

University of Amsterdam



Master Thesis

**Determinants of Brand Extension Performance
in Experiential Industry:
Evidence from the Video Gaming**

Faculty of Economics and Business

Oksana Afonina
6092349

Supervisor: M.A.A.M. Leenders
Second supervisor: F.B Situmeang

August 2010

Abstract

The gaming industry is a multi billion dollar market involving great production and promotion costs, as well as creating new working places and even professions. The growing army of consumers of this entertainment product includes people of different ages and social levels, making this market interesting and complex to manage for the marketers. Despite ongoing researches on video games in a wide range of different fields, including computer science, media and cultural studies, psychology, medicine, education, physics and youth studies, this huge and fast developing market was almost ignored by the marketing scholars. One of the strategies frequently applied by game developers is sequel release which is a form of brand extension. This study attempted to provide insights for the well researched topic of brand extensions (which was mostly done on the examples of physical goods) in the scarce studied environment of hedonic goods.

In this study I integrate diverse streams of literature from brand extension, consumer perception and experiential markets in order to identify factors that influence the market performance of sequels of video games. The empirical research was carried by analyzing the real data from the open online sources on video games, and thus provides reliable results unlike the studies using hypothetical brands. The key findings of this research suggest that critic rating and sales of previous game installment are the most influential predictors of the sequel performance. Even though other factors (genre extension, user rating, use of media franchise and naming strategy) are not so important for the success of the brand extension, analysis and discussion reveals insights for the entertainment industry. I then use the results of research to derive recommendations for marketers who work in entertainment industry, as well as provide comments for the theory on brand extensions from the side of experiential industry. Also limitations of my study and recommendations for the further research are discussed.

Key words: brand extension, video game, sequel, determinants of market performance

Table of Contents

Introduction	4
Literature overview	7
Brand extension strategy. Advantages and disadvantages.....	7
Consumer perception and evaluation of brand extensions.....	11
Experiential (hedonic) goods and brand extension.....	13
Overview of gaming industry.....	21
Empirical analysis	25
Data collection and sample.....	25
Variables and measures.....	26
Analysis and results.....	26
Discussion	30
Theoretical implications.....	37
Managerial implications.....	38
Limitations and recommendations for further research.....	40
Conclusion	42
References	43
Appendix 1. Categorization of video game genres.....	49
Appendix 2. List of prominent articles on brand extension and experiential goods	50
Appendix 3. The comparison in growth rates of three experiential industries.....	51
Appendix 4. Descriptive statistics for the dichotomous variables.....	52
Appendix 5. Correlation matrix.....	54
Appendix 6. Results of regression analysis.....	55
Appendix 7. Results of regression analysis with interactions.....	56
Appendix 8. Interaction plots.....	57

Introduction

Rapid developments in digital technology during recent years have all but changed the face of home entertainment. Video games have been a significant form of amusement since the early 1970's, appearing in number of formats and locations: television-dependent consoles, portable gaming devices, PC games and so on. The dynamic nature of gaming industry and growing demands of consumers make development of marketing strategies for this market an exciting yet difficult task. One of the strategies frequently applied by game developers is sequel release which is a form of brand extension. Brand extension has become an increasingly popular option for launching new products in the marketplace. Capitalizing on brand equity through brand extensions has truly become the "guiding strategy of product planners" (Tauber 1988, p.26) as it considerably decreases financial risks and promotional costs. However, the wrong extension can create damaging associations that may be hard or even impossible to change (Loken and John, 1993).

Two reasons further motivate current research focus. First, video games represent a rapidly developing and huge international market, which according to DFC¹ estimation reached \$57 billion in 2009 and continues to grow dramatically every year. Given this growth, it is important to increase our understanding about marketing factors that drive this industry. Second, the brand extension decision is strategically critical to an organization as it exploits one the most important assets owned by business – brand name and its reputation. Since not all extensions are successful it is both interesting and challenging to study possible predictors of brand extension performance.

Although, various issues of brand extension is a frequently researched topic (Aaker and Keller, 1990; Broniarczuk and Alba, 1994; Ambler and Styles, 1997 and many others) most of studies provide implications on physical product markets. Experiential (or also called hedonic)

¹ **DFC Intelligence** is a strategic market research and consulting firm focused on interactive entertainment and the emerging video game, online game, interactive entertainment and portable game markets.

goods, such as movies, video games, art, and entertainment, represent considerably different category and require special approach. Bassi (2010) stresses two important aspects of experiential goods. The first is that their characteristics are primarily intangible. They are not considered as the simple sum of their attributes, but as the potentials arising from their combination. Secondly, experiential goods are characterized by the reasons guiding their choice: utilitarian criteria are replaced by subjective criteria such as personality expression, dream realization, search for pleasure, and fun. However, different marketing aspects of experiential products are quite researched topic (e.g. Leenders et.al 2005; Sood and Dreze, 2006; Yang and Mai, 2009; Bassi, 2010 and others) their findings concern mostly movie industry. Therefore, there is an obvious need in diversified and extensive in nature research on hedonic products. The aim of current research is to fill in gap in theoretical research by drawing attention to the two salient areas of marketing of experiential goods, namely brand extension and factors of their performance. The purpose of this study is to empirically investigate the implications of brand extension in experiential goods market, and the main research question is ***“What factors influence the market performance of sequels in video game industry?”***.

The focus of the study is small, but still wide part of experiential product management, namely the link between different attributes of the game sequels as possible predictors of the market success. The theoretical foundation is based on the various topics in the literature with the accent on the hedonic goods. The theoretical part highlights the following sub-questions:

What is brand extension?

What are possible outcomes of the brand extension strategy?

What are the implications of the brand extension on the experiential markets?

What factors can possibly influence market performance of the sequel?

What are the specific characteristics of the gaming industry?

Current study contributes both to practical and theoretical fields. For practitioners, especially in gaming industry, this research will be useful because of highlighting brand extension issues and may help for developing better tuned and accurate marketing strategies for sequel releases. For the academics this research will be interesting from the perspective of empirical insights about brand extension aspects in experiential goods markets.

The structure of the paper as follows – I will start with a literature overview of main concepts that compose the theoretical background (brand extension, experiential goods and consumer perception of brand extension) and formulate hypotheses that will be tested. Next the description of the research design, methodology and data collection are provided. I will then present results of the research that are further argued in detail in the discussion part along with the managerial and theoretical implications, and suggestions for further research. The paper ends with conclusion, where the short summary of research key findings is given. In appendix visual materials that illustrate research findings are incorporated.

Literature Overview

In 1979, Edward M. Tauber coined the term “brand extension” to describe using the leverage of a well known brand name in one category to launch a new product in a different category. Since then brand extension has become a popular tool for marketing practitioners and provided wide field for abundant academic research. As outlined before, the goal of this study is to determine factors of brand extension success in poorly studied environment – experiential markets (on the example of video games market). This section provides literature overview of the relevant studies on brand extension literature over last decades. It lays a theoretical background for the empirical research and presents hypotheses that will be tested. At first I clarify central terms used in current study – brand and brand extension. After that advantages and possible shortcomings of brand extension strategy are discussed. Further the focus is on the consumer evaluation of brand extension as a pivotal characteristic of brand extension success. Since current research aims to examine experiential markets and video gaming in particular, I then argue about difference between physical and experiential goods and provide overview of video gaming industry for better understanding of the studied environment.

Brand extension strategy. Advantages and disadvantages

During the past couple decades, brand extensions have been the source of strategic growth for many firms (Aaker 1991; Farquhar 1989; Leuthesser 1988; Tauber 1988). Brand extensions are attractive to firms because they decrease failure rates by taking advantage of brand name recognition and image to enter new markets. The leverage of a strong brand name can reduce the risk of introducing a product in a new market by providing consumers the familiarity of and knowledge about an established brand. Also brand extensions can decrease the costs of gaining distribution and increase the efficiency of promotional expenditures (Morein, 1975).

