to help them making well-informed decisions. According to Kim & Song (2010), perceived usefulness was proven to have a significant impact on the intention to purchase via the Internet.

- **Perceived Ease of Use**

Both perceived ease of use and perceived usefulness of online platforms have showed significant impact on consumer intention to shop online (Kavianpour, & Shadkam, 2013). Perceived ease of use refers to the degree of how consumers believe that a retail platform or website can help them to search more information with less effort (Chui et al., 2005). Consumers usually visit user-friendly websites, which provide an accessible user interface (Lee & Lin, 2005). In contrast, if users perceive that a website is difficult to use, or the display of the website is complicated and ambiguous, they will show potentially lower online purchase intention (Green, Pearson, & Pearson, 2007).

2.5.4 Factors that discourage online shopping intention

Perceived risk

Internet-based consumer exchanges often involve many transacting parties (seller, financial institutions, shipping companies, and other intermediaries), and as such, the complexity of relationships increase, so does the potential for retailer opportunism (Grabner-Kraeuter, 2002). Unethical and harmful behaviors are known to increase in contexts without physical contact (Kelman and Hamilton, 1989). Consequently, consumers could potentially encounter three distinct types of risk in online purchasing.

- First, consumers face *privacy risks*, in the sense that the customer's personal and financial information may be stolen, altered or otherwise compromised by unauthorized third parties who are not part of the consumer-platform relationship.

- Second, consumers purchasing online goods and sharing ownership of those with an online platform face the risk of long-term availability. This occurs when the platform hosting the online goods becomes no longer available which constitutes a risk of loss of the goods. As argued by Tan and Thoen (2000), no party has total control over the systems and facilitating networks upon which internet-based transactions depend, which could present a barrier to purchase intention
- Finally, consumers could be confronted with cases of *retailer opportunism* – as defined by Jarvenpaa and Tiller’s theory, *Consumer Trust in Virtual Environments*, - intentional misbehavior by seller at the expense of the customer. Product quality may not correspond the advertised description or intentionally dishonor sales agreements.

Online purchasing has had a profound effect on the video game industry; hence it was a natural addition as the third theme of the literature review. By offering a theoretic foundation as to what factors influence purchase intention online, the study can proceed to exploring the exact application and influence of said factors on the development of revenue models as outlined within the theoretic framework and empirics chapters.

2.6 Theoretical framework:

This section summarizes and relates the above-presented theories to each other, combining them into one theoretical framework. The aim of this approach is to shed light on the effects and interdependencies that B2C online purchasing is exhibiting on revenue models, specifically in the context to the video games industry.

Player motivations

The first interdependency of the theoretic framework is centered around player motivations. In examining the different player types and their preferences, the authors made use of the *Player Types and Quality Predictions Theory* (Weber & Shaw, 2008). Based on this theory, six different player types are distinguished, each with specific behavioral patterns and preferences. These preferences in turn are used by developers to structure their games in a manner appealing to these player types. A conclusion can be drawn from Weber & Shaw’s theory, namely that video game players through their behavioral patterns and preferences shape the way games are structured, produced and monetized. This conclusion justifies the application of Osterwalder’s theory on *Business model generation* (2005). Osterwalder puts forward the notion that a revenue model is a business’s unique way of capturing value from its consumers. Due to the shift towards digital distribution, numerous development studios

had to restructure their internal business practices and monetization schemes, in order to match new player types and their recently emerged motives.

Combining the insights, from both Osterwalder's and Weber & Shaw's theories, the relation of player types and preferences can be summarized in the first interdependency: Consumers through their preferences and behavioral patterns influence how video games are structured both in terms of value capturing and revenue model development.

Revenue models

The second interdependency in the theoretic framework deals specifically with revenue models and the practices developers follow in shaping them. Building further on the first interdependency, developers structure video games and revenue modes to maximize their appeal towards a specific consumer behaviors and preferences. In addressing the above perspective of revenue model development, the theoretical framework makes use of Mason & Spring's theory on *The sites and Practices of Business models* (2011). By outlining the wide variety of revenue models currently in use within the industry, the authors showcase that these are shaped not solely by consumer insights and preferences, but also by the internal practices within development studios. Mason & Spring (2011) suggest that developer activities take place in three distinct levels: *strategic, operational and individual*. For the theoretical framework, the *operational level* of developer approaches is most relevant when examining revenue models targeting consumer preferences. Utilizing Mason & Spring's theory, it becomes possible to uncover the specific practices and approaches that developers employ on an organizational level to shape the structure of revenue models in the context of Online purchasing.

Purchase intention and influencing factors

The third and final interdependency relates to the practices and influences of online purchasing and how these are related to revenue models. Evidence provided in the introduction, shows that purchasing video games online has become more prevalent compared to the traditional retail model through "*brick and mortar*" outlets. As further showcased by the wide variety of online revenue models, online purchasing has become the preferred method of acquiring video game content, expanding the business models beyond single purchase into: subscription, freemium and mixed models. Through adapting Dhoklakia's theory on *Factors Driving Consumer Intention to Shop Online*, the authors have uncovered why consumers are increasingly picking online shopping over physical retailing. Building on these insights, Liat & Wuan's (2014) theory, *Factors Influencing Consumers' Online Purchase Intentions*, of positive influencers have been added to the framework to showcase *attractors* towards online shopping, such as convenience, pricing and diverse product types. As a counterpoint to the above theory, Jarvenpaa & Tiller's (2001) theory *Consumer Trust in*

Virtual Environments explores perceived risks and their effects on online purchase intention have also been included in the form of *detractors*, such as privacy risk, retailer opportunism and long-term availability. These contemporary revenue models and their relations are structured around online purchasing and as such address a wide spectrum of perspectives.

Summary of the theoretic framework:

The theoretic framework has three applications in the context of this thesis: Firstly, it relates to the problem area of this study, namely that there is fragmented knowledge about how revenue model development has been influenced by the advent of online purchasing. The framework also provides the necessary definitions and outline of different actors and their practices that exert an influence the industry. Secondly, the theoretic framework synthesizes the available academic knowledge and perspectives into three distinctive interdependencies which when combined create one cohesive system. Thirdly, the theoretic framework offers structure to the answers of the research questions posed within the scope of this study. The *Player motivations* interdependency reflects the connection between consumer preferences and revenue model development, which is crucial in offering a resolution to the second sub-question. The *Revenue model* interdependency reflects the role of internal developer practices in structuring revenue models, which is the key factor in answering the first research question. The third and final interdependency, *Purchase Intentions and influencing factors*, relates to both consumer preferences and developer practices and is thus a bridging component between the two perspectives on revenue model development.

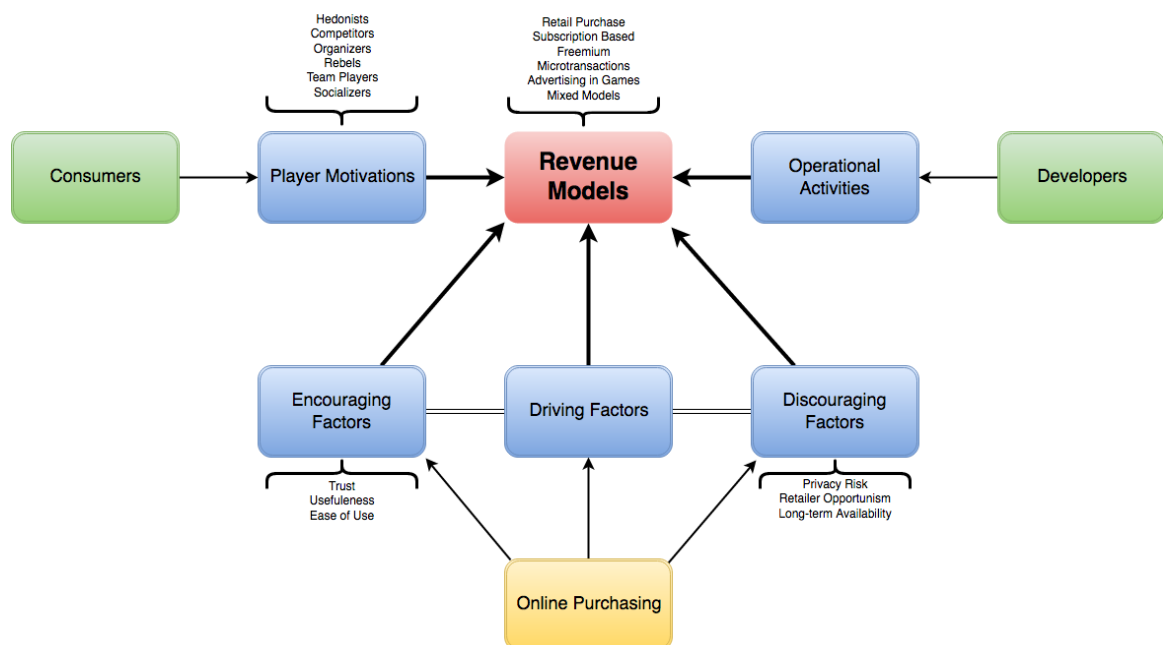


Figure 2 - Visualization of the theoretical framework

The figure is an illustration of the three influences that are exhibited on the development of revenue models. On the left side, consumers are observed and how they influence revenue models development through the motivations that they exhibit. On the right side, developers and their influences through everyday operational activities is illustrated. The bottom-side shows how the factors for online purchasing play a role in how a revenue model is structured.

3. Method

In this chapter, the authors argue for the choice of conducting both a qualitative and a quantitative study to investigate the effects of online purchasing on revenue models within the video game industry. Further, the authors justify taking a “Triangulation” approach. A description of the data collection, including the logic behind the method design and data processing will also be included in this chapter.

3.1 Research Approach

The study aims at uncovering the effects of online purchasing on revenue design. The research questions were formulated based on observations and limited existing theory, thus focusing the study around a combination of induction and deduction (Bryman & Bell, 2007, 2012; Bjorklund & Paulsson, 2014). According to Bjorklund & Paulsson (2014), in case of deduction, the researchers start with theories and make predictions on the basis of those, which is then attempted to be verified by the collected empirical data. In case of induction on the other hand, the research area is studied without prior knowledge of the theories, formulating these along the way, such as by the usage of *grounded theory*, with the application of certain determined criteria (Bjorklund & Paulsson, 2014). As presented in the introduction, the field of business model development is rather under-studied, especially in relation to video game development, thereby there is a scarce theory base available, which motivated the authors to combine both an inductive and deductive approach. The aim of the study therefore is to explain a situation and uncover relationships between different actors, thus taking an exploratory process.

With the goal of collecting insights on revenue model development, the chosen research method was a qualitative study based on semi-structured expert interviews. This approach is suitable due to the lack of data availability on revenue models; thereby the most reliable way of collecting it is through a qualitative study with personnel from the video game industry. Interviews are an appropriate data collection method for complex expert data based data (Bjorklund & Paulsson, 2014). For collecting data on consumer online purchasing behavior, a quantitative method was deemed as most appropriate as it allowed the study to acquire generalizable findings through statistical analysis (Bryman & Bell, 2012).

The *Triangulation* approach is facilitated through the study of academic literature as outlined by the theoretic framework, gathering both quantitative data on customer behavior and qualitative data on revenue model development and finally, bringing these three elements together to explore the causal relationships between them (Adami & Kiger, 2005).

3.2 Qualitative study

The qualitative study was conducted through semi-structured interviews with field experts to collect insights on how developers experience the shift towards online purchasing and distribution.

- Sample

The qualitative sample contains seven semi-structured interviews, held either face-to-face or via Skype. The selection of participants represents different actors within the video game industry and outlines insights from 12 unique company systems. The logic behind this heterogeneous selection was based on the assumption that online purchasing is perceived in different ways for various actors. The functions represented in the sample include: CEO, Senior Sales Analyst, Lead Game Designer, Senior Consultant and Marketing Manager. Moreover, the selected interviewees have different degrees of experience allowing the study to explore their unique insights of the past, present state and potential future developments. Contact with individual professionals from the gaming system was established thru the use of the author's personal network, as well as requests through the social site, Linked-In. The anonymized list of interview subjects is available in the Appendix.

- Design

The qualitative study was designed around three specific areas: (1) revenue model development processes, (2) capturing and utilizing consumer data and lastly (3) the shift towards online purchases and potential future outcomes. Questions were stated in a simple and straightforward manner, with the inclusion of follow-up questions. The overall pattern of the interviews was flexible and allowed room to tap into the interview subject's personal experience and knowledge. An interview guide (see Appendix) is applied to maintain the focus during interviews and to allow for a fuller image of the interviewee's perspective. All interviews were transcribed within 72 hours and responses were codified to identify recurring themes. The names of the participants and the companies were made anonymous and disclaimers to the noncommercial nature and public availability of the thesis were provided.

- Data processing

In line with triangulation logic, the authors processed data by identifying converging themes and comparing these with the data collected through the quantitative study and the existing literature to uncover potential gaps. This method fits both the inductive and deductive approach of the study, as well as the *Triangulation* logic. The collected data was initially coded into nodes corresponding to different practices, analyzed and compared with existing theory to check for developments or discrepancies.

3.3 Quantitative study

In this chapter, the survey design, question types, codification, distribution and limitations will be discussed in greater detail. The survey targeted everyday consumers and aimed at collecting their personal preferences towards video games and monetization strategies, as per the third interdependency of the theoretical framework.

The self-completion type survey (Bryman & Bell, 2011; Fowler, 2014) aims to find balance between quick and easily questions and codified responses on a six-point *Likert scale* (Bryman, 2011), ranging from positive to negative, alternatively strongly agree to strongly disagree to specific statements. The survey consisted of 19 main questions, ten of them with sub-question. Respondents were assumed basic knowledge of the industry and were provided with contemporary examples when clarifications were necessary. The survey was distributed through a number of ways, including: social media; in-person approach and through online forums.

The survey has been divided into six main parts. The questions for the analysis have been regrouped, in order to shift focus from respondent convenience to greater insight generation for the reader.