As a first step, would be logical to clear out the main concepts used in this research, in particular “brand” and “brand extension”. Styles and Ambler (1995) identified two approaches to defining a brand. The first one is the traditional product plus definition which views branding as an addition to the product. The brand is seen primarily as an identifier. The second approach is the holistic view. Under this approach the focus is on the brand itself, which encompasses much more than just the product. The brand is considered to be the sum of all elements of the marketing mix: product is just one element, alongside price, promotion and distribution. The holistic approach defines a brand as “the promise of the bundles of attributes that someone buys and that provides satisfaction... The attributes that make up a brand may be real or illusory, rational or emotional, tangible or invisible.” (Ambler, 1992). These attributes emanate from all elements of the marketing mix and all the brand’s product lines. The holistic view seems more relevant to the current environment dominated by brand and line extensions, as it takes into consideration all the different product lines which come under a single brand umbrella, i.e. brand is made up of all its brand and line extensions, and the marketing activities that surround them, in addition to the original product line.

Brand extensions are one of the most heavily-researched and influential areas in marketing (Czellar, 2003). The popularity of brand and line extensions among practitioners over last decades, and consequently as subjects for research among academics, has coincided with the emergence of the brand equity concept. The two have been linked: a brand’s equity has an impact on the success of extensions (Rangaswamy et al., 1993), and extensions in turn have an impact on a brand’s equity (Dacin and Smith, 1994; Keller and Aaker, 1992).

Other recent research suggests that the parent brand's reputation could be damaged if the extended product fails, if the positioning of the extended product is inconsistent with the positioning of the parent brand, or if too many products are extended from a given brand name (Loken and John 1993; Leuthesser 1988). Although introduction of brand extensions has become prevalent, such a practice does not necessarily guarantee success. Even those extensions that are

not classified as failures do not necessarily enjoy equal success. For instance, failure rates of brand extensions in many fast-moving consumer good (FMCG) product categories are approximately 80% (Volckner and Sattler, 2006). An extension may cannibalize sales of existing products and dilute the image of the original brand over time (Reddy et al, 1994). Although the extent is not known, it is likely that an unsuccessful product may seriously affect the parent brand (Tauber 1981). Ries and Troad (1986) contend that extensions are potentially ruinous because they dilute a brand's position in a consumer's mind. However, analysts contend that some companies have waited too long to respond with extensions as well-known brands name experienced decline (Levinson et al 1993). These observations lead to ask what determines the brand extension performance, and thus create the purpose of current research. Assuming that there exist multiple determinants of brand extension evaluation, a reasonable goal is to analyze the relative influence of each determinant.

Brand extension research has, since the nodal research of Aaker and Keller, grown to identify a broad variety of determinants of brand extension success. For example, research by Volckner and Sattler (2006) proved approximately 15 determinants of extension success significantly relevant. In line with previous studies, authors found that fit between the parent brand and an extension product is the most important driver of the brand extension success, but such factors as marketing support, parent-brand conviction, retailer acceptance, and parent-brand experience are highly important. Although, this research is one of the most elaborate and broad, it still doesn't consider all the possible determinants of success and can be applied mostly for the physical goods and FMCG in particular. This research aims to answer the call of Volckner and Sattler (2006) for analysis of other possible determinants in application on different markets.

For current analysis it is important to understand differences between types of extension strategies that depend on markets and opportunities that they provide for the brand. Tauber (1981) categorizes a firm's growth opportunities as presented in the matrix below.

Brand category

		<i>New</i>	<i>Existing</i>
Brand name	<i>New</i>	New brand	Flanker
	<i>Existing</i>	Brand extension	Line extension

Table 1. Tauber's (1981) growth matrix²

The key distinction in the matrix is between brand extension and line extension. It is important to mention, that there is some variation in the academic literature regarding definitions of these terms. For example, Doyle (1994) defines brand extension as using a brand name successfully established for one segment or channel to enter another one in the same broad market. Brand stretching means transferring the successful brand name to quite different markets. In line with Tauber's matrix following definitions can be distinguished:

- brand extension involve the use of an established brand name to enter a new product category (Aaker and Keller 1990). The representative example is Virgin Group that uses the same brand name for the different markets – music recording, air transportation, cable television etc.;
- line extension, on the other hand, involve the use of an established brand name for a new offering in the same product category (Reddy et al., 1994, Aaker and Keller, 1990). The example for this is Coca-Cola with Cola Zero.

While this classifications and definitions are quite clear in theory, the boundaries are much less clear in practice. For example, Sony's range of mobile phones would not be considered brand extensions if Sony's market was defined broadly as "consumer electronics". Diet Coke could be placed in a new, more narrow category of "diet drinks", "colas", or "carbonated soft drinks", etc. category definition, therefore, plays an important role. Since

² The matrix was adapted by Ambler&Styles (1997). Tauber used the term 'new product', where Ambler&Styles use 'new brand' and 'franchise extension' where the 'brand extension' is used.

current research focuses on the video games market it is necessary to determine game sequels in the area of brand extensions.

As shown before brand extension refers to the use of well-known brand names for new product introductions. Oxford English Dictionary (2007) defines sequel as:

“The ensuing narrative, discourse, etc.; the following of remaining part of a narrative, etc.; that which follows as a continuation; esp. a literary work, that although complete in itself, forms a continuation of a preceding one”.

According to this definition sequel actually continues the previous story only extending a plot of a game. If to treat a game as a brand, sequel can be considered as line extension, because it uses the reputed name to launch product with new features. However, taking into account changes that sequels undergo (genre and console extension, graphic extension packages etc.) the sequel may appear as a new product for definite audiences and markets. To avoid dilution in the main concept for the current research I will use the definition of Kotler (1991), which is broad and all inclusive – *brand extension strategy is any effort to extend a successful brand name to launch new or modified product line.*

Consumer perception and evaluation of brand extensions

Most previous research on brand extensions has considered only single extensions, finding that evaluations of brand extension will depend on consumers perceptions of the original of core brand (e.g., its perceived quality) and the similarity or “fit” between the core brand and the proposed extension (Aaker and Keller 1990; Bridges 1990; Boush and Loken 1991). Specifically, such as (1) consumers hold positive beliefs and favorable attitudes toward the original brand in memory, (2) these positive associations facilitate the formation of positive beliefs and favorable attitudes toward the brand extension, and (3) negative associations are neither transferred to nor created by the brand extension (Aaker and Keller, 1990). In other

words, brand extensions appear to be evaluated more highly to the extent that they are perceived as similar to (or typical of) the brand's current product offering.

Prior brand extension research has emphasized role of fit or similarity between the two involved product classes in the formation of brand extension evaluations (see Aaker and Keller, 1990). Fit of extensions is important for a few reasons. One is that the transfer of the perceived quality of a brand will be enhanced when the two product classes in some way fit together. For example, categorization theory (Cohen and Basu, 1987) suggests that consumer would evaluate a brand extension in one of two ways: (1) by piecemeal processing, whereby an extension evaluation is a function of inferred brand attribute beliefs and their evaluative importance, or (2) by category-based processing, whereby an extension evaluation is a function of some overall attitude toward the original brand. Specifically, if consumers perceive a similarity or fit between the original and extension product classes, with category-based processing that would transfer quality perceptions to the new brand extension. In fact, categorization research has demonstrated that general affect can be transferred from one object to another (Gilovich, 1981). A second reason why fit is important to the extension is that a poor fit may not only detract from the transfer of positive associations, but may actually stimulate undesirable beliefs and associations (Aaker and Keller, 1990). For example, if a food brand is going to produce watches, consumers may question the ability of food firm to make good watches. If the fit is low, the extension may be regarded as ridiculous.

As mentioned before, the associations that consumers hold about an existing brand name serve as a basis for making inferences about the extension. In the absence of information, consumers fill in the gaps by making inferences on the basis of assessable diagnostic cues, such as price, brand name, or product warranty (Dick, Chakravarti, and Biehal 1990; Feldman and Lynch 1988; Simmons and Lynch 1991). However, these findings concern the physical-product context.

Experiential (hedonic) goods and brand extension

Unlike the traditional utilitarian products of which rational consumers try to maximize their utilities, consumers use hedonic goods for fun, leisure and entertainment. Video games belong to the category of experiential goods or hedonic goods (hereafter these two terms are used interchangeably) (Dhar and Wertenbroch, 2000). In modern economy, characterized by demand saturation, wide offer, and rapid information technology development, new needs emerge, linked to a sort of superior demand: experience. Customers are not satisfied only by functional characteristics of a product; they need and look for experience. The most important thing to know about games is that they center on *play*. Unlike literature and movies, where the center is *story*, in games everything revolves around play and the player *experience*. Game designers are much less interested in telling story that creating a compelling framework for play.

Experience may be defined as an event that involves a person in a memorable way (Pine and Gilmore, 1999). This means that experiential goods cannot be treated with traditional criteria (for example, utilitarian), since they involve a greater affective component, hedonistic criteria, and customers' personal characteristics (Babin at al, 1994). Experiences are memorable by definition, and are not consumed as goods, but for what they represent. Experiences are strictly personal and subjective, and involve emotional, intellectual, spiritual and physical spheres. An experience may be perceived through different channels: a consumer may be led to think, sense, feel, act, and relate (Schmitt, 1999). 'Sense' involves sensorial perception through sight, hearing, taste, smell and touch. The 'feel' experience involves feelings and emotions. The 'think' experience involves customers' ability to generate creative thoughts. The 'act' experience reveals customers' alternative ways of doing something, alternative styles and interactions. 'Relate' regards relations with a group or culture. All these experiences are embodied in games.

Bassi (2010) points out three main aspects of experiential goods. The first important aspect of experiential goods is that their characteristics are primarily intangible; they refer to symbols and multisensorial perceptions. They are not considered as simple sum of their

attributes, but as potentials arising from their combinations. Secondly, experiential goods are characterized by reasons guiding their choice; utilitarian criteria are replaced by subjective criteria such as personality expression, dream realization, search for pleasure, and fun. A third important aspect focuses on consumption rather than on purchase – that is, on the psychological reaction induced by using the product. Experiences last longer than goods: a book or a concert generate emotions even after they have been heard or listened to. Lastly, experiential goods oblige companies to relate differently to brands. A brand itself may in fact be a source of experience involving customers. Holbrook and Hirshman (1982) note that one main feature of experiential goods, when they are judged, is subjectivity. When reading a book (or playing a game in our case) each person “consumes” a different product, undergoing a different emotional and intellectual reaction. Satisfaction becomes an extremely personal judgment. The video games industry provides a perfect context to study the hedonic consumption, as in a virtual world a player can create any type of avatar as he desires and accomplish all kinds of adventurous missions as he wants. The experience of hedonic consumption of video games can be best illustrated by the quotation of Nina Huntemann³: “You know what's really exciting about video games is you don't just interact with the game physically -- you're not just moving your hand on a joystick, but you're asked to interact with the game psychologically and emotionally as well. You're not just watching the characters on screen; you're *becoming* those characters”.

Assuming that there exist multiple determinants of brand extension success, a reasonable goal is to determine the relative influence of each determinant. As argued before, past research has shown that fit and similarity are core to explaining success of brand extension. Consistent with previous brand extension studies I expect that attitudes toward video games sequels will be influenced by perceived similarity with the prequel, however only to some extent. In determining factors of success of video games, consumer perception is one of the most important issues that

³ Nina B. Huntemann – Ph.D., an associate professor of media studies at Suffolk University in the Department of Communication and Journalism. Her research focuses on new media technologies, particular video and computer games, and incorporates feminist, critical cultural studies and political economy perspectives.

need to be addressed. In contrast to physical goods Sood and Dreze (2006) argued that in experiential goods markets extensions will be perceived differently due to sensory satiation. Van Trijp (1995) suggests that hedonic products evoke faster satiating responses (e.g., variety seeking behavior should be greater among brands of cookies than among brands of laundry detergents). Because variety seeking is a determinantal factor in consumer choice, it has received well-deserved attention in the consumer behavior literature (see reviews by Alister and Pessemier, 1982 and van Trijp, 1995). An important paradigm for explaining variety seeking behavior is based on the theory of optimal level of stimulation (e.g. Deci and Ryan, 1985). It is argued that individuals possess characteristic optimal levels of stimulation, which they seek to maintain by managing the amount of incongruity in their lives. Therefore, I assume *that in experiential goods, and video games in particular, quality of dissimilar extension will be perceived higher than quality of similar and this will lead to better market performance*, and this assumption is central to the two following hypotheses.

The first hypothesis is in line with study of Sood and Dreze (2006), who tested success of brand extensions in experiential goods on the example of movie sequels. One of their studies was aimed to examine the naming strategy used to launch the sequel. The naming of sequel is one of the methods to vary the degree of activation of the parent movie and therefore vary the degree of assimilation. Results of their study revealed that named sequels receive higher consumer ratings, numbered sequels were more likely to be assimilated with the original movie, leading to lower evaluations, faster response times and reduced recall of sequel's plot. In current research I would like to test the same relation between the naming strategy of sequel and its market performance. I suggest that numbered sequel (e.g. Lara Croft 2) will be perceived as more similar to the prequel in comparison to sequel using naming strategy (e.g. Lara Croft: The Tomb Rider) and this in turn will influence the sales. Hence, the first hypothesis is:

H1. Naming strategy will have positive influence on the market performance of sequel.

As games have become more complex in terms of graphics, complexity, interaction and narrative, so a variety of genres have come to dominate the market. There is, however, no standard categorization of such games; different stakeholders in the games industry (e.g. game outlets, developers, academics, web review sites) use taxonomy appropriate to their own audience. Nonetheless, the difference between genres, and even between games within one genre, differentiates the way they are played. Such categorizations are discussed in Orwant (2000), who also illustrates the system employed by Herz (1997) which closely resembles that used by many in the contemporary games industry. The Herz system presents these major categories (see Appendix 1). But even with this taxonomy there are exclusions; a large number of games will be released every year that defy categorization. In addition, some games fall into more than one category; for example football manager games (where you buy, sell, select and position players) arguably fall into the categories of simulation, strategy and sports games. The name of genre usually conveys directly what kind of user experience it delivers. Genres help to target audience more easily and established genre conventions provide guidelines and standards to follow. The peculiarity of digital genres is that they are hardly static. Rapid development in technologies always destabilizes the foundations they are built upon. Some genres become obsolete. Others emerge with the advent of new interaction techniques and devices. Hybrid genres (cross-genres) are enacted by combining elements of different genres together and bring unique (Ye, 2004). By taking a critical approach to the understanding of genres of interactivity, Apperley (2006) makes observations about the media as a whole. Interactivity – the way in which the game is played, rather than watched – is a feature common to all video games (Apperley, 2006). He claims that conventional video game genres rely overmuch on games representational characteristics. Representational in this case refer to the visual aesthetics of the games and the genre is a reflection of it. In line with satiation in consumer perception of hedonic goods, I would like to examine whether extension of genre actually leads to difference in market performance. Therefore, I hypothesize:

H2. Genre extension will have positive influence on the market performance of sequel.

For developing next few hypotheses I take for a cue factors that are important for an initial game (prequel) as well. These factors are considered for two reasons. First of all, I want to explore environment in which creating sequel is more favorable. Therefore, there is a need to what initial determinants are influential in it. Second of all, following the importance of ‘fit’ concept I want to test further if the factors that influence performance of prequel are still valuable and consistent in the sequel release.

Often the source for the video game scenario is an existing media. It’s not surprising that influence of films and books is playing a significant role in the development of modern games: as hardware performance increases at each generation, games platform have an ability to incorporate and warrant extensive full motion video sequences that are heavily influenced by the movie industry (Poole, 2003). Indeed, collaboration between movie and games industries enables the sharing of ideas, technologies, and expertise (Kerr&Flynn, 2003). Examples of movie-to-game extension include Lara Croft: Tomb Rider, Lord of The Rings, Spiderman, Shrek 2, Harry Potter and many others. Licensed games, which are typically based on movies and comics, have also populated more and more of the industry’s release calendar. Important to mention that some of listed above games are issued by the movie, but the movie itself was based on the book or comics, so we can observe few levels of media extension. Surprisingly, no academic research was found on media extension. This study attempts to fill in the gap in this field of theoretical research and examine one of the aspects of using media franchise for the brand extension.