- Sample:

The survey was aimed at consumers regardless of age, gender or nationality, to provide a broad spectrum of respondents. To ensure statistical significance, the target response rate has been set at 120. The total number of respondents starting the questionnaire was 169 after survey closing, with 144 complete responses. To avoid ambiguity, minimize respondent drop-off rate and ensure a high quality of responses, the survey was designed with a “funnel approach”, where broader questions were asked first, with successively narrower inquiries following. Along the way, illustrative examples were provided to exemplify business models.

- Design:

An introductory text welcomed respondents, clarifying the goals and non-commercial purpose of the study. The following two open-ended questions about past purchases were asked with the specific intent of not only gaining insight, but also to get the respondent thinking about the topic (Ernst & Adams, 2001), preparing them for the upcoming codified section of the survey about specific revenue models. Scale questions were designed utilizing a six-stage *Likert scale* (Bryman, 2012) with no middle point. Respondents were asked about business models recognition, personal preference and purchase intention towards these. Answers were accompanied by examples of popular releases from the past three-year. The following questions examined whether respondents are consciously familiar with business models. The survey finished with a set of questions establishing the demographic profile of the respondent (Bryman, 2012).

- Data processing:

The primary analysis tools for the quantitative data were IBM's SPSS and Microsoft's Excel data analytics software. Quantitative data analysis guides were used in order to maximize the amount of data during analysis, the two main resources were: SPSS Manual by Pallant (2013) and for Survey Research Methods by Fowler (2014). For additional statistical analysis, Newbold's (2013) *Statistics for Business and Economics* 8th edition was used. Data was visualized with the help of comparative bar charts, pie charts and box plots.

3.4 Quality of the study

Reliability

Bryman & Bell (2011) define reliability as the consistency of a measure of a concept. In the context of this study, reliability is referred to in relation to both empiric data collection methods. In relation to the qualitative data analysis reliability of the study is enhanced by maintaining a clear distinction between the interviewee statements and the researcher's interpretation. Furthermore, an interview script is added in the appendix that serves to ensure the interview processes continues along similar lines and limit possible alterations to the conversation. In relation to the quantitative data, reliability is enhanced by the consistency of collected measures. All respondents answered the same set of questions, in the same codified manner, thereby ensuring comparability.

Parsimony

Waris (2012) argues that parsimony refers to the practice of research, which is conducted in a simple and not overly elaborate manner. Simplicity in explaining the problem area and generalizing the solutions is favored to an overly complex research framework. Throughout the research process triangulation between theoretical framework, qualitative and quantitative empirical results was applied. In the context of this study, parsimony is achieved through using relevant insights collected throughout empirics, while disregarding information that does not add value to the study.

Validity

Validity is concerned with the integrity of conclusions, which are generated during the research phase (Bryman, 2011). In the context of this study *Internal Validity*, relating to the issue of causality was achieved through the interdependencies across the collected empirical data. *External Validity* dealing with the generalization of results was applied in the analysis of the quantitative study, where responses were grouped into homogenous segments. *Construct Validity* dealing with measurements of the quantitative section of the study and finally, *Ecological Validity*, concerned with the practical, real-life applicability of the findings. In conclusion, *Validity* was a key consideration throughout the whole of the thesis, with the aim of ensuring that applied measurements genuinely gauged the intended subject.

4. Empirical results

4.1 Interview Responses

The qualitative research analysis is structured topologically around three focal points, which have emerged during the initial research stage, each in connection to the main research question. Through analysis of both primary and secondary sources, a number of recurring themes have been identified within the focus areas, which showcase the effects that online purchasing had on the industry in the past decade. These findings represent one aspect of what Bjorklund & Paulsson, 2014 refer to as “Triangulation” analysis method. Within the first section, the study discusses the effects of online purchasing has had on revenue model development and monetization strategies. Following, the study addresses the key learnings in contemporary revenue model development. Finally, the chapter concludes with a comparison between academic literature and expert opinions in regards to factors that influence online purchasing.

4.1.1 Revenue model development

As uncovered in the literature review, the advent of online purchasing has had a profound effect on the structure of the value chain within the video game industry. One of the most profound changes to occur was the emergence of wide diversity in revenue models resulting from the shift in power from publishers to developers. Another consequence of the growth of online purchasing is the fact that the number of development studios has radically increased, leading to a saturation of the supply side of the market, which in turn has compelled studios to look for more innovative ways to capitalize on consumer needs. The empirical results describing these changes in the value chain and their effects on revenue models will be presented by: firstly, focusing on the shift of power from publishers to developers and secondly by describing the learnings adopted by developers when designing the revenue models and thirdly, exploring potential gaps between academic literature and commercial practice. A supplementary case will also be included, describing the biggest online distributor of video games today - *Steam (Valve Corporation)* - and the clout it carries within the videogames industry.

4.1.1.a From Publisher to Developer

As discussed in the literature review, the growth of online purchasing and the infrastructure behind its existence has brought significant changes to the value chain of industry. Prior to the “*Age of Internet*”, developer studios needed to work with publishers willing to shoulder the financial burden of manufacturing the physical medium for the games (such as disks and cartridges), creation of promotional materials, maintaining a network of physical distributors, such as “*brick and mortar outlets*” and corresponding physical deployment. With the onset of online purchasing however, developers could overcome all these intermediaries by directly

selling their titles over the Internet to consumers.

Based on the primary interview data, this shift in power from publisher to developer has resulted in three main implications for developers: Firstly, it has made developer studios financially more independent from publishers. Secondly, it has allowed studios to lower the prices of games by reducing intermediary costs. Thirdly, it opened many opportunities for revenue model innovation with lowered barriers to entry into industry.

The shift has also had a profound effect on the cash flow of developer studios, as “A”, CEO reflects:

“In the old system (prior to online purchasing), there was no other way than to go through a publisher. The cost of capital was enormous; royalties from titles took months to come back to the company which put us at a significant financial disadvantage. Today we are getting our payments every month from Steam.”

Instead of relying on publishers for royalty payments, development studios nowadays are much more in control of their cash flows and their profit margins. Through selling games directly on their website or through virtual marketplaces such as Steam, developer studios not only earned a degree of independence but also have established direct communication channels with their audience. This allows them to be more accurate in terms of satisfying their consumer needs and consequently, monetize their titles more efficiently. As “C”, senior consultant explains:

“A very good thing with this (online purchasing) is that now you can have a direct line of communication between the consumers and the developers. That makes it easier to gauge how users feel.”

Secondly, the shift towards online purchasing allowed for developer studios to significantly lower the prices on their titles. By eliminating all the intermediaries and in turn lowering the price on video games, development studios have achieved greater sales figures than ever before and popularity has consequently soared. “Brick and mortar” retailing is becoming less and less relevant for the industry and is only used by the biggest and most well-off publishers, like Electronic Arts, delivering their *triple-A* titles (“A”, 2017). More details are provided on how virtual marketplaces, such as Steam function, in the case study, which will be further investigated in the following section.

Thirdly, as development studios gained greater control over their cash flows and the role of intermediaries in the video game industry was significantly diminished. As an example, in 2004 Japanese game designer, Daisuke Amaya released “Cave Story” – a game he developed completely on his own over the course of five years. This lowering of entry barriers has led to a significant growth in independent small team studios, which develop their own titles. As a

result of the increase in available content, differentiation and alternative monetization methods became a viable option. “F”, Lead Game Designer elaborates:

“You have to identify your own little niche and serve those loyal players. It is very difficult to compete with Triple-A titles. Be different and cater to your audience until you get a stable user base.”

The above quote illustrates one of the most important insights from the third implication – namely that development studios became much more involved in how revenue models are structured and how monetization strategies are being developed. This in turn also led to a wide diversity in terms of different monetization strategies and revenue models.

4.1.1.b Best Practices

As discussed in the literature review, with the advent of online purchasing, developer studios have become much more engaged in designing unique and innovative ways to offer value to their users. This has resulted in the emergence of a wide variety of different revenue models, which also brought new monetization approaches.

The following segment will provide an overview of the key points that interviewees considered paramount when discussing and developing monetization strategies for their titles. These highlights reflect the varied positions of the interviewees within their enterprises and offers a glimpse into the driving factors of revenue models developed across the industry.

In line with the triangulation logic, the empirical findings in this section will be cross-referenced with data from the quantitative findings. Therefore, it must be kept in mind that due to the diverse nature of the video game industry and the wide range of revenue models within it, not all these considerations are universally applicable to all revenue models, but are rather indicators of specific approaches to title monetization. As A, CEO reflects:

“The real trick is the revenue models, because these are always different and tied to the mechanics of the specific game they are applied to. There is no overarching solution. The devil is always in the details.”

4.1.2 Value-to-price balance

“D” (Sales Analyst) argues that one of the key consideration when developing a revenue model is to make an offering that is balanced between the value that it offers and its price point. He suggests an example using in-game items within a micro-transaction based model – (such as timesaving boosts) whose pricing needs to be in balance with cost and provided value. If in-game items are offered at a higher price than their perceived value, consumers will not purchase them and in return this could lead to a community backlash. Should the in-game item be underpriced, the developer risks the users going through their game too quickly

and ultimately losing interest in it. The key to a healthy purchasing community is offering a fair deal that doesn't leave consumers feeling they are being taken advantage of. In "D"'s own words:

"Balance is needed! You have to look at your own game and balance the effect of in-game items (or boosts) with the price that you ask for them. If you want a healthy returning community, you will try to price in-game items fairly."

"C", Senior Consultant, further echoes the above insight:

"Matching the price point towards the value of a product is almost like a work of art. Get that wrong and even the most interested player will look at your game and say: No, I disagree. - You're trying to 'sucker me' so I am not gonna buy it!"

4.1.3 Transparency and Payment Methods

"B" (Marketing and Support manager) discussed that an ideal revenue model needs to reflect the company's desired conduct towards its players. Revenue strategy needs to be transparent and straightforward with no hidden costs or charges and payment methods need to be available to accommodate specific customer requirements. The interviewee argued that transparency could be achieved through clear communication with the consumer and responsiveness if they have a problem that relates to payments. As "B" (Marketing and Support Manager) elaborates:

"How you generate revenue from users needs to be an extension of the image you wish to have as a business. In my opinion, trust is the biggest driver of online sales in video games and you can't achieve that without transparency in pricing, charging and communication."

This notion builds trust within the consumers, as trust is amongst the strongest motivating factors when it comes to online purchases. He also argued from his experience, that video game developers do not currently commit enough to accommodate all player needs, in terms of purchasing methods. "B" (Marketing and Support Manager) motioned that users are sometimes left-out from the monetization:

"If users can't pay, because they are not offered a convenient method, you can't monetize them!"

4.1.4 Metrics driven approach

"Gut-feeling is bad regarding monetization methods, data will always win. However, it is not always an exact science, as there is no perfect formula for the perfect movie, music or video game. It takes guts to know what people will appreciate!"

“A”, (CEO), maintained that monetization strategy, revenue models and the surrounding decision-making process should ideally be data-driven. In his opinion data and insights based on metrics are amongst the most vital prerequisites to an optimized revenue model. Furthermore, he argued that metrics serve as the “litmus test “of adjustments of the content and over the overall health of the game and its community. Paradoxically, he further reasoned that even though “data will always win”, the decisions should not be based solely on it, rather on a combination of “gut-feeling” and metrics.

“G”, (Marketing manager), offers a counterpoint to this statement, arguing that metrics are indeed important, especially when a title is launched and already has a steady following. He notes a distinct lack of available data on consumer preferences, mostly prior to the launch of new IPs, which behooves to use “gut-feeling” and hunches when deciding on the monetization strategy. On the topic “G” (Marketing Manager) shared the following insight:

“You have to look at what has worked for other games. There are few sources as to what people are into and even when there is, it is not completely translatable in your design. We would have loved to have more customer research, but ultimately it was 60% data and 40% hunches when we were pitching our design to investors.”

“E”, (Sales analyst), indicated a third application for metrics within video games. He argued that data and metrics collection have become a core activity for developer studios. He further stated that utilizing data collection and staying informed in regards to trends within the purchase behavior of consumers can mean the difference between commercial success or failure for a new title. “E” (Sales analyst) summarizes his thoughts on the topic the following way:

“In my experience with the free-to-play model, collecting data on player purchase behavior was a core activity. The issue in free-to-play titles is tracking the conversion rate and the pricing. The ratio between these two indicators decided whether a game was going to be successful or not.”

4.1.5 Segmentation

Both “F”, (Lead Game Designer), as well as “D”, (Sales Analyst), argued that segmentation is a key aspect when it comes to designing monetization strategies. “F” argued that segmentation is vital in terms of considering the mechanics that will be implemented throughout the game's lifecycle. Mechanics are the different in-game activities that players perform, which could range from exploration to competitiveness and serve as a general outline for the theme of the game and the types of players it will attract.

“It is important to uncover your specific player base as this will define as to whom you are selling your game to and for whom you are developing the mechanics for, which in turn will be monetized. There is a rough categorization for player types, as per in-game activities, but it is difficult to translate it to actual practical results due to the specific situation of your own design.”

This statement refers to the notion that developers employ a general segmentation that is based on psychological profiles, much like the categorization that Weber puts forward (see *Literature Review*). In line with Weber, “F” concurred that currently, game designers are in a position where they do not share an industry standard customer segmentation strategy.

“D” (Sales Analyst) further argues for segmentation in terms of purchase behavior of an established community and the different offerings that can be made to the varying segments. He reaffirms that having an overarching segmentation would be helpful, but has expressed doubts about the feasibility towards such a concept. “D” (Sales Analyst) argued the following way:

“Every game represents a different monetization challenge. Every game must look at its own unique customer base initially (age, gender, employment/income) and establish its own customer segments. While having an industry standard segmentation will speed up identifying target groups and approaching them, it’s very hard to achieve due to the nature of the industry”

While both interview subjects are discussing the concept and importance of segmentation, it must be underscored that both participants refer to segmentation from the perspectives of their own positions.