The decision to release more games based on licenses like movies or comic books is in the same vein as movie sequels – these games are near-guarantee success that can help keep game publisher stable and allow them to take risks in the future once production costs are notunmanageble. This all hinges on the blockbuster theory, which is most commonly applied to the movie industry (Vany, 2004). It suggests that software publishers want to pour a large

amount of resources into a single game in hopes of making a huge profit. Thus, I want to explore if presence of the media franchise has a positive influence on the extendibility of the game. The third hypothesis takes deductive approach and derives from practice of using successful hedonic goods for the extension in the other media. Therefore, if a game is part of an existing media franchise, I hypothesize the following:

H3. Media franchise will have positive influence on the market performance of sequel.

According to King and Krzywinska (2002) one of key factors in which “game world is experienced” by the players is a playmode. The single-player version of the game centers around following a linear narrative, whereas the multiplayer version takes on a number of permutations in which the various players either stalk each other within the virtual environment or group together to compete against other groups in discrete episodes or “missions” (Morris, 2002). Playing mode also has an important social matter. In multiplayer games gamers have opportunity or exploratory play, play that encourages cognitive development and fosters problem-solving skills, they will do so in the virtual environment of games. Also multi-player games create opportunities for leadership, competition, teamwork and collaboration.

In line with sensory satiation theory discussed before I speculate that single-player sequels will be accepted less favorable by players than multiplayer sequels, as they are less entertaining and diverse in playing. Also since multiplayer games involve more players I expect that they will create more sales per one unit (a person who likes the game will recommend it to the family or friends). My next hypothesis is stated as follows:

H4. Multiplayer mode of the game will have positive influence on the market performance of sequel.

Other's opinion is especially important for potential users of experiential products, because they provide indirect experience on sensory aspects and reduce the uncertainty associated with the products (West and Broniyarchuk, 1985; Park and Lee, 2009). Thus I consider another important factor – game ratings, which are approached from the both side of critics and users themselves.

Critics and their reviews pervade many industries. Judges, experts, evaluators, analysts, and professional reviewers exist in various product and service categories such as books, music, high-technology products, universities, and many consumer durables. Also, one of problems with most contemporary games is that they are banal, formulatic and predictable. Thoughtful criticism can marshal support for innovation and experimentation in the industry, as much as film criticism attracts attention to independent films. So far, censors and culture warriors have gotten more or less a free ride because it is almost taken or granted that games are culturally worthless. Moreover, criticism may provide a means of holding the game industry more accountable for its choices (Jenkins, 2002).

Critics and their reviews are particularly important in the entertainment industry (Handel, 1950) and scholars have considered the relationship between the market performance of entertainment products and the potential role of critics. There have been different approaches to examine the potential influence of critic role on the example of movie industry. Most of studies conclude that movie critics play a significant role for the success or a failure of a film (Terry et al. 2005). Eliashberg and Shugan (1997) distinguish two possible perspectives on the role of critics: the influencer and predictor. From the first perspective critics are opinion leaders who influence their audience and, consequently the box office performance. The predictor perspective suggests that critics might be predictors of performance but not necessarily causing it. Many of studies in movie industry have found a positive relationship between favorable movie reviews and movie performance (Sochay, 1994). The results of some other studies indicate, however, that

positive film reviews are not significantly related to movie performance (Zufryen, 2000), or even negatively related (Hirschman and Pieros, 1985).

Despite ongoing gaming-related research in several disciplines, including psychology, sociology and marketing science, little has been done to improve our understanding of the role that critics play determining or predicting the commercial performance of sequels. I would like to explore this relationship here. I speculate that in choice among vast number of various video games consumers will be guided by critic scores and hence the next hypothesis is:

H5. Performance of sequel will be positively influenced by critics score.

I also expect that peer review has an influential role in consumer's choice. According to Park and Lee (2009) other's opinions are important for potential users of hedonic goods, because they provide indirect experience on sensory aspects and reduce the uncertainty associated with the products. Also consumer rating is an indicator of fun of the game and may be used by peers for the choice of the sequel if they are not familiar with prequel. Moreover, it has been acknowledged that "wisdom of crowds" is a quite accurate mechanism to predict future trends (Manski, 2006). Large group of common users might be better in predicting trends than a single expert. For instance, study by De Vany and Walls (1996) reveals that consumer word-of-mouth is an important factor that determines the long-term success of motion pictures and other experiential goods. This study takes this approach into consideration and speculates that user ratings will have influence on the buying intentions of gamers and therefore influence the sales of sequel. I consider user ratings as a trustworthy signals for the purchase intension and the next hypothesis is:

H6. Performance of sequel will be positively influenced by user score.

The last factor that influences the performance of sequels that is considered in current research is market performance of prequel. I consider this parameter for two reasons. First of all, according to Riezebos et al. (2003), brand with high performance and high name awareness is better suited to extension. Second of all, favorable evaluation of brand extension requires a favorable prior attitude toward current brand (Bousch and Loken, 1991). So I expect that performance of prequel, as an indicator of success and awareness among consumers will influence the market performance of sequel. A well-known and well-accepted brand evokes consumer expectations on performance and brand extensions also evoke consumer expectations on prior associations/knowledge of the brand. These inferences may improve the brand extension associations and evaluation. The other obvious fact is that the higher the sales of prequel the broader the existing user base and this implies for the sequel as well. The sales of sequel may be a result of the consumer lock-in in the old game therefore my final hypothesis is:

H7. Market performance of prequel will be positively related to the market performance of sequel.

The table 3 (Appendix 2) incorporates the main literature findings, that were indicative for the hypothesis development in current research.

Overview of gaming industry⁴

In the past two decades, games have emerged and matured into an influential entertainment form. Today games also do more than create virtual worlds; they also illustrate the real world. The individuals playing video games comprise an increasingly large and definition-defying group. According to ESA, the average gamer is 35 ears old and has been playing for 12 years. Fort percent of gamers are women and a quarter is over age 50. In addition, a December

⁴ This chapter is based on open industry reports of DFC, ESA, NPD and Nielsen.

2008 study by Pew Internet and American Life Project found that 53 percent of all Americans over the age of 18 play video games, as do a full 97 percent of teenagers. All these statistics show that today's video game players include people of all ages and professions. The gaming industry also adds lucrative jobs to local economies nationwide. In USA, for instance, computer and video game companies directly and indirectly employ more than 80 000 people.

The important characteristic of video gaming industry is that it is interdependent with the gaming console market. Development of technologies in both industries fosters growth and jointly captures more and more consumers. Consider, for instance devices like Wii, which the whole new generation of gamers, among whom are many who have never used gaming consoles in their lives. Another factor that changes the video game industry is online business models. Pricing is dropping for games as consumers embrace free business models – while game industry continues to reach new consumers, the amount of money that it gets from each player is decreasing. DFC analysts predict a significant change in spending patterns as consumer spending shifts away from buying goods at retail to buying products online (either for digital delivery or by paying a subscription or usage fee). Another trend is that consumers are embracing online business models with significant free play components. Although, these models may generate more profits than traditional retail sales, in short term they provide less revenue. However, console games are expected to quadruple by 2015 as online distribution models are spreading. However, comparison of a gaming with other experiential markets (movies and music) (Appendix 3) shows gaming had some major growth, but over last years, though, none of the three categories has shown the explosive growth. For instance, music (which includes CD sales, digital sales, music video sales, and mobile downloads), has dropped significantly and it is expected to fall even further. Although, the video gaming industry is relatively young and very fast developing, this trend in decrease of market performance of major hedonic goods requires attention in the strategic planning of the possible profitable scenarios. The report of Center for

Digital Strategies identifies the following trends that will influence the growth in the overall video game market:

- growth of broadband technologies;
- cheapness of computing power;
- adoption of more robust wireless networks and phones;
- maturing of consumer base;
- game developer and publisher consolidation.

The video-gaming industry is not limited only to the offline products. The online game development is still very young and wide open. This industry is appealing because of the enormous growth potential – according to the Center for Digital Strategies for the 4 years it increased over 3 times – but the difference of this promising market is that it is a service, not a product and therefore implies new business approaches.

Games offer vast opportunities for researchers and designers to study human-computer interaction and human-human interaction. Due to their popularity, games also provide an ideal test bed for various innovative interaction techniques, interface metaphors, etc. Nonprofit organizations and issue advocates view video games as an effective medium for communicating ideas and generating support among young consumers. Computer and video games have become successful vehicles to teach important values, engage a new generation of voters and bring the problems facing other countries to the front door of new audiences.

Indeed, video games win more and more place in everyday life of society. Hardware (gaming consoles) in combination with software (games) create a virtual environment, which offer the control over factors that real-world tasks do not. The purposes for which games are used by different social and market players are quite impressive and once more prove the importance of this industry. For example, the experimental study by Deutsch et al. (2008) described the feasibility and outcomes of using Wii gaming system to augment the recovery process of an adolescent with cerebral palsy. The United Nations World Food Programme

created a computer game to educate children about world hunger. A commercial video game modified by University of Southern California researchers helps recently deployed troops cope with symptoms of post-traumatic stress disorder through play that simulates conditions in Iraq. Nonprofit organizations and issue advocates use “serious games” as a medium to reach young consumers. Corporations and educational institutions have also found video games to be useful tools. Companies like American Express, IBM, Nokia, Pfizer offer interactive computer training that includes game-like simulations. Educators harness the power of video games to teach the next generation.

Not a surprise that video games have been researched in a wide range of different fields, including computer science, media and cultural studies, psychology, medicine, education, physics and youth studies. As the computer and video game playing population expands and diversifies, in-game advertisements and advergames⁵ are expanding as well. In 2006, according to the statistics from Nielsen Media Research, \$75 million was spent by different industries on this new way to reach potential customers. Nielsen estimates this figure will increase 13-fold by 2010 to \$1 billion, which provides great opportunities for marketers. However, marketing research has almost ignored this highly interesting field and dynamic industry and this study is aimed fill in this gap. The next chapter depicts methodology of the current research, providing description of data collection and used variables and presents the results of analysis.

⁵ Advergaming – the practice of using a video game to advertise a product. Applies to various free online games commissioned by major companies.

Empirical analysis

Data collection and sample

The gaming industry was selected as a research setting for this study and the data were collected from open online sources. To avoid bias in the research, games for the study sample were detected randomly, i.e. without anchoring to any particular attribute, except having one or more sequels. So the data presents games and sequels released by different publishers in different regions (Europe, USA and Japan) and for different consoles. As a result dataset included 156 various games and their sequels which made altogether 615 data points.

The current study includes three main data sources of information. The general information about games (full name, play mode, user and critics' ratings) is collected from a popular third-party website GameStats.com. This website provides information and tips about all video games (console games, PC games, Online games), as well as user reviews and discussion forum. To my knowledge, GameStats is most likely the most comprehensive website that provides publicly assessable information about videogames. GameStats uses the web's most detailed game database, courtesy of gaming and entertainment network IGN.com and includes information and media for more than 27 000 games. However, because this database does not provide data on sales, it was collected from the VGChartz.com – an internationally recognized as the number one free online source for the latest videogame industry figures and trends. Numbers from this site have been cited and featured by a number of leading worldwide publications such as Reuters TV, The BBC, CNN Money, The New York Times, Fortune, Business 2.0, Forbes, The New York Post and many others. As argued before, genres of game are a pretty vague concept even among specialist, so for recording the genre extension more detailed data collection was conducted. Games were analyzed by reviews of respected critics on Metacritic.com. In an article entitled "How Metacritic Took Over" The Official Playstation Magazine (UK) calls

Metacritic "The most influential videogame site in the world" and "The website that can make or break a game."

Variables and measures

The main research purpose is to study the importance of possible factors that influence market performance of sequels. Therefore the *dependent variable* is market performance which is measured in copies of the game sold worldwide. The independent variables, indicated on the basis of theoretical research as potential factors influencing the market performance of sequels, are:

- *genre extension* (dichotomous variable) – indication of the change of genre between prequel and sequel;
- *media franchise* (dichotomous variable) – indication of the game released by any media franchise (movie, book, comics etc.).
- *multiplayer mode* (dichotomous variable) – indication of the games with multiplayer mode;
- *critic and user rating* (discrete variables) – critic and user evaluation of the sequel measured on 10 point scale;
- *named title* (dichotomous variable) – indication of games with narrative description in the title of sequel;
- *sales of prequel* (continuous variable) – copies of the game prequel sold worldwide.

The set of variables assumed here is build upon the assumption of dissimilarity preference by users (genre extension and naming strategy), factors that illustrate success of products in other entertainment industries (user and critic rating and media franchise) and the success of previous installment (sales of prequel).

Analysis and results

This chapter provides an overview of data analysis. First, the descriptive statistics for discrete and continuous variables (Table 4) and dichotomous variables are presented (graphs 2,3,4,5 in Appendix 4).

	Minimum	Maximum	Mean	Std. Deviation
Critic rating	0,8	9,8	7,487	1,181
User rating	1	10	7,915	1,416
Sales of sequel	0,01	18,2	1,1452	1,7164
Sales of prequel	0,01	18,2	1,3566	1,8840

Table 4. Descriptive statistics for discrete and continuous variables

Secondly, the correlation analysis was conducted (Table 5, Appendix 5). When the Pearson correlation is 0, there is no linear relationship between the variables. When the coefficient of correlation equals -1, there is a negative linear relationship between the variables and when the coefficient of correlations equals +1 there is perfect positive relationship. Because the greater part of the variables are interrelated, attention is paid to the variables with a correlation coefficient higher than 0.300. As seen from the table 5, sales of sequel are strongly negatively correlated with media extension ($r = -.96$; $p < .05$), strongly positively with prequel sales ($r = .602$; $p < .05$) and weakly positive with critic score of sequel ($r = .394$; $p < .05$) and user score of sequel ($r = .116$; $p < .05$). Sales of prequel are weakly correlated with critic score of sequel ($r = .252$; $p < .05$). Naming strategy of sequel is weakly but negatively correlated with critic score of sequel ($r = -.274$; $p < .05$) and user score of sequel ($r = -.142$; $p < .05$), as well as with sales of prequel ($r = -.128$; $p < .05$). Preliminary, this results provide support for hypotheses 5, 6 and 7, and question hypotheses 1,2,3,4.

Further the model was tested by means of regression analysis. The results of the first regression are depicted in the Table 6 (Appendix 6). Results indicate that only critic rating ($\beta = .518$, $p < .05$) and sales of prequel ($\beta = .447$, $p < .05$) have effect on the sales of sequel. These results provide support for hypotheses 5 and 7. The rest independent variables (naming

strategy, user rating, genre extension and media franchise) didn't show any significance in respect to the market performance, which is quite surprising. However, genre extension are less than 20% of the sample (see Appendix 4) so the significance may be influenced by the small sample.

In order to improve interpretation of the result of individual variables and explore multiple effects I further tested for interaction effects in the model. Interaction effects represent the combined effects of variables on the dependent measure. When the interaction effect is present, the impact of one variable depends on the level of the other variable. For the regression analysis I constructed interaction terms between independent variables. This was done by centering the continuous independent variables (user and critic rating and sales of prequel) and multiplying the new centered variables with other independent variables (playmode, genre extension, and naming strategy). The newly created interacted variables were used in regression along with the plain independent variables. In attempt to fit a model (Aiken and West, 1991) to a set of data, I proceeded in a following way: starting with a model that contained all interacted and plain independent variables as predictors for the dependent variable, the model then was simplified by discarding the variables that did not contribute to explaining the variability in the dependent variable. The results are shown in Tables 7 (Appendix 7). The model explains 63% ($R^2 = .625$) of the original variability and is significant ($p < .01$). However, only a few interacted variables showed significant results. With regards to market performance of sequel, the interaction between sales of prequel and naming strategy of sequel is significant ($\beta = .212$; $p < .05$); the interaction between sales of prequel and playmode ($\beta = .226$; $p < .05$), and interaction between sales of prequel and critic rating of sequel ($\beta = .283$; $p < .05$) are significant as well. The plots that illustrate the significant interaction effects between variables are presented in the Appendix 8.