4.1.6 Factors influencing online purchase intention

The third and final topic, discussed during the qualitative interviews, inquired about the participant’s own perceptions as to the relevance encouragement and discouragement in online purchasing settings. Inquiries were made as to whether *Trust*, *Ease of Use* and *Usefulness* enhanced consumer’s intention to complete an online transaction with similar questions being asked in regards to *Perceived Risks of Privacy*, *Long-term Availability* and *Retailer Opportunism* as factors that detract purchase intention. The conscious limitation that was applied to questions along the line of *Factors that Motivate Shopping Online* was applied in line with the observations of the industry, as well as the theoretical framework.

Factors encouraging online purchase intention

Trust

The initial inquiries were made in relation to as a factor that encouraged players to invest in a title. Respondents agreed that there is a correlation between player purchase intention and trust, particularly when the company is well-known and is already established on the market. As reflected by “D” (Sales Analyst):

“We used Steam as one of the platforms on which you could access our game. As you know, it’s the largest platform out there so there was definitely trust behind it.”

In analyzing “D’s” statements, two conclusions can be inferred, which are in line with the presented academic literature. The first conclusion mirrors Koufaris & Sosa’s (2004) theory “*The development of initial trust in an online company by new customers*”. As examined, the study suggests that consumers consider larger companies more reliable, which could influence their trust factor. The second conclusion relates to confirmed *Trust* as a conducive factor of online purchase intention.

Ease of use

The subsequent inquiry was related to whether or not *Ease of Use* (Kavianpour, & Shadkam, 2013) could be considered as a factor for purchase intention. “B” (Marketing and Support manager) explains:

“...Companies need to be more accommodating of users and try to expand the availability of payment solutions.”

The statement by “B” in regards to providing diverse payment options to consumers from a global consumer base led the authors to the conclusion that *Ease of Use* is recognized by developers as a factor that enhances monetization when structuring revenue models and is an active element within strategies.

Usefulness

The final inquiry reflects *usefulness* (Kim & Song, 2010) of online platforms as a factor which strengthens consumer purchase intentions. This is further illustrated by the included mini case-study on the online platform - *Steam*. As presented in the literature review, the factor of *usefulness* can be adapted to reflect how much a payment method or a website assists consumers in achieving their desired purchase intention. Reflecting the *Player Motivations* section, users engage in video games based on motivations as described in *Gratifications Model* (Vorderer, Hartmann & Klimmt, 2003) and *Self-determination Theory* (Ryan, Rigby & Przybylski, 2006). Building on these theories, it is logical to conclude that players with specific interests in games will perceive vendors and platforms, hence payment methods, that offer them the widest variety of relevant titles as useful. Reflecting on the factor of usefulness

and its contemporary applications, “C” (Senior Consultant) recalls the example of the *Steam* platform:

“In my mind, Steam is the go-to-place where you find everything you want. Steam is the platform with the most games from Triple-A to indie titles with various price points.”

Based on the statements from the interview subjects and their insights in regards to the shift towards digital distribution, the three factors that encourage online purchasing are recognized by experts within the video game industry. Thereby the findings of the literature review were further found to align with the understanding of the questioned developers.

Factors discouraging online purchase intention

In regards to factors that discourage online purchasing, interview subjects were in consensus about the relative low level of consumer fear about financial transactions and moderate consideration of long-term availability (Tan and Thoen 2000). As indicated by Jarvenpaa and Tiller (2001), perceived risk of misuse of private information, long-term availability and retailer opportunism are all potential barriers to online purchase from the consumer's side.

Perceived risk of privacy

When inquired in relation to risk of misuse of privacy data, interviewees reflected that users are becoming more and more experienced and knowledgeable. “E” (Lead Sales Analyst) reflected the following way:

“I think people nowadays, at least those actively online, have become experienced in spotting shady websites and deals that are too good to be true. I have worked with large and well-known platforms, so I have never encountered an instance where people were worried about their privacy being abused.”

What can be inferred from this statement is that online consumers do not exhibit concerns over their privacy data being abused by established platforms. A second insight revealed that interviewees hold consumers are experienced enough to see signs of malpractice. It can be deducted from the statement, that risk of privacy influences purchase intention, as a reaction to signs of malpractice, rather than as a starting consideration. Thus, can be concluded that consumers are not initially worried about their data being abused.

Perceived risk of long-term availability

The second discouraging factor for online purchase intention, in the context of video games is the long-term availability of the titles and platforms. Interview subject “B” (Marketing and Support Manager) reflects on long-term availability in the following way:

“I would say long-term availability could be considered a barrier to purchases, especially when free-to-play models are concerned. Recently, Steam’s early access platform exemplified that very issue. People were annoyed over investing into titles that were never finished and discontinued after the beta-period.”

“B” refers to the Steam platform’s *Early Access* program, in which players have the opportunity to purchase in-development titles and aid developers finishing these in the spirit of co-creation. It can be concluded that long-term availability is a barrier to purchase intention.

Perceived risk of retailer opportunism

Finally, interviewees were inquired about the retailer opportunism as perceived from the developer perspective. “D” (Sales Analyst) reflected the following way:

“While working in collaboration with Steam, I never saw any indication that consumers were worried about their payment information.”

The above reflection indicates consumer trust and ease-of-mind, in regards to online purchases from the well-established online retailers, to the extent that the trust placed in these platforms is reflected on the developer studios as well.

4.1.7 Illustrative mini case study - Steam, “the IKEA of the videogames industry”

Steam is an online distribution platform for games and game-related media. Users can use Steam to purchase computer games and download them without a physical disk. Created and managed by Valve Corporation, Steam has grown into one of the largest providers of computer games for independent studios such as Supergiant Games and also to triple-A studios like Activision (Devin Coldweley, 2012).

The Steam platform was released on March 22, 2002 for a beta period, which attracted about 300.000 testers. Around 2004, Valve began negotiations with video game studios and signing contracts allowing Steam to distribute their games. The platform became popular once Valve released *Half-Life 2*, their original IP, which required a Steam account from the player's side. Since then, Steam has continuously proved itself to be a reliable online distributor of video games (Nethosting, 2012), with over 125 million active users as of 2015 (Kotaku, 2015).

During the process of collecting qualitative data, interviewees from different positions and multiple stations across countries have acknowledged Steam as the largest and most influential virtual marketplace for video games. As “C” (Senior Consultant) reflects:

“They (Steam), in my humble opinion, are the go-to place because they have everything. I guess you can compare it to IKEA – If you want to furnish your apartment, you go to IKEA and they have absolutely everything, the same applies to Steam when it comes to videogames.”

The quote above gives a precise illustration of how Steam is perceived in the videogame community. Examining its commercial activities, facilitating the sales, by using the learnings from the online purchasing section, it becomes easy to see why Steam is an industry standard when it comes to selling games digitally.

Relating to consumer’s motivations to shop online, Steam provides *convenience* by allowing users to own a collection of titles that are available for transfer across devices. Prices range from \$60 (for triple-A titles) to below a single dollar, thus ensuring that any *price* considerations can be accommodated. In relation to *product type*, Steam accommodates both *search goods* (specific games that a user wishes to purchase) as well as *experience goods* (when a user wants to discover a new game).

When referring to factors that encourage purchase intention, Steam is amongst the most trusted vendors, to the extent where Steam’s credibility is also transferred to the studios who offer their titles on the platform. As “D” illustrates:

“Steam is the biggest distributor of video games for PC. People are not deterred to make purchases there because there is great degree of trust. People knew that they didn’t need to worry about their billing information or their privacy data.”

Further building on the same factors, Steam’s *usefulness* is also characterized by the ease-of-access, which it has made available on a global scale. In comparison to console games, which are usually purchased through a physical medium, the Steam platform allows a user to access their desired title upon input of username and password, anywhere, anytime. Complementing Steam’s usefulness as a platform in general, is the ease-of-use that is offered to users, characterized by the ability to share titles with other users in their friend-list. As “E” explains:

“Steam is a very straight-forward platform, you can login from multiple PC’s and you will have access to your games. It is very easy to discover new games because of the vast library of them available, even share these with your friends... it is definitely a platform that has multiple features.”

When applying the identified perceived risks, as illustrated by Grabner-Kraeuter (2002), interviewees also acknowledged Steam as a technologically advanced platform, mitigating many of the above-discussed risks. Applying the factor of perceived *privacy*, *long-term availability* concerns and fear of *retailer opportunism*, interviewees did not see these as hindering factors for Steam. As “F” elaborates:

“It’s a very large platform (Steam) and a very large company (Valve! That alone reduces the risk of retailer opportunism... In regards to (long-term) availability, I believe Steam will definitely be around...”

From the quotes, above, it has become clear that Steam has a strong focus on e-commerce, in both its technical implementation and commercial processes. As a confirming sign of the above, the service has passed the 25 million active user mark in 2015 (Forbes, 2016).

4.2 Survey responses

In this following section of the empirics, the qualitative data collection will be presented and discussed. As previously mentioned, this thesis builds on a blend of quantitative and qualitative data, which aims to uncover insights from both. The previous chapter has presented the primary part of the empirics, in form of qualitative data through in-depth interviews, while this section aims to complement it with quantitative findings gained from consumer surveys. During the survey design, data collection and analysis, the main focus was on the second research question, as well as the “player motivation” and “purchase intention influencing factors” of the theoretical framework.

4.2.1 Survey demographics

The first group of questions inquired about the respondent's demographic background, asking about age, gender and current employment status. The following graphs and tables summarize and establish a basic picture about the respondents' background. Data shows the age distribution with a dominant group of respondents between the ages of 25 and 34 with a response rate accounting for 52.1%. As discussed during the literature review, this group is among the dominant in video game consumption along with the 18-24 year olds (Statista Portal, 2017). The second largest group constituted of respondents between the ages of 18 and 24, making up 32.6%.

Employment-wise, the largest group was full-employment with 47%, followed by students with 38%. Part-time, looking for work and other categories were relatively low, with a combined percentage of just over 14.5%. The higher prevalence of respondents with full-time employment in theory indicates a larger amount of disposable income, but potentially also less free time for video game related activities, which is noting for the overall study.

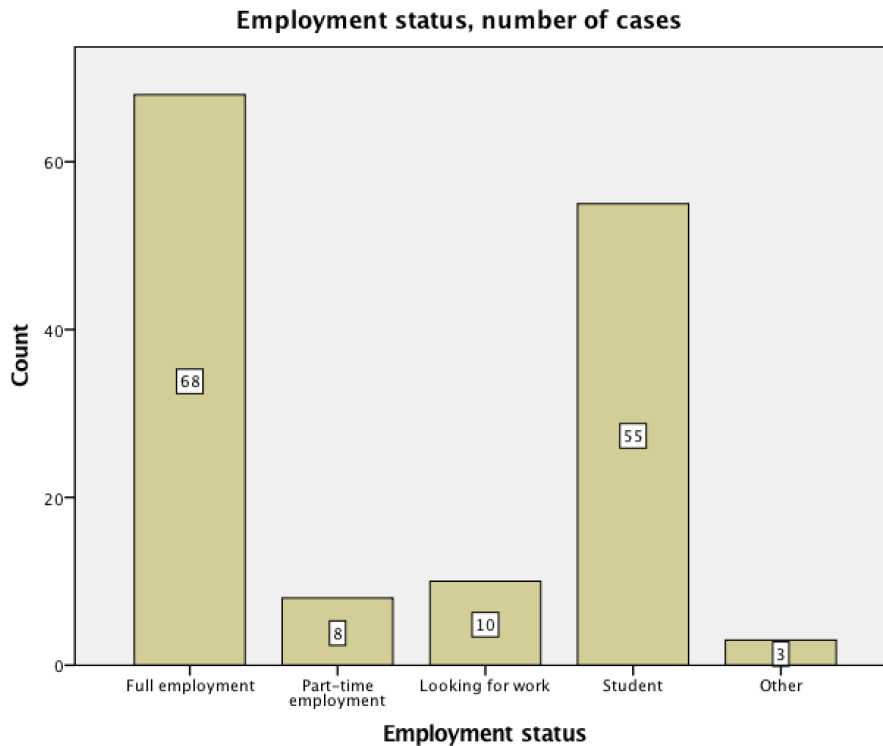


Figure 3 - Showing the distribution of employment status among respondents.

Regarding gender, the data is inclined towards the male end, with a distribution ratio of 77% males to 21% females, additionally 2% identifying themselves as “other”. The gender distribution findings showed a stronger tendency towards male respondents than the one uncovered during the literature review (Statista, 2010), which showed an industry specific distribution of 60-40% male-to-female ratio. The result of the difference can be explained by the channels the survey was distributed through and the interest taken by the respondents in the topic.

4.2.2 Industry-specific demographics

The second section of the survey has dealt with industry-specific demographic figures, such as: number of hours played per week, estimated dollars spent on games per year, number of years being an active patron of the industry and lastly activity per platform, such as PC, console, mobile and handheld devices.

The number of dedicated hours follows an approximate normal distribution, where 5-10 hours is the most dominant among consumers. In comparison, secondary data (Statista, 2014) shows an average playtime of 14 hours per week among the US consumer base, which is approximate to the above finding. The distribution also shows the great diversity at which consumers engage in related activities and the overall role games play in user’s everyday life.

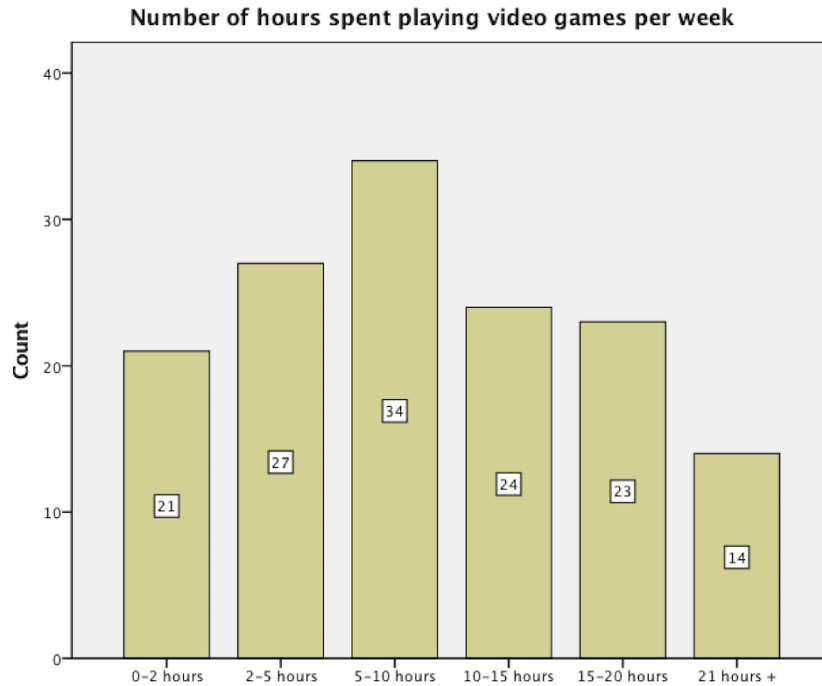


Figure 4 - Showing the distribution of hours spent per week playing video games.

Respondents also have diverse spending habits, with a mean yearly spending of \$211 per person and a standard deviation of 184.32 (see box-plot in the appendix), which can be compared with statistics from the US (Gearnuke, 2015) at \$140 per consumer from year 2014.

The mean time being a patron of the industry is 17 years with a standard deviation of 6.6 (see box-plot in the appendix), which when compared to the above-presented age distribution means that most consumers have started engaging with these products in their childhood. Comparatively, secondary data (Polygon, 2016) shows, that the average player today has been actively playing games for the past 13 years.

Lastly, regarding distribution of platform, PC clearly leads with a mean of 4.787, followed by consoles (2.816), mobile (2.482), the less popular categories of handheld (1.678) and other (1.355). A similar trend is shown by the Entertainment Software Association (ESA, 2015), with a clear preference towards the PC platform, followed in the same order as the primary data, by console, mobile and lastly handheld.

4.2.3 Open-ended questions

Before inquiring about business models and related attitudes, respondents were asked to revive two titles they have purchased within the past five years, one which they were satisfied with and another which they were unsatisfied with. The main purpose of the question was to liven up conscious and unconscious post-purchase evaluations within the respondents, both positive and negative, thereby preparing them for upcoming questions about revenue models.

Open-ended responses were individually processed, read and sorted, due to the challenges associated with codification of free-text replies within SPSS. Responses have shown a great diversity in taste towards video games, with over 70 different titles mentioned.

4.2.4 Attitudes towards video games

The third section of the survey focused on attitudes towards the industry and video games. To the question “Why do you play videogames?” respondents gave overall high marks, as all means were listed above the 3.9 mark, with the highest rated response” They allow me to relax” -the *Hedonist* group classified during the literature review (see Player Types) receiving 4.993 and the lowest” I like the competitiveness” with 3.902 - the *Competitors*.

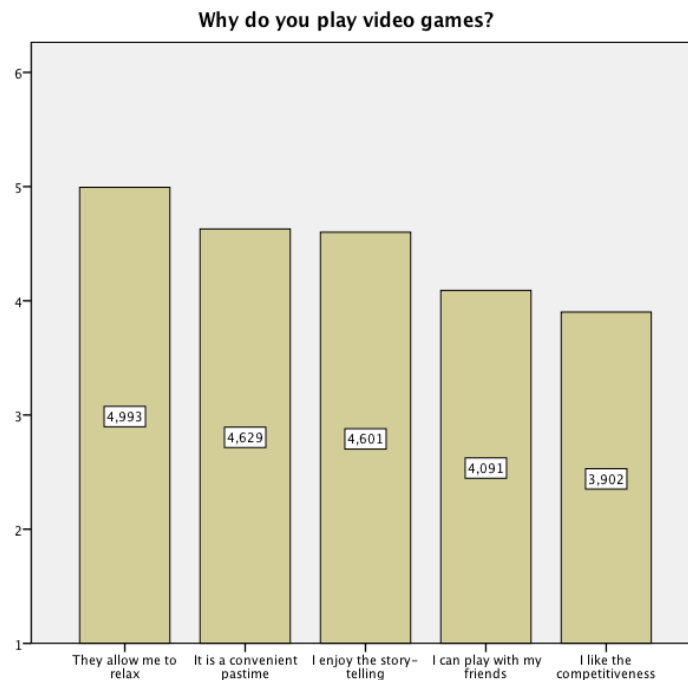


Figure 5 - Showing attitudes towards statements on reasons for playing video games on a six-point *Likert scale* (1-strongly disagree, 6-strongly agree).

To the question, “Do you feel that spending on video games is worthwhile?” 71% of the respondents have indicated that they either agree or strongly agree, showing a high interest towards these offerings among respondents. Only 3.4% respectively 4.1% felt strong disagreement or disagreement to the statement (see pie chart in Appendix).

The question: “What is important for you when purchasing a video game?” was asked in two parts in order not to overwhelm respondent with all ten aspects at once. The results are combined in the chart below. The most prominent repliers to the question were: “Getting a good deal” (4.497) and “Affordability” (3.979) from the consumer’s receiving end, while from the developer's side, respondents rated “The studio is not trying to take advantage of me” (4.469) and “The way the game is monetized is fair and reasonable” (4.378). On the lower end of the scale, consumers seem to care relatively less about “Current popularity” (2.406) and “supporting a franchise” (1.895). These results suggest that even though respondents have a high willingness to pay, they are also conscious about the monetization strategies targeting them and care less about supporting the studio or a franchise.

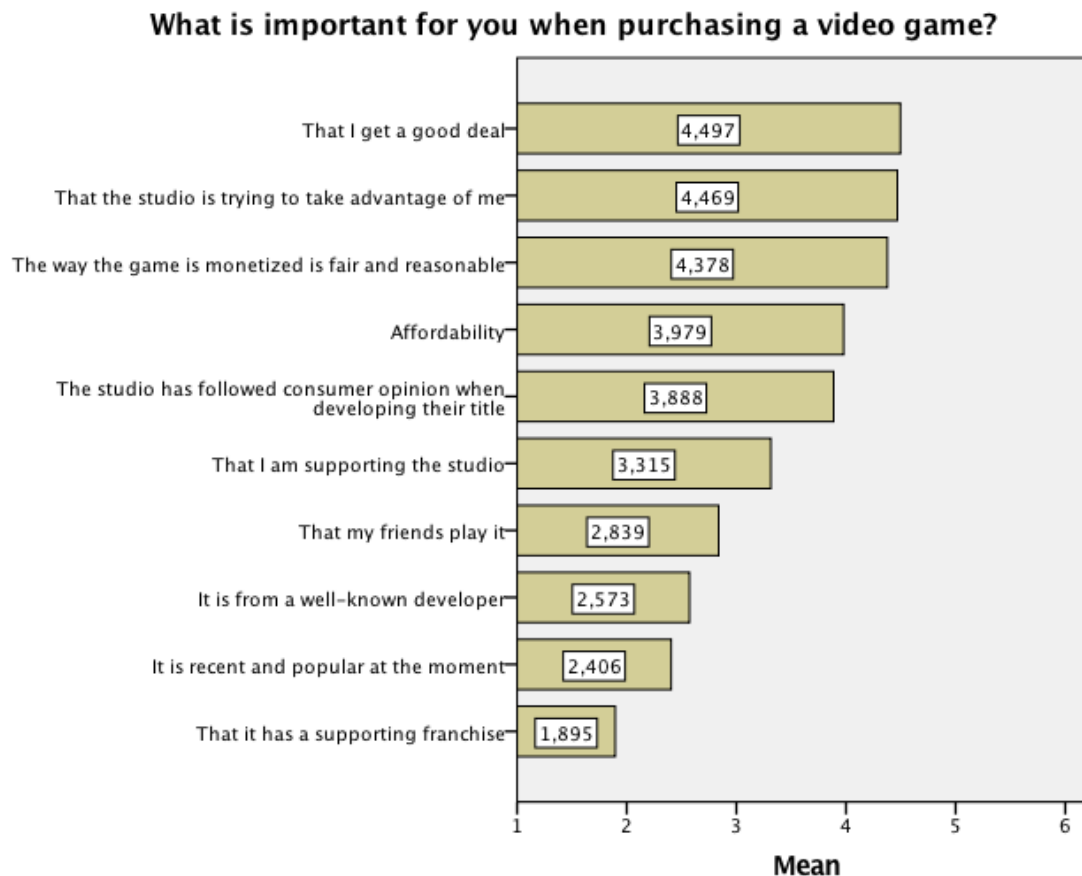


Figure 6 - Showing attitudes towards statements on purchasing video games on a six-point *Likert scale* (1-strongly disagree, 6-strongly agree).

In regards to delivery method, digital delivery enjoys a stronger preference with a mean of 5.007, while physical delivery still shows demand and relevance (3.417). This trend is reflective of the current global preference presented in the literature review, which has shown a successive shift from physical to digital delivery (Statista, 2016). The data shows that although digital distribution has taken over as the preferred delivery method, there remains a market demand for physical media.

4.2.5 Consumer deterrents

The following section of the survey investigated consumer's deterrents to online purchases and thereby their attitude towards taking part in e-commerce related activities. The three questions about consumer deterrents uncovered generally low level of concern over online purchases. When ranked, consumers were more worried about the long-term availability (accessibility and support of the platform) of online platforms with a mean of 3.182. As discussed in the literature review, with online purchasing, there is no physical medium involved, thereby consumers are reliant on the warden of the online platform for future updates, support and access to their titles in the years ahead, should they purchase a new computer or wish to re-install their games. As many modern titles require periodical or continuous online connection and verification as part of intellectual property protection, if the platform facilitating the above responsibilities ceases to exist, so disappear the titles as well.

The remaining two questions asked the respondents about worries relating to transaction related activities. The results show that consumers have a low level of worry for their financial information being misuses (2.818) and order clearance due technical errors (2.642). The above results indicate that the average consumer trusts the mechanisms put in place to facilitate online purchasing related transactions, however there still is room for further improvement.

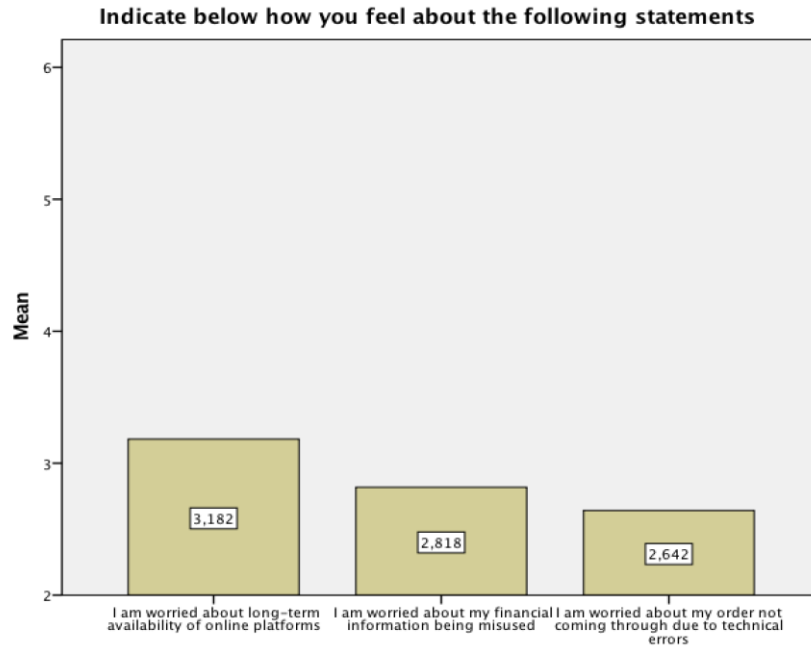


Figure 7 - Showing respondent attitudes regarding worries when purchasing video games on a six-point *Likert scale* (1-strongly disagree, 6-strongly agree).

4.2.6 Business related questions

The fifth and final section of the survey aimed to investigate consumer attitudes towards business and monetization aspects of video games. The questions gauged consumer familiarity with the four major types of business models; secondly, aimed to uncover personal preference towards these models and lastly looked at how likely they see themselves to purchase games based on these models in the upcoming year.

To the first question of the segment, “How familiar are you with the following models?”, respondents have shown general high familiarity with all four models types. The highest familiarity was received by “Single Purchase” (mean of 5.806), followed by “Freemium” (4.681), then “Subscription Based” (4.285), and closing the ranks “mixed models” (4.188). It is worth keeping in mind that these figures of consumer knowledge are based on the respondent's own estimation. To help answering business model related question, the survey provided examples to each model in the form of currently popular game titles.

In connection to the previous aspect, to the question "Do you have a personal preference for any of the models?", Single Purchase has received the highest mean, with 5.525, whereas Freemium has received a significantly lower mark with a mean of just 3.489. This shows that consumers have high knowledge and preference for single purchase titles and high knowledge and relatively lower preference for freemium titles.



Figure 8-Showing respondent preference, respectively likelihood of future purchases for the four main business model types on a six-point *Likert scale* (1- preference/future purchase not likely at all to 6 - preference/future purchase 6-highly likely).

Further building on the above findings, the data shows the prospect of how consumers expect to purchase titles in the upcoming year. The trend of Single Purchase being favored over the other three models continue, with the highest mean of 5.461, while Freemium and Mixed Models rival each other at the same approximate level of 3.525 and 3.245 respectively. The same trend is true for Subscription Based games, as this was the lowest ranked among the four, with a mean of 2.049.