Results of hypotheses testing

<i>H1. Naming strategy will have positive influence on the market performance of sequel.</i>	<i>Not supported</i>
<i>H2. Genre extension will have positive influence on the market performance of sequel</i>	<i>Not supported</i>
<i>H3. Media extension will have positive influence on the market performance of sequel.</i>	<i>Not supported</i>
<i>H4. Multiplayer mode of the sequel will have positive influence on the market performance of sequel.</i>	<i>Not supported</i>
<i>H5. Performance of sequel will be positively influenced by critics score.</i>	<i>Supported</i>
<i>H6. Performance of sequel will be positively influenced by user score.</i>	<i>Not supported</i>
<i>H7. Market performance of prequel will be positively related to the market performance of sequel.</i>	<i>Supported</i>

The next chapter elaborates the findings with the respect to the theoretical background of tested hypothesis. Discussions of these findings with suggestion what affects the success of sequel, theoretical implications and managerial strategies that can be employed are discussed next. I also indicate the limitations of current study, as well as give recommendations for the further research.

Discussion

Each company is interested in the effective management of their new product activities. In particular, firm needs to know how to analyze market opportunities, select appropriate target markets, develop an effective marketing mix, and successfully manage the implementation of the marketing efforts. All this makes the process of marketing management and the successful result depends on the right decisions on the every stage. The starting point of new product activities is an analysis of market opportunities. Management needs to know how to identify and evaluate these opportunities. Introducing brand extension seems to be a safe way for a start of product, since it is has already the successful product for the background.

Every brand extension opportunity should be evaluated in terms of its compliance with the objectives and available resources of the firm. The analysis should reveal a number of attractive in terms of market opportunities. Each will require further study before it stops at the next target market. To ensure sufficiently attractive opportunities, the company will need to conduct a more thorough assessment of current and future brand situation. With a positive result at the next stage the market segmentation to identify consumer groups and needs, which the company can meet the best. Segment consists of consumers, who are equally responsive to the same set of incentives marketing. For each segment company must decide what exactly the position it wants to take. It should also examine the positioning of the target market of branded goods of competitors in terms of properties, which, in the opinion of consumers, the most important. Furthermore, it should assess the demand for the possible combinations of product features. Then, to decide exactly what to create: a brand extension designed to meet the remainder not yet meet the needs, or brand extension, similar to one already existing. In current research I made an attempt to analyze the factors that would be important for such stages of brand extension launch as product design and further promotion.

The increasing cost and scale of video-game production has encouraged many publishers to choose the safe strategy and release sequels and remakes of existing games. It takes literally hundreds of people, several years of development and millions of dollars to launch a modern game and such large investments are quite risky for an uncertain return. As the complexity and price of the development process continues to raise, that cost/risk ratio becomes more and more a concern for publishers. This is true for the movie industry as well – a lot of new releases are either a sequel or remake (for instance, just in 2010 among big releases are Toy Story 3, Shrek 4, Alice in Wonderland and so on). But game publishers also have a dilemma. To reduce costs, they need to put their games on as many platforms as possible. It used to be relatively easy to port a game from console to next. Now, the next generation platforms are different, and publishers have to have very distinctive games for each machine. That plays into the hands of console makers, who want exclusive games to lure gamers to their platforms. Another threat for the market performance of video games comes from the increasing demand of next generation technologies – development times, team developer sizes and complexity is growing constantly but only a small proportion of next generation are likely to achieve profitability in the near future. If a publisher wants to achieve success and increase its presence in the market, it must constantly update its game range and launch on the market with new products. At the present level of production, huge expenditures on research and development time by inventing a new game to its coming to market is constantly decreasing.

Another aspect to consider about hedonic goods is that consumer experiences are source of fun and generate important feelings (Holbrook and Hirschman, 1982) and choices about such product are guided by emotions. Experiential goods oblige marketers to treat brands differently – a brand itself may in fact be a source of experience involving customers and this must be taken into account while planning a communication campaign. Therefore, the problem of choosing the correct strategy for the implementation of the goods at the video game market is paramount and the expansion of the existing brand seems to be the right one.

In order to explain economic success measured as a number of copies of sequel sold worldwide a complex set of independent variables was analyzed. In this, the research was build upon the researches of performance of movie market but integrated with the specific attributes of the video-games. Game related variables were used as a bridge for the explaining of performance of sequel. The current research is based on the quite general data about various game sequels sold worldwide, therefore has low explanatory power for understanding performance in narrow specifics of games (for instance, geographical success or only inside one genre or for narrow demographic category). However, results can be integrated into other analysis of economic success of video-games.

Gamemakers should realize that the perfect audience of the sequel is probably someone who heard of or played the previous game and thinks that the series is great and also willing to invest into new installment. This is about consumer confidence about the quality of the game and for those the concept of fit is probably dominating as in physical goods markets. However, while sequels bring new revenues out of existing fan base, they serve another purpose: engaging new fans to game. And for this audience changes and improvements may be the reason to try a sequel in case the prequel they heard of was not interesting enough. Also an important fact about sequels is that they are a good way to improve the previous game flaws and errors, and not only improve but also bring the whole new experience to old fans and newcomers alike.

Obviously, sales of video games depend on many factors, but the prominent one is probably the quality. As video game industry becomes more mainstream and amount of games is constantly growing, a lot of new consumers, who just entered the market and don't have experience in this environment, may have problem with the evaluation of what is a good or bad game. In this environment cues as price or cover design may be not enough. Therefore, expert and peer review plays and important role in consumer choice. Results of this study revealed that only *critic rating* has influence on sales of sequel, which is line with the influencer perspective (Eliashbers and Shugan, 1997), that suggests that critics do influence box office revenues.

Strong and favorable brand associations, which can be represented by high *user ratings*, enable the brand to be strategically differentiated and positioned in consumers mind. Therefore, I considered another factor that possibly influences the market performance of sequels – user rating. This factor was also analyzed due to fact that often people’s decisions are guided by others opinion. In everyday life we decide on what products to choose or services to use on the basis of how popular it is among peers. The results of this study show, that user rating has no influence on the sales of sequel. But consider this – most of sequel had really small deference in user and critic evaluation. Also since user rating and critic rating are correlated (Appendix 5) I conclude that user rating has no impact on sales but it is influenced by critics. Critics are usually the first independent party who report to the market their opinion about the released game, so would be logical to suspect that users are guided by critic score in the first place. However, user rating may not be important if the game still enjoyed decent sales.

One of propositions of current research was that due to sensory-specific satiety consumers will seek for variety in product (Inman, 2001), especially in hedonic goods. Therefore consumers will perceive the dissimilar extension more favorably which in turn will lead to higher market performance. The most important preliminary factor for the brand extension is that consumers hold strong, positive and favorable beliefs about the parent brand and transfer these feelings to the extension. Dissimilarity of brand extension was already an issue for the scholar research. Keller and Aaker (1992) showed that dissimilar extensions for high quality brands will be evaluated higher than for the average quality brands, and Park et al. (1991) observed that dissimilar extensions are more successful for prestige brand segment than for functional, when the brand concept is consistent with those of extension products. These findings were confirmed by other studies, which considered, however, only the physical goods.

In current research support for these statements was not found. I took genre extension and naming strategy to analyze influence of dissimilarity of extension on the success of the sequel. The factor of *naming strategy* influence was considered on the basis of research of Sood and

Dreze (2006), whose findings suggested that the movie sequels with named extension (Lara Croft: Tomb Rider) will be evaluated more positive than the sequels with number in the title (Lara Croft 2). The result of current analysis reveal that change of the naming with narrative extension has no influence on the sales that basically is different from the results of Sood and Dreze (2006). However, their study used a different approach – questionnaire – and was testing the consumer perception of extension, not the direct influence on sales. As current research used the real data on existing brand I suspect that this analysis provides more robust results.

Although, findings suggest that naming strategy may not affect the sales results of the extension it may be possible that it affects response to the parent brand. In contrast to numbering strategy, which uses parent name and number (and therefore falls under the fit concept in brand extension evaluation), naming strategy combines the parent brand name with an individual name of extension and forms new, composite name. Obviously, the gamers perceive such change differently and may find it inconsistent with the original brand. Would be interesting to conduct an analyses of the possible dilution of the parent brand influenced by the sequel naming strategy, but it is out the field of the current study.