Lastly, respondents were asked about the likelihood of them purchasing additional features and elements in addition to their titles in the upcoming year. Among these; visual improvements; collector's editions; new content and time saving boosts were included. The ratings ranged between a mean of 3.972 for Expansions to 1.604 for "Time saving features boosts". These findings show parallels with the literature review and qualitative empirics, as the "Time saving features and boosts" are typical applied for Freemium titles, which were proven to be popular through the questions above. Additionally, as the literature review and interviews have shown, very few consumers purchase such paid improvements, at a rate between 1-3%

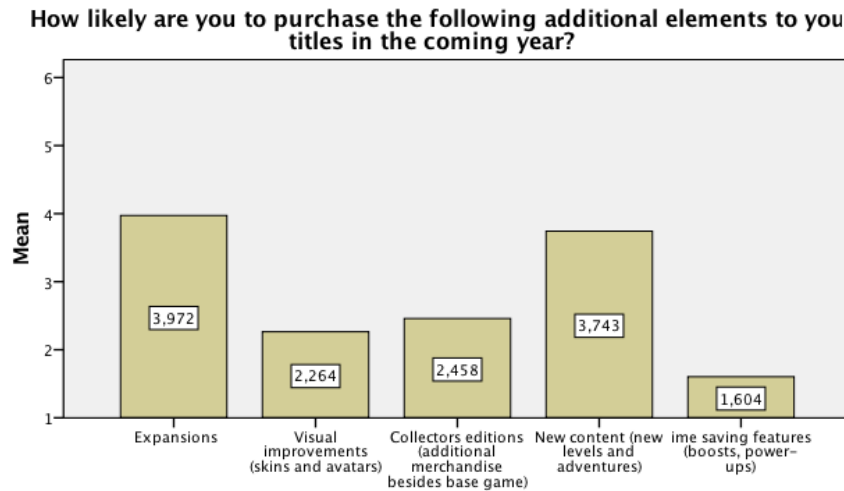


Figure 9 - Showing respondent future likelihood of purchasing additional, complementary elements on a six-point *Likert scale* (1-not likely at all, 6-highly likely).

4.2.7 Segmentation of respondents

In order to uncover potential segments, an ANOVA analysis was conducted. Out of the numerous available statistical methods, such as simple correlation analysis this method was chosen in regards to the questionnaire codification and response rate. The analysis aimed to summarize and generalize the responses into potentially emerging, distinctive categories, instead of looking at individual cases, a conscious tradeoff made by the authors. Another way of conducting the analysis therefore would have included finding correlations between individual cases in the data potentially presented in a scatter-dot diagram, which would have eliminated the potential drawback originating from the dependent variable.

The two selected variables were: “Estimated annual spending on video games”, chosen as the dependent variable and “Number of hours played per week” as the independent one. These two have been chosen due to their information value for developers, not only regarding interest and time committed, but also willingness to pay - these two variables are closely considered during development, with indications of how many content hours to include, at which price to offer the final game for and for which segments. For an additional insight, the data have been split between male and female respondents, however as previously mentioned only 21% of the respondents were female, thereby the statistical significance cannot be ensured for that group; for male respondents on the other hand, the analysis have uncovered a clear trend.

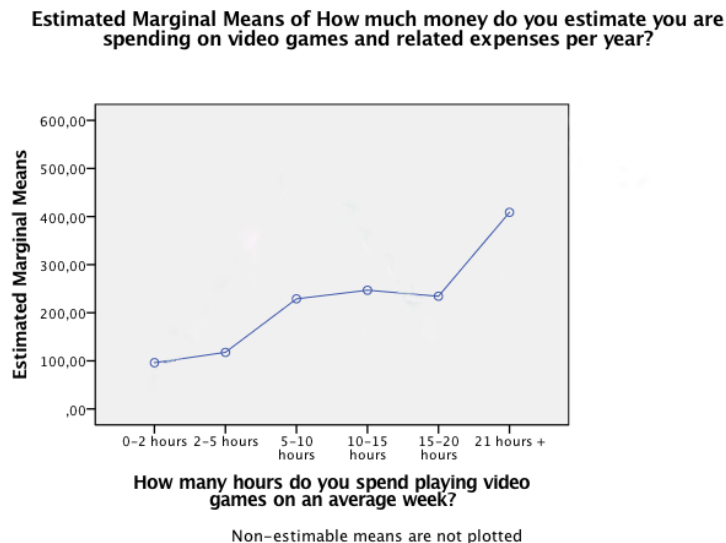


Figure 10 - ANOVA output graph showing the relation between estimated marginal mean spending per year and number of hours per week played.

Interpretation of the ANOVA analysis shows a relation between the variables, which can be further used to divide respondents into segments. The table for “test between-subjects effect” have shown the statistical significance of the components, ranging from 0.0001 to 0.036. By examining the means for each category in the descriptive statistics table, combined with the visual clues provided by the plot-curve, it becomes possible to distinguish between three distinctive segments based on the similar habits of yearly spending and weekly game time.

The first segment includes consumers who play between 0-2 hours and 2-5 hours per week, with a mean spending on video games ranging from \$96.15 and \$117.68 per year. This segment, with a size of 33.56%, is most descriptive of *casual players* with relative low willingness to pay and relative few game hours dedicated.

The second segment includes consumers who play 5-10, 10-15 and 15-20 hours per week, with corresponding means of \$228.89, \$246.89 and \$234.35 respectively. This segment is the largest, with 56.85% and can be classified as *dedicated players*, with double the willingness to spend, thereby it is potentially also the most promising for both indie and triple-A developers.

The third segment includes highly devoted player, dedicating 21 hours or more per week, with a mean spending of \$408.80 per year. This segment is classified as *advanced players*, with both willingness to pay and high willingness to play. This segment is the smallest, with only 9.58% and thereby also is the most niched. According to previous studies, there is further possibility to segment this lucrative portion of the community, however this thesis does not extend beyond this category, as the incentives motivating this segment is different.

5. Conclusion

In this chapter, the authors summarize the empirical findings and their implications, in order to identify the effects of online purchasing on revenue model development. Firstly, the research sub-questions are examined, answered and related to one another. Building on the answers from both sub-questions, the main question of the study will be resolved. Concluding this chapter, a short summary of the application to the theoretic framework of this study will be offered.

5.1 Research sub-question #1

What contemporary practices and considerations are essential for successful revenue models according to developers?

The first sub-question, explored in this study mainly relates to the qualitative research conducted via expert interviews and is compared with the results of the survey. It is important to restate one of the delimitations of the thesis: This study is not meant to explore the specific in-company processes and individual structures of revenue models, as that would prove a task beyond the scope of this paper. Consequently, the focus of this sub-question falls on the learnings and experiences developers acquired during the shift towards online purchases and what aspects they hold as important when designing new revenue models. This subject is of particular importance, as a similar shift is already showing signs, moving away from physical mediums to online purchasing and digital distribution within the console market (Guardian, 2016). One of the aspirational goals of this thesis is to collect and analyze these learnings in an effort to reduce uncertainty for revenue model development, when the shift occurs on the console platforms.

- **Balance of value to price**

Another key insight this study revealed is the importance of having a balance between price and value offered. As a result of the emergence of a wide variety of titles and revenue models, gamers have become more experienced and informed in terms of how titles generate revenue and the appropriate price for in-game goods. The notion of an empowered and knowledgeable consumer is further strengthened by the qualitative data collected. Insights gathered from the survey sample indicate that over 71% of respondents believe spending money on video games is worthwhile, with an average weekly playtime of 10-15 hours, have high familiarity of business models and place high importance on “getting a good deal”. Based on this data, it is clear that consumers are financially engaged, spend significant amounts of time on it, have experience of various revenue models and have the experience to identify fair and unfair pricings. A quote from “C” perfectly shows the importance of striking a price-value balance:

“Matching the price point towards the value of a product is almost like a work of art. Get that wrong and even the most interested player will look at your game and say: No, I disagree.”

- **Segmentation**

The second key insight uncovered in the process of this study is the necessity of approaching not only revenue model development, but also video game development with segmentation in mind. With the increasing number of video game titles being launched each year, the market has become highly saturated and even cluttered, which necessitates a precise focus on a particular group of players in terms of game mechanics. This insight is in line with all three pillars of the triangulation approach applied in the study. Quantitative data gathered from the survey revealed that users have a profoundly diverse taste in terms of titles and mechanics. Furthermore, data suggests five different motivations for playing games, each characteristic to particular players, such as exploration and competition (Weber, 2012). As “F” summarized the importance of segmentation:

“You have to identify your own little niche and serve those loyal players. It is very difficult to compete with Triple-A titles. Be different and cater to your audience until you get a stable user base”

The second instance where segmentation is relevant is in relation to purchase likelihood and occurs usually post-game launch. “F” argues the importance of segmenting the player base as such:

“Conversion rate is very important. Every game must look at its own unique customer base initially and identify the group that is willing to pay and try to cater to these players”

- **Metrics-driven approach**

Another key insight revealed by the study was the strong preference of developers for a metrics-driven approach in relation to not only revenue model monetization, but also to video game development. As a result of the shift towards online purchasing, revenue models within the industry have become much more complex and interactive, involving different incentives, purchase motives and monetization strategies. This development has highlighted the need for data-collection to indicate trends in the player base, ensure optimal pricing of in-game goods and highlight potential areas of issues. “D” summarizes the importance of a metrics-driven approach as follows:

“In my experience with the free-to-play model, collecting data on player purchase behavior was a core activity. The core issue in free-to-play titles is tracking the conversion rate and the

pricing. - The ratio between these two indicators decided if a game was going to be successful or not.”

This quote suggested two differences with the pre-digital revenue models, which necessitate a metrics-driven approach. Firstly, it indicates the need developers to take an active role in monitoring the player base and to actively utilize insights from their data-collection models in making the title commercially successful. Secondly, it indicates that pricing of in-game items is a dynamic process that is based on real-time data as opposed to static prices in pre-digital revenue models.

- **Transparency and payment methods**

The last key insight to emerge in the course of this study was the need for transparency in the revenue model and a need for variety in payment methods. The growth of online purchasing allowed for much more interaction between developers and consumers. As “A” reflects during the interview:

“One of the good things to come out of retail (distribution) becoming less and less important is that you can establish direct communications between developers and consumers”

This has led to new ways of thinking in regards to revenue models. As described in the balance of price-to-value insight, consumers are much more educated and experienced in how titles are monetized and how they spend their money in-game, which has led developers to consider the ways in which their revenue models are perceived as a factor that influences player’s intention to purchase. As “B” summarizes:

“How you generate revenue from users needs to be an extension of the image you wish to have as a business. In my opinion, trust is the biggest driver of online sales in video games and you can’t achieve that without transparency in pricing, charging and communication.”

This leads the authors to conclude that, given the knowledgeable consumer base, being transparent about the structure of the revenue model has become vital practices for developers.

5.2 Research sub-question #2

The second sub-question aimed to examine the demand side, by inquiring about consumer preferences and contemporary attitudes through a quantitative method. The results presented in the quantitative analysis are generalized below, showcasing the main influencing factors and their respective implications, thereby answering the second research question.

What factors influence consumer purchase intentions in relation to revenue models in videogames?

Consumer influencing factors

- **Demographic factor**

One of the basic factors in regards video game consumption is consumer demographics, such as employment, income, age and gender. Based on collected sample, a representative respondent would be between the ages of 25 and 34, male, with full-time employment, indicating a steady salary and a considerable chunk of disposable income. However, full-time employment most likely also impacts leisure time. As most respondents play between 10 and 15 hours a week on average, indicating that the category of games is either dominating or rivaling other forms of entertainment in the consumer's life. The estimated yearly spent playing video games would land around the \$210 mark, with a corresponding high belief in the value of these expenditures, indicating high interest and engagement for the category. Preference for videogames as a form of entertainment, with acknowledgement of it being a worthwhile expenditure would establish the primary motives for the consumer. The preferred primary platform would be PC, complemented by console and occasional activity on mobile. The diversity of engagement shows that even though there is a clear preference for PC, consumers own and use multiple platforms in their everyday life.

- **Knowledge and consumer deterrents**

The preference for distribution channel, either physical or digital is connected to the level of existing knowledge from the consumer's side, previous experience and consumer worries, such as privacy concerns or retailer opportunism, in the underlying systems. Respondents have shown a fair amount of knowledge about the industry and clear preferences for monetization schemes. A primary preference for digital distribution indicates that most consumers are progressive, who follows current trends and want to take full advantage of the technological offerings. Furthermore, with only minor reservations and worries about digital distribution practices and online financial transactions, most consumers would be an ideal target for most large to mid-size developers aiming to leave the physical medium behind. Consumers however consciously consider the long-term availability when purchasing through digital channels, an issue which if addressed by developers, could further motivate the consumer to leave physical distribution behind.

- **Monetization preferences**

Preference for revenue models exists on both a conscious and unconscious levels and is related to length of engagement, past experiences and personal taste. Consumers primarily prefer *Single Purchase* titles, but would not be afraid to try out a variety of other business models as well, indicating interest and willingness to experiment. Additionally interest in *Freemium* titles has been shown, however with corresponding low willingness to pay for these. Developers wishing to leverage these models should therefore take their value proposition and consumer preferences into account. Most consumers are influenced about getting “good deals” and “affordability”, while caring less about supporting the developers; an insight potentially useful for pricing and designing price-to-value balance for upcoming titles.

5.3 Main Research Question

The focus of this thesis has been to explore how revenue models in the video game industry have evolved in the context of the shift towards online purchasing. Within the problem area, the authors identified that the shift has already had serious implications for the market, as exemplified by the wide variety of innovative revenue models discussed in the literature review. However, there have been only limited and relatively fragmented academic knowledge as to the factors and considerations that influenced these newly developed models. In order to explore this problem area, the authors adopted a triangulation approach aimed at identifying the changes in consumer behaviors, expectations and the adaptations that developers had applied to their practices to match them. Thus, resulting in the sub-questions. In order to answer the main research question of this thesis, it is necessary to bring these two perspectives into one cohesive system.

“How does business-to-consumer online purchasing affect video game revenue model development?”

The answer to the main research question is based on the cross-reference and combination of insights from the qualitative and quantitative empirical methods. Building on these results, the answer to this research question will take the form of pairing the insights from sub-question #1 and sub-question #2 and drawing a conclusion on the effect this has had on revenue model development.

- **Customization and granularity**

As a result of the shift towards online purchasing, development has also moved towards focusing on more customized and increasingly data-driven revenue models. This adjusted monetization strategy can be translated into two practical applications: The first application indicates that revenue model development has moved away from selling games as products towards selling them more as services, an on-going process of capturing value from distinct player types and categories, with specific purchase motivations and habits. This conclusion is

in-line with the insights from the quantitative study - current game consumers are driven by a variety of motivational factors, which impacts their preferences and view on monetization models. The second application of this approach means that revenue models have become more focused on capturing and utilizing player data and metrics. This application is also congruent with the recommendations by interviewees on a more data-driven approach in relation to monetization. To conclude, revenue models have become much more customized to fit their corresponding titles and player types, with a push towards reliance on metrics.

- **Transparency and communication**

Developers have adjusted to the increasing importance of structuring revenue models in a fair, transparent manner and maintaining clear communication with their player base. As exemplified by quantitative data, the contemporary video game consumer is knowledgeable about different revenue models, has experience with different games and places significant importance on “affordability”. This insight infers that video game players are knowledgeable and experienced enough to be able to evaluate revenue models and pricing. This is aligned with insights gathered from developers, in terms of matching value-to-price as an important practice of contemporary revenue model development. Another key development for revenue models is the increased drive for clear communication with players as exemplified in the qualitative section. Referring to insights from interviewees, clear and responsive lines of communication in relation to payment issues (especially given the wide variety of payment methods available) can be identified as a strong driver for the commercial success of a revenue model.

- **Flexibility and wide variety of payment methods**

The following shift in revenue model development reflects the growing flexibility through the inclusion of different payment methods within contemporary monetization strategies. This insight builds on data collected from interviewees in relation to the growing adoption of metrics-driven development. Qualitative data suggests that revenue models have moved from static constructs to flexible models that allow for adaptations towards emerging consumer trends. The examples provided by interview subjects reflected the need for dynamic adjustments for business and revenue model development, in relation to pricing and availability. The motivation for a wider variety of payment methods is confirmed by both the quantitative and qualitative data. In conclusion, revenue models have moved away from being static constructs towards flexible processes that can adapt to changes in the consumer base.

- **Streamlining of online purchasing**

The focus point to be addressed within the main research question relates to the influence of online purchasing on revenue model development. This focus area reflects the comparison between existing sources on factors that encourage or detract from consumer purchase intention and the insights gathered from the empiric data. Through the application of triangulation between the three insight sources, the authors of this study concluded that there is a gap in knowledge relating to factors that influence online purchase intention. While encouraging factors such as *Trust*, *Ease of Use* and *Usefulness* are still relevant based on qualitative data collected from experts, discouraging factors such as *Privacy*, *Long-term availability* and *Retailer Opportunism* are rejected as holding relatively low importance with qualitative or quantitative data. This could be interpreted to signify that online purchasing has been streamlined and improved since the studies, listing the discouraging factors, were conducted. A logical conclusion is that the video game industry, alongside other industries, has actively developed in order to minimize the perceived risks and to maximize the factors that encourage purchases. Thus, suggesting contemporary revenue models to being safer, more transparent and consumer-orientated than ever before.

6. Discussion

6.1 Implications

The implications of this study indicate greater complexities for developers opposed to prior the shift towards online purchasing and digital distribution. Launching a commercially successful title has become a greater matter than just having a good game design and adequate production capabilities. The contemporary developer needs to take multiple factors into account. The current market landscape is greatly diverse, which necessitates a careful and focused approach. Consumer segments have become much more specialized in their preferences and expectations towards titles. Furthermore, competition is significantly increased due to lower barriers of entry thus resulting in a red ocean, where video games on the PC platform vie for exposure.

However, with the increased complexity of the industry, also come a number of opportunities. As a result of the shift, indie developer studios have a much greater opportunity succeed in gathering a consumer base and creating a sustainable revenue model. This development has taken place due to the emergence of global online retail platforms, such as Steam. Furthermore, lowered manufacturing-costs are also allowing developers with limited resources to compete with more established companies. Among the three distinctive developer sizes, the indie group has benefited the most from digital distribution, followed by mid-sized and lastly the few remaining giants, in form of triple-A developers.

The implications of this wave of liberalization are reflected in a greater number of developers

entering the market, bringing a wide variety of titles and choices to consumers and increasing level of competition for established studios. This development, together with business and revenue model innovations, has led to greater market fragmentation. Essentially a red ocean has occurred around the three previously mentioned developer types of *triple-A*, medium-sized and *indie*.

Lastly, the industry is reforming itself to experience a similar change in the value chain in another of its branches - consoles. Presently, consoles are still very restricted platforms with mainly medium-sized to Triple-A productions making their way on the devices. However, console owners are consolidating their online marketplaces similarly to Steam and starting to offer their titles for download as opposed to via a physical data carrier. Furthermore, as this process of consolidation continues, Microsoft, Sony and Nintendo will need indie developers to populate their market places with content. Thus, making this study highly relevant for developers who are considering stepping into the console market. With another platform opening up to indie developers and utilizing online purchasing and digital distribution as its driving forces, this study could provide guidance in addressing consumer needs and structuring revenue models in a holistic manner.

6.2 Research Contribution

This thesis contributes to research in four distinctive areas. The primary contribution is in the form of an in-depth examination of the revenue model development processes within the video game industry. As indicated in problem area, this study has dealt with incomplete and fragmented academic knowledge on the process of revenue model development in the context of online purchasing.

The secondary contribution of this thesis comes in the form of a theoretical framework outlining the interdependencies between player motivations, online purchase methods and revenue model development. This contribution is facilitated through the synthesis of existing academic literature, up-to-date quantitative and qualitative studies with developers as well as cross-referencing with consumer attitudes.

The third contribution of this thesis is in identifying and discussing gaps between academic literature and commercial practices in relation to factors, which influence online purchase intention. The gaps, uncovered in the qualitative empirics, namely that factors that discourage online purchase intention are relatively outdated in the context of contemporary practices and offer an opportunity for revision and further research.

The fourth and final contribution comes in the form of an overview of best practices in regards to contemporary revenue model development, collected through qualitative insights and based on industry expert opinion, these are presented in the form of insightful quotes

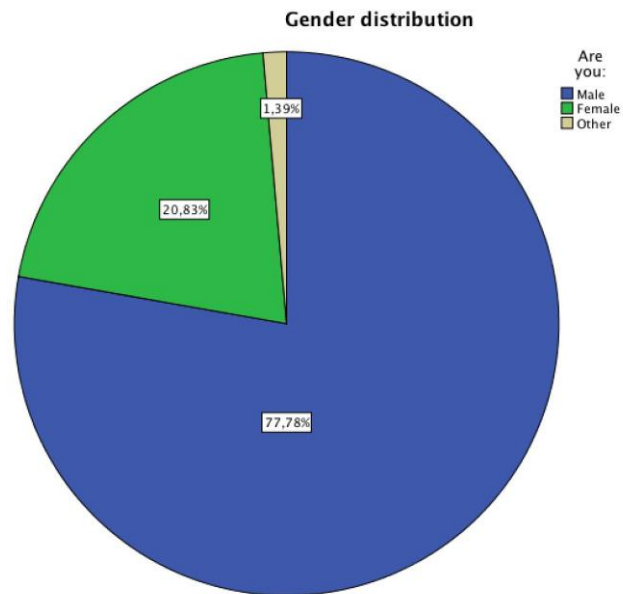
from developers. In conclusion, the thesis has condensed and synthesized the represented knowledge into a theoretic framework, which addressed revenue model development from the three distinct aspects of: consumer preferences, online purchasing trends and emerging best practices.

6.3 Critical Review

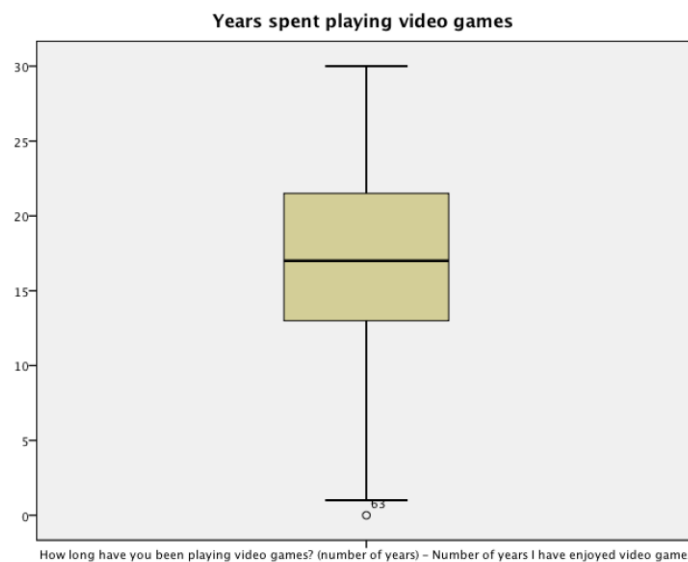
Within this section, the authors will highlight some of the issues that could have a negative impact on the quality of the study. First and foremost, the video game industry is in a constant flux, hence the findings of this study could become obsolete in a matter of months. Furthermore, a potential issue could be the depth of insights that have been collected from both focus groups - interviewees and survey respondents. Due to time constraints, the authors had to make a choice of collecting and analyzing research results only to a certain depth. Building on that, both samples are fairly small with interviewees being a total of eight and survey responders, a total of one hundred and forty-seven. Another aspect worth mentioning is that, this study generalizes the term of revenue model in the sense that there is a wide variety of video games and for some of them, some of the results of this study are irrelevant. That being said, the authors do believe that it is important to examine revenue models as they are significant both for developers as well as for video game studios. Finally, the video games is a very practical industry that relies on tacit rather than academic knowledge, so the authors acknowledge that the some of the theories presented in this study are applied to the topic of revenue models specifically for academic research purposes, rather than practical solutions.

7. Appendix

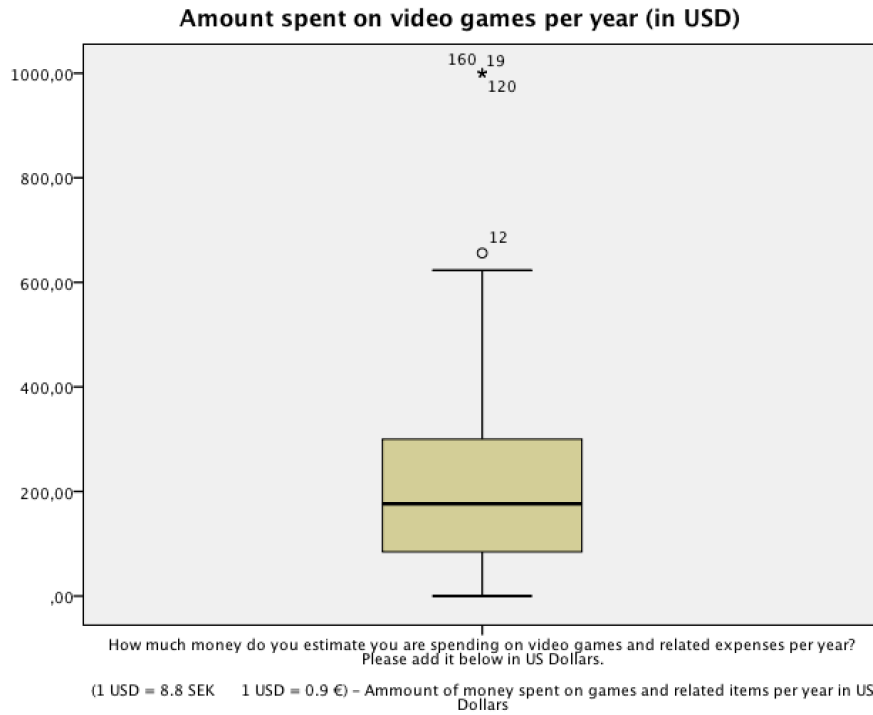
7.1 Additional quantitative data



Quantitative Data - Appendix Figure 1
Pie chart showing gender distribution among respondents.

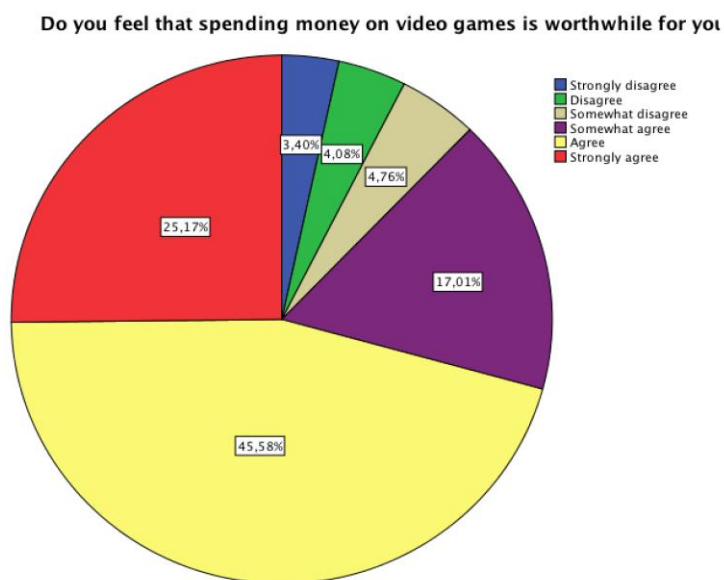


Quantitative Data - Appendix Figure 2
Box plot showing the long-term dedication to the industry.