The hypotheses about *genre extension* also did not support preliminary expectations. During data collection several interesting observation were made that form the basis for understanding of genre across this medium. First of all, most of games belong to several genres at once. The possible explanation for no influence of genre extension on the game is that flexibility and mixing of genres is so common in gaming industry, that it is not a significant factor for users. Each game has of course the main genre (like strategy or sport) and logically the sequel continues the leading genre, so adding one more sub-genre, especially close to original one (like action and adventure) does not make much difference. Second of all, some of games actually reduced the number of genres. For instance, the first God of War release combined action and adventure genres, and the God of War 2 was detected and purely action game. Such

examples are quite rare; however they indicate the genre as a possible tool for marketers to target the potential audience more precisely.

Another factor that was considered as favorable in influence on the market performance of sequels was using media popular *media franchise* for brand extension. The most obvious reason for using media franchise for the further extension is the financial one. The largest and most successful games are coming out of the biggest publishing houses, benefiting from all the additional promotion, publicity and circulation that it brings. The amount of money and time that it takes for releasing the games decreases proportionally to the performance of other products in franchise. The major publishers more and more often go for established titles which are less financial risk. The other reason for extending the media franchise is a consumer segment. The same as is in film industry in video-games sequels have a guaranteed, ready-made fan base, which obviously will help in promoting the game.

Although media franchise is extensively used in marketing of experiential goods, there is no theoretical foundation to guide decision-making process in this regard. This research attempted to give insight regarding the impact of the media franchise on the performance of game extension. Although, findings did not support the hypothesis about direct influence of media franchise on the sales, during the data collection an interesting observation was made. In fact, not only the games were an extension of a book, movie or comics, but also the games themselves initially were the source of the franchise extension. Such games as *Mortal Combat*, *Hitman*, *Silent Hill*, *Resident Evil*, *Ratchet&Clank* and some others set a beginning of TV shows, comics and movies. It proves that gaming industry gains the more and more place among experiential goods, and this must taken into consideration while extending the gaming brand in entertainment industry in terms of creating cros-product extensions which will require less costs to other product categories (and not only hedonic).

There is another positive effect of media extension in the game industry that is worth mentioning. It is one for the console makers. For instance, new systems like Nintendo Wii are

using old and building new franchises for supporting sales and promotion of the console itself (successful Super Mario Galaxy 2 is being just one example, following with such releases of 2010 as Assassin's Creed 2, God of War 3, Super Street Fighter 4). Also, the possible concept worth mentioning – video game-sequels can push famous franchises to a new creative turn, since they involve interactivity and use high technologies for sensorial impact.

The *playmode* of the game was also studied as a possible predictor of sales. The reason for this was guided by the thought that if the single-player version of game is great, then multiplayer and co-op options will be even more great – everyone knows that the more people equals more fun. However, analysis did not show any influence of the play mode on sales. Which is quite surprising, since I was expecting that direct network effect may occur: the more players play a particular game due to the multiplayer mode the more sales it generates. However, play mode showed significant results when interacted with the sales of prequel. Multiplayer sequels had higher sales than single player.

An additional consideration is worth noting in this context. Almost all of sequels (more than 95%) did not change their playmode in comparison to prequel. If the game was singleplayer the sequel was released in single player mode too, and the same for multiplayer. This can be explained in a few ways. The one possible reason for not extending the game into multiplayer is that of increase in development costs. The multiplayer requires new approach in technical changes, and possibly it was easier to keep it on the same level of complexity. Another reason is that of genre of game setting, which would not be suitable or required major changes in the sequel with another mode. Anyway, the game mode may be a source of enhancing the audience of sequel. If the game was popular and the player wants to continue to play the sequel, he will probably recommend it to the friends and in this case multiplayer mode games generate more sales from one unit.

The last factor studied was *prequel sales* that showed significant influence on the sales of sequel. Also the result of interactions reveals that sales of prequel do influence the critic score

and are connected to the multiplayer mode. So the effect of other game characteristics indeed seems to differ according to sales of prequel. The number of prequel sales is a good predictor for the sequel performance, but this indicator is also influenced by the characteristics of the system – a game that have been released on the widely popular platform may sell more units than a game released for a less popular platform. Although in current analysis I didn't control for the market performance of particular platform, the sample was build with respect to different consoles, so the result considered as reliable.

Theoretical implications

The existing brand extension literature only studied physical goods markets; therefore current research contributes to this theoretical field from the view of experiential goods market. On the other hand, study contributes to the marketing researches of success of experiential goods, since most of studies used movie industry and we provide evidence from the gaming industry.

This study contributes to literature by conducting research using variables that were not investigated before, namely media franchise in gaming industry and genre extension. Although hypotheses were not supported, the discussion here may bring some cues for the future analysis. Since the assumptions about dissimilarity being positive factor for the sales are not supported, I conclude that fit in brand extension in gaming industry is an important issue as was studied before. This result, I suppose, may be also transferred to other hedonic markets with respect to the specifics of the chosen attributes.

The important point in this research is the methodology and used data, since previous studies on similar topic used mostly questionnaires and experimental designs, and some of them were even based on hypothetical brands. As Volckner and Sattler (2007) fairly mention, it is unclear if studies using hypothetical brand extensions can be generalized to real extensions. So we believe that our results are more robust and provide theoretical insights from the real world

situation. Also, Volckner and Sattler (2006) point out that previous brand extension researches tested only the direct relationship between brand extension success (dependent variable) and potential success factors (independent variables) and did not take into account for potential structural relationship among success factors. Our study made an attempt to investigate such relationship deeper. Results of interactions in current analysis reveal that even though some factors are not important when considered alone (e.g. playmode) they do have an impact in combination with others (e.g. interaction of prequel sales and playmode).

Managerial implications

From a managerial perspective, because the majority (89%) of new product introduction activity appears to come from extensions, it is especially important to have knowledge about the relevant factors that contribute to extension success. It would be particularly useful if factors under the firm's control were identified as pivotal. Scale does matter in gaming industry and the more complex the games become the more tools needed to keep costs under control. The real money spinners are console games, but subject to the ups and downs of the hardware cycle as console launch or go out of fashion. Therefore, marketers must be aware of possible ways to build strong gaming brands. Sequel strategy allows avoiding risks on presenting the new title and reducing promotion costs. Innovative titles are sometimes ignored by consumers, while some repetitive titles with minor improvements in gameplay and graphics can provide much better returns to game publishers. Popular franchises like FIFA soccer or Madden NFL can be compared to Madonna or Elvis Presley in music industry that insure stable revenues in a long run. The findings of this study may help managers in experiential industries to improve their product propositions and tune the existing products in order to acquire the sufficient level of brand extension performance.

The first most obvious recommendation for the managers in gaming industry is to consider release of sequel only if the prequel had decent sales. In reality during the new product development managers may be guided by the need of low cost suggestion, and they choose the

safe brand extension strategy. I recommend to begin decision about extension with analysis of the previous sales and comparing it to the sales of other similar competitive games. Analysis also revealed that the sales of prequel is closely related to the importance of other attributes of the game, so examining these factors in combination with sales will provide more robust basis for the extension decision.

The second recommendation is derived from the importance of critics. If critics are influencers, game publishers should use them as a part of marketing program and should try to collaborate with critics. Of course, they cannot push critics to write favorable reviews but they can influence the way critics see the game. For example, the solution may be to set up a private pre release for critics. Also may be helpful arranging meeting with critics and game designers who can professionally answer to critical comments and provide more information in case of about particular features.

The results shown that genre extension, using media franchise, and manipulating the name are not the important factors for the sales of the game. Therefore, managers should think about other possibilities in game improvement or about the ways to manipulate the information about new release in order to change consumer evaluations and cognitive process of the sequel and reducing the importance of fit.

The distinctive characteristics of the game industry are that the audience is more up-to-date with technologies and virtual reality, so a lot of communication between users is going online. This provides a fruitful field for studying game's strength and weakness and regular monitoring of the fans discussions in the Internet may lead to developing successful extension strategy.