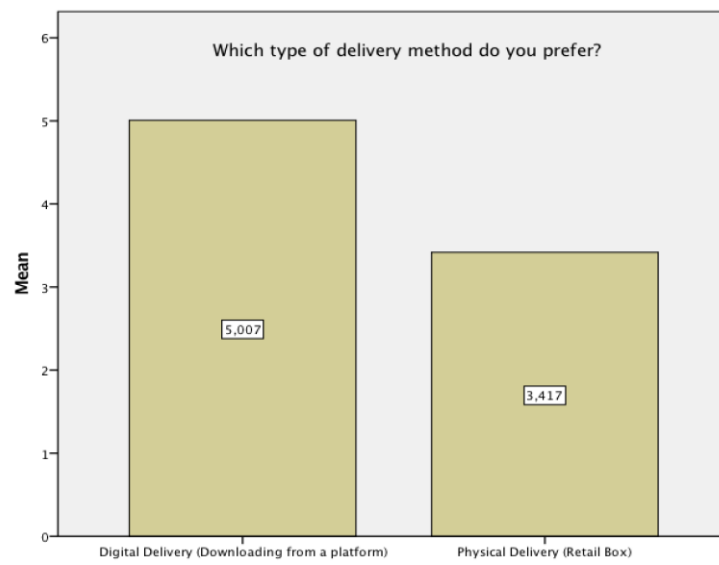
Quantitative Data - Appendix Figure 3

Box plot showing distribution of dollars spent per year on video games.

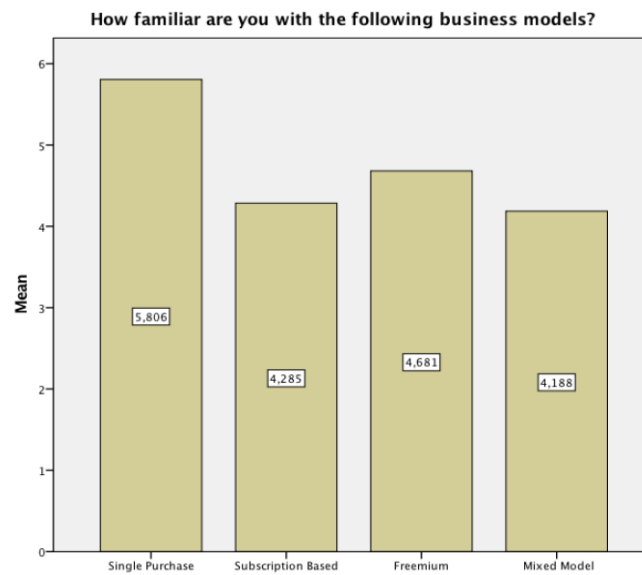


Quantitative Data - Appendix Figure 4

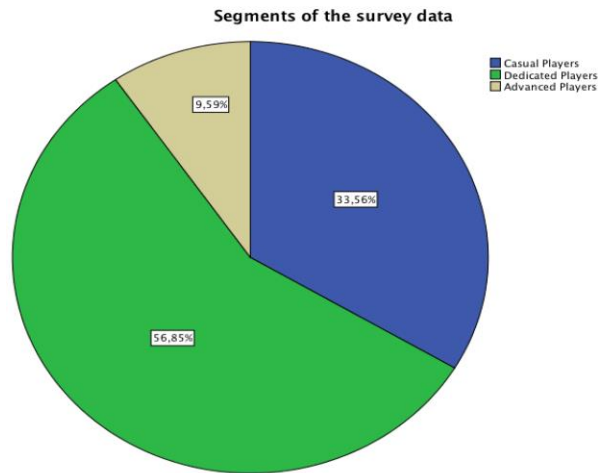
Pie chart showing consumer attitudes towards spending time on video games.



Quantitative Data - Appendix Figure 5
Bar chart showing consumer preferences: digital vs. physical delivery.

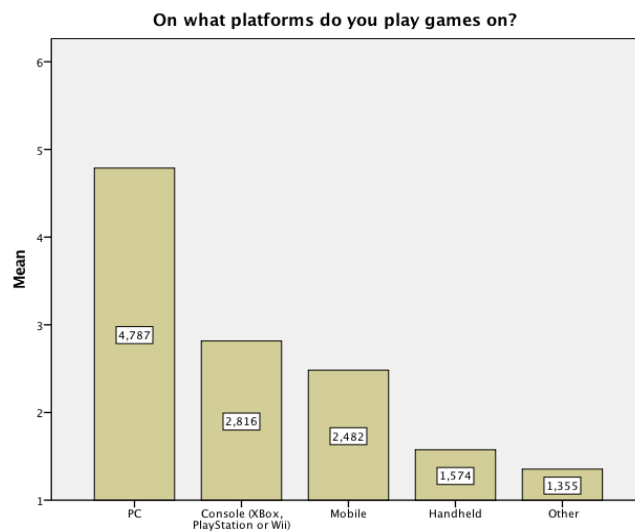


Quantitative Data - Appendix Figure 6
Bar chart showing consumer familiarity with the four main business models.



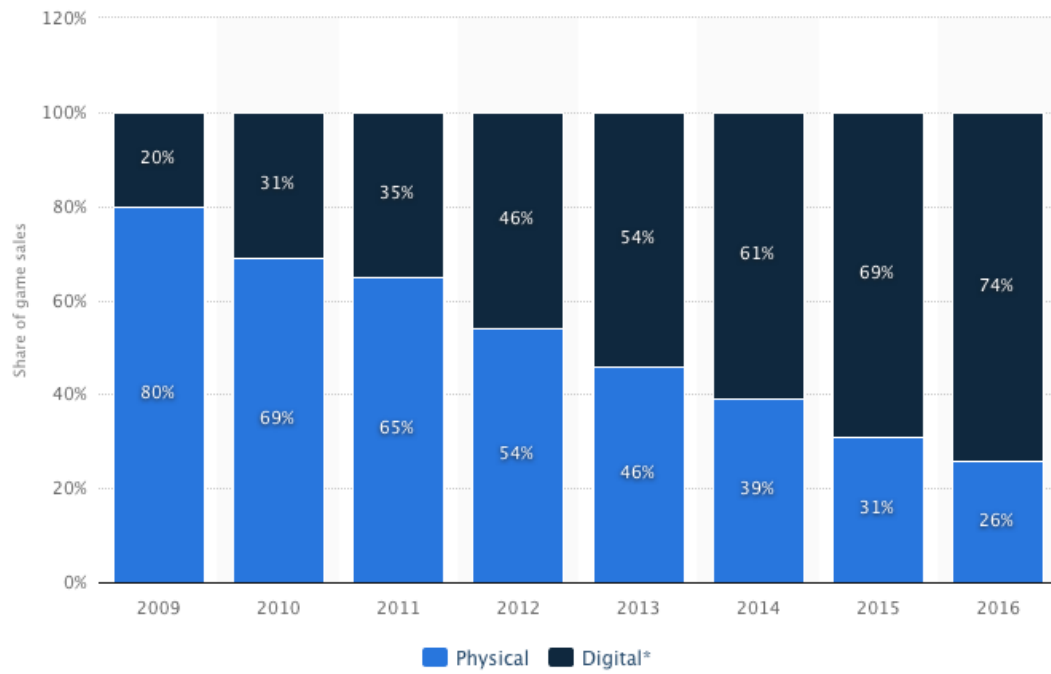
Quantitative Data - Appendix Figure 7

Pie chart showing the distribution of player groups in the created segments.



Quantitative Data - Appendix Figure 8

Bar chart showing the platform distribution preference for the respondents.



Appendix Figure 9
Ratio of physical to digital delivery 2009-2010. Source: Statista Portal, 2017

7.2 Overview of Interviews

Anonymization	Position	Organization	Located in	Interview Type	Interview Date
A	Chief Executive Officer	Triple-A Swedish Publisher/ Studio	Stockholm	Face-to-Face	05/04/2017
B	Marketing and Support manager	Medium-sized Dutch Studio	Utrecht	Face-to-Face	27/03/2017
C	Senior Consultant	Boutique publisher/consultancy	Stockholm	Skype	14/04/2017
D	Sales and Revenue Analyst	Indie development studio	The Hague	Skype	10/04/2017
E	Senior Sales and Revenue Analyst	Triple-A Dutch studio	Amsterdam	Skype	18/03/2017
F	Lead Game Designer	Indie development studio	Eindhoven	Skype	13/04/2017
G	Marketing Manager	Medium-sized Dutch studio	Utrecht	Skype	03/05/2017

Appendix Table 3 - Interview sessions

7.3 Interview Guide

Briefing

1. Introduction of interviewers
2. Introduction of thesis and disclaimers

General

3. Could you please introduce your company?
4. Could you tell us your position and responsibilities?
5. Could you tell us what revenue models you have worked with?

Revenue Models

6. What is the process of developing a revenue model for a title?
7. What factors do you consider when developing a revenue model?
8. Do you rely on gut-feeling or metrics when you innovate your revenue models?
9. In your experience, what practices are key for success in contemporary revenue models?

Shift to Digital Distribution

10. Could you, in your own words, describe the shift from physical to digital distribution?
11. Could you, in your own words, describe the effects of the shift on revenue model development?
12. Could you, in your own words, describe the effects of the shift on the player base?

Consumer preferences

13. When developing titles, do you drive consumer demand or conform to it?
14. What is the role of segmentation in video game development?

Online purchase factors

15. Do you consider Trust, Ease of Use and Usefulness as relevant factors for purchase intention?
16. Do you consider Risk of Privacy, Long-term availability and Retailer Opportunism barriers to purchase intention?

Conclusion:

17. What do you consider are the future trends in the video game industry?

8. References

8.1 Printed references

Adams E. (2002) Ethics in Qualitative research.

Alba, Joseph, Lynch, John, Wietz, Barton, Janiszewski, Chris, Lutz, Richard, Sawyer, Alan, & Wood, Stacy. (1997). Interactive home shopping: Consumer, retailer, and manufacturer incentives to participate in electronic marketplaces. *Journal of Marketing*, 61, 38–53.

Balkin, J. and Noveck B. (2006) *The State of Play: Law, Games, and Virtual Worlds*, NYU Press.

Berg, S. and Schager, C. (2006) *In-game advertising: Making or Breaking the Computer Gaming Experience?* Stockholm School of Economics.

Bjorklund, M. and Paulsson, U. (2014) *Academic papers and theses*. 1st edition. Studentlitteratur.

Burke, Raymond R. (1997). Real shopping in virtual stores. In Stephen P. Bradley and Richard L. Nolan (Eds.), *Sense and respond: Capturing the value in the network era*. Boston, MA: Harvard Business School.

Chatfield, T. (2010) *Fun INC. - Why Games are the 21st century's most serious business*, Random House.

Chervany, N.L., & McKnight, D.H. (2001). What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, 6(2), 35–59.

Chesbrough, H. (2010) *Business Model Innovation: Opportunities and Barriers*. Long Range Planning, vol. 43, pages 354-563, Elsevier.

Chiang, Kuan-Pin. (2001). Effects of price, product type and convenience on consumer intention to shop online. In Ram Krishnan and Madhu Viswanathan (Eds.), *Proceedings of AMA Winter Educators' Conference*, Vol. 12, pp. 163–169. Chicago: American Marketing Association.

Chui, Y.B., Lin, C.P., & Tang, L.L. (2005). Gender differs: assessing a model of online purchase intentions in e-tail service. *International Journal of Service Industry Management*, 16(5), 416-435.

- Da Costa, E. (2001) Global E-commerce Strategies for Small Businesses.
- Dhoklakia, R. (2003) Factors Driving Consumer intention to Shop Online: An Empirical Investigation. *Journal of Consumer Psychology*.
- Fowler, F. (2014) *Survey Research Methods*. 5th edition, Sage.
- Grabner-Krauter, S. (2002) Patterns of consumer trust in electronic commerce.
- Green, D., Pearson, J. M., & Pearson, A. (2007). Determining the importance of key criteria in web usability. *Management Research News*, 30(11), 816-828.
- Hunicke, R., LeBlanc, M and Zubek R. (2005) MDA: A Formal Approach to Game Design and Game Research.
- Jarvenpaa, S., & Tiller, E. H. (1999) integrating market, technology and policy opportunities in e-business strategy. *Journal of Strategic Information Systems* 8 (1999) 235-249.
- Jarvenpaa, Sirkka L., & Todd, Peter A. (1997). Is there a future for retailing on the Internet? In Robert A. Peterson (Ed.), *Electronic marketing and the consumer* (pp. 139–154). Thousand Oaks, CA: Sage.
- Kelman, H., C. & Hamilton, V. L. (1989) Crimes of obedience: Towards a Social Psychology of Authority and Responsibility.
- Kim, H., Song, J., 2010. The Quality of Word-of Mouth in the Online Shopping Mall. *Journal of Research in Interactive Marketing*, 4(4), 376- 390.
- Kim, Y.M., & Shim, K.Y. (2002). The influence of internet shopping mall characteristics and user traits on purchase intent.
- Koufaris, M., & Sosa, W., H., (2002) customer trust online: examining the role of experience with the website.
- Lai, E., Wang, Z., 2012. An Empirical Research on Factors Affecting Customer Purchasing Behavior Tendency During Online Shopping. (pp. 583-586). Institute of Electrical and Electronics Engineers.
- Lee, G. G., & Lin, H. F. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, 33(2), 161-176.
- Liat, C.,B. & Wuan, Y.,S. (2014) Factors influencing consumers' online purchasing intention.

Mason, K. and Spring, M (2011) The Sites and Practices of Business Models. *Industrial Marketing Management*, vol. 40 pages 1032-1041.

Mason, K. and Spring, M. (2011) The Sites and Practices of Business Models, *Industrial Marketing Management*, vol. 40, pages 1032-1041, Elsevier.

Mohseni, S. & Sreenivasan, J. (2014). The impact of user characteristics in online purchase intention in tourism industry. *Reef Resources Assessment and Management Technical Paper*, 40(1), 399-404.

Nelson, Philip J. (1974). Advertising as information. *Journal of Political Economy*, 82, 729–754.

Newbold, P., Carlson W. and Thorne, B. (2013) *Statistics for Business and Economics*. 8th edition, Pearson.

Nichols, R. (2014) *The Video Game Business*, Palgrave Macmillan.

OECD Report: Working Party on the Information Economy, Digital Broadband Content: The online computer and video game industry, (2005), OECD.

Olsson, B. and Sidenblom L. (2010) *Business Models for Video Games*. Lund University.

Osathanunkul C. (2015) A Classification of Business Models in Video Game Industry. *International Journal of Management Cases*, volume 17, issue 1, p. 35-44.

Osterwalder, A. and Pigneur, Y. (2010): *Business Model Generation*, Wiley.

Osterwalder, A.; Pigneur, Y and Tucci, C. (2005) Clarifying Business Models, Present and Future of the concept, CAIS.

Pallant, J. (2013) *SPSS*. 5th edition, McGraw Hill.

Peterson, Robert A., Balasubramanian, Sridhar, & Bronnenberg, Bart J. (1997). Exploring the implications of the Internet for consumer marketing. *Journal of the Academy of Marketing Science*, 25, 329–346.

Prince, J. (2004) The beginning of online/retail competition and its origins: An application to personal Computers. *International Journal of Industrial Organization*, 139-156.

Rayport, J.F., Jaworski, B. (2001) *E-commerce*.

Reed, Sandy. (1999, October 25). Online shopping? YouBet! *Infoworld*, 91. Sherif, Carolyn, Sherif, Muzafer, & Nebergall, Roger E. (1965). *Attitude and Attitude Change*. Philadelphia: Saunders.

Ryan, R. M., Rigby, C.S., & Przybylski, A. (2006) The motivational pull of video games: A self-determination theory approach. *Motivation and Emotion*, 30(4), 347-363.

Shadkam. M., Kavianpour, S., Honarbakhsh, S., & Hooi, L.W. (2013). Antecedents of consumers' intention to shop online. *Australian Journal of Basic and Applied Sciences*, 7(13), 190-197.

Shostack, G. (1977) Breaking free from product marketing, *Journal of Marketing*, Vol. 41, April, p. 73-80.

Shostack, G. L. (1977) Breaking Free from Product Marketing, *Journal of Marketing*.

Tan, Y.-H., and Thoen, W., "Toward a Generic Model of Trust for Electronic Commerce," *International Journal of Electronic Commerce*, Volume 5, Number 2, 2000-2001, pp. 61-74.

Vargo, S. L. and Lusch R. F. (2004) Evolving to a new service dominant logic for marketing. *Journal of Marketing*. Vol. 68, January 2004.

Vorderer, P., Hartmann, T., & Klimmt, C. (2003) Explaining the enjoyment of playing video games. The roles of competition, Pittsburgh (pp. 1-8). New York: ACM.

Willson, M. and Leaver, T. (2016) *Social, Casual and Mobile Games: The Changing Gaming Landscape*, Bloomsbury.

Yadav, S. and Pavlou P. (2014) Marketing in Computer-Mediated Environments: Research Synthesis and New Directions, *Journal of Marketing*, Vol. 78 (January 2014), p. 20-40.

Zackariasson, P. and Wilson, T. (2012) *The Video Game Industry - Formation, Present State and Future*, Routledge.

8.2 Digital references

Accenture. (2013) The Pulse of Gaming. <https://www.accenture.com/us-en/~media/Accenture/Conversion-Assets/LandingPage/Documents/3/Accenture-3-LT-10-Pulse-Gaming-Disruption.pdf> (accessed 2017/3/9).

Adami, MF and Kiger, A. The use of triangulation for completeness purposes. <https://www.ncbi.nlm.nih.gov/pubmed/16045044> (Accessed 2017/3/20).

Baxter, R. (2016) Subscription Business Models Are Great for Some Businesses and

Terrible for Others. <https://hbr.org/2016/07/subscription-business-models-are-great-for-some-businesses-and-terrible-for-others> (accessed 2017/4/27).

Blizzard. (2017) World of Warcraft Subscriptions. <https://us.battle.net/shop/en/product/world-of-warcraft-subscription> (accessed 2017/3/11).

Cox, K. (2016) It's Time To Start Treating Video Game Industry Like The \$21 Billion Business It Is. <https://consumerist.com/2014/06/09/its-time-to-start-treating-video-game-industry-like-the-21-billion-business-it-is/> (accessed 2017/3/9).

Daniels S. (2015) Big Budget Games Are a Dying Breed. https://motherboard.vice.com/en_us/article/aaa-games-are-crumbling-under-their-huge-budgets (accessed 2017/3/9).

Davison, P. (2013) Pay to Play: In Defense of MMORPG Subscription Fees. <http://www.usgamer.net/articles/in-defense-of-subscription-fees> (accessed 2017/4/28).

Duvel, R. (2017) StarCraft map used in South Korean presidential candidate's campaign. <https://www.technobuffalo.com/2017/04/24/starcraft-map-used-in-south-korean-presidential-candidates-campaign/> (accessed 2017/4/28).

Entertainment Software Association. (2015) Essential Facts About the Computer and Video Game Industry. <http://www.theesa.com/wp-content/uploads/2015/04/ESA-Essential-Facts-2015.pdf> (accessed 2017/5/6).

Financial Times. (2015) Gender challenge in the videogames industry. <https://www.ft.com/content/4778b356-1409-11e5-9bc5-00144feabdc0> (accessed 2017/5/4).

Forbes. There's something really wrong with Steam, PC Gaming's Biggest Digital Store. <https://www.forbes.com/sites/erikkain/2016/12/19/theres-something-really-wrong-with-steam-pc-gamings-biggest-digital-store/#2fb6522042e9> (Accessed 2017/4/20).

Frank, A. (2016) Take a look at the average American gamer in new survey findings. <https://www.polygon.com/2016/4/29/11539102/gaming-stats-2016-esa-essential-facts> (accessed 2017/5/6)

Friedman, D. (2015) I was a Warcraft millionaire. <http://www.polygon.com/2015/4/27/8482181/i-was-a-warcraft-millionaire-but-its-probably-too-late-for-you> (accessed 2017/4/27).

Good, O. (2017) South Korean presidential candidate campaigns with a StarCraft map. <http://www.polygon.com/2017/4/22/15393184/starcraft-map-south-korea-election-president-moon-jae-in> (accessed 2017/4/28).

Gray, K. (2015) Microtransactions are seeping into console gaming, and it makes me feel bad. <http://www.techradar.com/news/gaming/microtransactions-are-seeping-into-console-gaming-and-it-shows-no-sign-of-slowing-1306494> (accessed 2017/4/28).

IGN. Why video games are the ultimate entertainment medium http://www.ign.com/blogs/imo_joe_/2012/09/27/why-video-games-are-the-ultimate-entertainment-medium (Accessed 2017/3/1/).

Jacobs, H. (2015) Gaming guru explains why 'freemium' is actually the best business model for multiplayer video games. <http://www.businessinsider.com/sean-plott-explains-why-he-thinks-freemium-games-are-the-best-business-model-for-both-players-and-developers-2015-3?r=US&IR=T&IR=T> (accessed 2017/5/4).

Johnson, E. (2014) The Case For and Against Game Subscriptions in the App Store. <http://www.recode.net/2014/8/1/11629430/the-case-for-and-against-game-subscriptions-in-the-app-store> (accessed 2017/4/27).

Katkoff, M. (2013) How to Monetize an Infinite Runner. <http://www.gameanalytics.com/blog/monetizing-an-infinite-runner-guest-post.html> (accessed 2017/4/27).

Kohler, C. We don't need game publishers, hardware makers or retailers https://www.wired.com/2012/04/opinion_kohler-we-need-no-one/ (Accessed 2017/3/20).

Kotaku. (2014) How Much Does It Cost To Make A Big Video Game? <http://kotaku.com/how-much-does-it-cost-to-make-a-big-video-game-1501413649> (accessed 2017/4/27).

Levy, E. (2014) Why Microtransactions Aren't Going Away Any Time Soon. <http://kotaku.com/why-microtransactions-arent-going-away-any-time-soon-1674260827> (accessed 2017/4/28).

Longanecker, C. (2014) Why You Should Use a Subscription Business Model. <https://www.entrepreneur.com/article/243573> (accessed 2017/4/27).

Madigan, J. (2010) The Psychology of Immersion in Video Games.

<http://www.psychologyofgames.com/2010/07/the-psychology-of-immersion-in-video-games/> (accessed 2017/4/27).

Makuch, E. (2016) DLC and Microtransactions: New Study Shows How Gamers Feel About Them. <https://www.gamespot.com/articles/dlc-and-microtransactions-new-study-shows-how-game/1100-6444522/> (accessed 2017/4/28).

Minotti, M. (2014) Flops, failures, and disasters: The gaming industry's biggest misfires. <http://venturebeat.com/2014/08/30/flops-failures-and-disasters-the-gaming-industrys-biggest-misfires/> (accessed 2017/3/11).

Nethosting. Steam overview <https://www.nethosting.com/steam-case-study/> (Accessed 2017/4/6).

Novy-Williams, E. (2016) Virtual Weapons Are Turning Teen Gamers Into Serious Gamblers. <https://www.bloomberg.com/features/2016-virtual-guns-counterstrike-gambling/> (accessed 2017/4/28).

Oxford Dictionary. (2017) Definition of video game. https://en.oxforddictionaries.com/definition/video_game (accessed 2017/2/23).

PC-Gamer (2013) Microtransactions: the good, the bad and the ugly. <http://www.pcgamer.com/microtransactions-the-good-the-bad-and-the-ugly/> (accessed 2017/4/28).

Plunkett, L. (2015) There Are Over 125 Million "Active" Steam Accounts. <http://kotaku.com/there-are-over-125-million-steam-accounts-1687820875> (accessed 2017/3/11).

Richtel, M. (2005) A New Reality in Video Games: Advertisements. http://www.nytimes.com/2005/04/11/technology/a-new-reality-in-video-games-advertisements.html?_r=0 (accessed 2017/4/28).

Rock, Paper, Shotgun (2007) RPS Exclusive: Gabe Newell Interview <https://www.rockpapershotgun.com/2007/11/21/rps-exclusive-gabe-newell-interview/> (Accessed 2017/3/1).

Rose, A. (2013) Why you need to boost your customer service game. <http://venturebeat.com/2013/02/18/why-you-need-to-boost-your-customer-service-game/>

(accessed 2017/3/9).

Slabaugh, B. (2014) Most Freemium Revenue Comes From Less Than 1% of Gamers. <http://www.escapistmagazine.com/news/view/132582-Most-Freemium-Revenue-Comes-From-Less-Than-1-of-Gamers> (accessed 2017/3/9).

Smith, D. (2015) I miss the days when I only had to pay once for a video game. <http://www.businessinsider.com/microtransactions-are-ruining-video-games-2015-4?r=US&IR=T&IR=T> (accessed 2017/4/28).

Spill Games. State of Online Gaming Report http://auth-83051f68-ec6c-44e0-afe5-bd8902a7.cdn.spilcloud.com/v1/archives/1384952861.25_State_of_Gaming_2013_US_FI_NAL.pdf (Accessed 2017/3/1).

Statista (2017) Breakdown of U.S. computer and video game sales from 2009 to 2016, by delivery format. <https://www.statista.com/statistics/190225/digital-and-physical-game-sales-in-the-us-since-2009/> (accessed 2017/3/9).

Statista. (2014) Average time spent gaming weekly in Great Britain as of June 2014, by age (in hours). <https://www.statista.com/statistics/323943/average-time-spent-gaming-weekly-uk/> (accessed 2017/5/6).

Statista. (2015) Music industry revenue worldwide in 2015 and 2020. <https://www.statista.com/statistics/259979/global-music-industry-revenue/> (accessed 2017/3/9).

Statista. (2016) Breakdown of U.S. computer and video game sales from 2009 to 2016, by delivery format. <https://www.statista.com/statistics/190225/digital-and-physical-game-sales-in-the-us-since-2009/> (accessed 2017/5/3).

Statista. (2017) Age breakdown of video game players in the United States in 2017. <https://www.statista.com/statistics/189582/age-of-us-video-game-players-since-2010/> (accessed 2017/2/27).

Statista. (2017) Distribution of computer and video gamers in the United States from 2006 to 2017, by gender. <https://www.statista.com/statistics/232383/gender-split-of-us-computer-and-video-gamers/> (accessed 2017/5/3).

Statista. (2017) Outlook Report: Video Games. <https://www.statista.com/outlook/203/100/video-games/worldwide#takeaway> (accessed 2017/2/25).

Statt, N. (2013) Micropayments, mega angst, and the future of console games.
<https://www.cnet.com/news/micropayments-mega-angst-and-the-future-of-console-games/> (accessed 2017/4/28).

Stuart, K. (2016) The digital apocalypse: how the games industry is rising again
<https://www.theguardian.com/technology/2016/may/17/video-game-industry-changing-virtual-studios> (accessed 2017/3/9).

T. C. Economist. (2014) Why video games are so expensive to develop.
<http://www.economist.com/blogs/economist-explains/2014/09/economist-explains-15>
(accessed 2017/3/9).

Takahasi, D. (2016) PwC: Game industry to grow nearly 5% annually through 2020
<https://venturebeat.com/2016/06/08/the-u-s-and-global-game-industries-will-grow-a-healthy-amount-by-2020-pwc-forecasts/> (accessed 2017/3/9).

Tassi, P. (2013) The Ten Commandments Of Microtransactions.
<https://www.forbes.com/sites/insertcoin/2013/11/25/the-ten-commandments-of-microtransactions/#69a82fb18cd3> (accessed 2017/5/6).

The Guardian. The digital apocalypse: how the games industry is rising again
<https://www.theguardian.com/technology/2016/may/17/video-game-industry-changing-virtual-studios> (Accessed 2017/3/3).

Ukie. The games industry in numbers <https://ukie.org.uk/research> (accessed 2017/3/1).

Universal Pictures. (2016) Warcraft the Movie.
<https://www.universalpictures.com/movies/warcraft> (accessed 2017/3/11).

Waris, M. Parsimony. <http://brm4pk.se/2012/11/parsimony.html> (accessed 2017/4/1).

Yenigun, S. (2012) Presidential Campaigns Rock The Gamer Vote.
<http://www.npr.org/2012/10/01/162103528/presidential-campaigns-rock-the-gamer-vote>
(accessed 2017/4/28).