Another suggestion, which is not based on the current analysis but is the result of market study made during this research, is to launch sequels online. First of all, online environment allows much easier access to the massive target audience, since it connects users from all other the world and there is no need for launching games in different geographical locations. Second

of all, bringing games online also allows publishers to venture into in-game advertising of world famous brands. Third of all, the online environment provides creative and cheap means for the promotion of the sequel itself.

Limitations and recommendations for further research

I conclude this chapter by addressing the limitations of current study, and discussing possible directions for the further research. The important limitation of current research is the absence of control for the market related factors such as, for instance, number of games in a specific genre. This may be important in terms of evaluation the competitiveness of the market, which of course influences the success of different games. The other limitation is that due to closed information about marketing activities of publishers, it was impossible to obtain numbers of marketing budgets. And I believe this one of the most important factors of market performance, not only in gaming industry. I suspect that results obtained from regression would be much different if factors determined for testing were analyzed with the marketing budget. Also I consider as limitation of my study is that hypotheses were tested in one type of industry only, namely the video gaming, so results may be applicable to other cultural industries only with the respect to specifics of environment and product-specific attributes. As seen from industry overview the gaming market is quite unique and still developing, so other hedonic markets which have other influential forces and trends may react on the discussed factors differently.

I believe that the conceptual and empirical approaches described here can provide useful starting point for the future research. Although the topic of brand extensions is a heavily researched and well documented, brand extensions of hedonic goods are been almost ignored. This study made an attempt to disentangle the drivers of the market of video game sequels. However, this research can be extended in different ways in future. Firstly, further research is needed to test whether the findings presented here also valid for brand extensions in other hedonic markets – cross-product classes and cross-industry research need to be conducted in

order to see if there is any difference (i.e. music recording or book publishing). Secondly, an obvious extension of my study is increasing the number of possible factors that may influence market performance, such as marketing budgets, demographics of players, history of extension and so on.

Also would be interesting in the future research to use qualitative approach. In-depth interviews with managers and industry experts or elaborated case studies seem promising for representing new factors of success. They can enhance knowledge about importance of managers in this industry, competitive activities and other external and internal factors. In addition, would be interesting to research the marketing mix elements that are used in this industry. Since video-games have large and various audience and the market itself is very innovative, promotion is definitely having impact on extension success. Qualitative approach is also interesting since video games present highly complex research environment and sometimes provide more clues for the study. For instance, the popular game *Soulcalibur 4* is notable for its inclusion of three characters from the *Star Wars* franchise as playable fighters, and this is not the exclusive case of such collaboration. This shows some interesting connection in approach to game development and may reveal fruitful cues for the research. Or, for example, one could focus on the discussion about comparison of online and offline gaming. Also the important issue to be accounted in further research is the gaming console. Since not all games are multiplatform, success of some games and their sequels can have related effects dependent on the market coverage of the definite platform. Generally, games as combination of such intangible factors as genre, rapid technological development, media interactions and other, must be further studied using different research techniques that may shed light on the other factors of success that may be out of focus in current study.

Conclusion

Playing games is probably the most popular hobby in the modern world. And except popularity it becomes addictive to many. This is because the visual media in combination with modern gaming platform creates the virtual environment which completely absorbs you from the reality. Although, the gaming industry is quite new and young (if to compare it to such forms of entertainment as theater or music), it develops rapidly due to technological innovations and audience expansion. According to different expert estimations, one fifth of the games release is responsible for the four fifth of the cumulated revenues. The similarity between the market of video games and other media markets indicates that a deeper look at models to predict the economic performance of games may provide a fruitful approach to the further understanding of the success in related markets.

This study examined this highly dynamic environment from the perspective of brand extension represented by game sequels. Although, brand extensions are used extensively in hedonic markets, there exists virtually no theoretical foundation to guide decisions in this regard. On the other hand, most of studies of brand extensions focus on physical products; this study considers experiential goods and their extensions. This research was an attempt to provide insights regarding the role of different factors in game sequel management. The concepts applied in this research linked together branding and consumer behavior disciplines and may be helpful in furthering our ability to make predictions regarding the likely impact of different determinants on the success of brand extension. The key findings suggest that the most powerful predictors for the sequel success are prequel sales and critic rating. Other factors, namely genre extension, using of media franchise, name manipulation and user rating did not show the influence on the performance. Clearly, there are other factors that influence the market performance of sequels (such as promotion activities, demographic of audience, technological influence and others), which still have to be studied in future researches.

References

- Aaker, D.A. (1991). *Managing Brand Equity*. New York: The Free Press.
- Aaker, D.A., Keller, K.L. (1990). Consumer Evaluations of Brand Extensions, *Journal of Marketing*, 54, 27-41.
- Aiken, L. S., and S. G. West (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage Publications.
- Alister, M., Pessemie, E(1982). Variety Seeking Behavior: an Interdisciplinary Approach. *Journal of Consumer Research*, 9, pp. 311–322
- Ambler, T. (1992). *Need-to-Know-Marketing*. London: Century Business.
- Ambler, T., Styles, C. (1997). Brand Development Versus New Product Development: Toward a Process Model of Extension Decisions. *Journal of product and brand management*, 6 (4), 222-234
- Apperley, T.H. (2006). Genre and game studies: Toward a critical approach to video game genres. *Simulation and Gaming*, 37 (1), 6-23.
- Babin, B. J., Darden, W. R., Griffin, M. (1994). Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value. *Journal of Consumer Research*, 20(4), 644-656.
- Bassi, F. (2010). *Experiential Goods and Customer Satisfaction: An Application to Films*. *Quality Technology & Quantitative Management*. 7(1), 51-67
- Boush, D.M., Loken, B. (1991). A Process Tracing Study of Brand Extension Evaluations. *Journal of Marketing Research*, 28, 214-28.
- Bridges, S. (1990). *A Schema Unification Model of Brand Extensions*, unpublished PhD dissertation, Graduate School of Business, Stanford University.
- Cohen, J.B., Basu, K. (1987). Alternative Models of Categorization: Toward a Contingent Processing Framework. *Journal of Consumer Research*, 13 (March), 455- 72.

- Czellar, S. (2003). Consumer attitude toward brand extensions: An integrative model and research propositions. *International Journal of Research in Marketing*, 20 (March), 97–115.
- Dacin, P.A., Smith, D.C. (1994). The Effect of Brand Portfolio Characteristics on Consumer Evaluations of Brand Extensions, *Journal of Marketing Research*, 31, 229-42.
- De Vany and Walls, W. D. (1996). Big Budgets, Big Openings, and Legs: Analysis of the Blockbuster Strategy. *The Asian Economic Review*, 47 (2), 307-328.
- Deci, E. L., Richard M. R. (1985). Intrinsic Motivation and Self-Determination in Human Behavior. *New York: Plenum*.
- Deutsch, J.E., Borbely, M., Filler, J., Huhn, K, Guarrera-Bowlby, P. (2008). Use of a Low-Cost, Commercially Available Gaming Console (Wii) for Rehabilitation of an Adolescent With Cerebral Palsy. *Physical Therapy*, 88 (10), 1196-1207
- Dhar R, Wertenbroch K. (2000). Consumer choice between hedonic and utilitarian goods. *Journal of Marketing Research*, 37 (February), 60–71.
- Dick, A., Chakravarti D., Biehal G. (1990). Memory-Based Inferences During Consumer Choice. *Journal of Consumer Research*, 17 (June), 82–93.
- Eliashberg, J., SHugan, S.M. (1997). Film Citics: Influencers or Predictors? *Journal of marketing*, 61 (April), 68-78
- Farquhar, P. H. (1989), Managing Brand Equity. *Journal of Marketing Research*, 1 (September), 24-33.
- Feldman, J.M., Lynch J.G. Jr. (1988). Self-Generated Validity and Other Effects of Measurement on Belief, Attitude, Intentions and Behavior. *Journal of Applied Psychology*, 73 (3), 421–35.
- Gilovich, T. (1981). Seeing the Past in the Present: The Effect of Associations to Familiar Events on Judgments and Decisions. *Journal of Personality and Social Psychology*, 40 (May), 797-808.
- Handel, L. A. (1950), Hollywood Looks at Its Audience. *Urbana, IL: University of Illinois Press*.

- Herz J.C. (1997) (edited by Michael Pietsch). Joystick Nation: How Video Games Ate Our Quarters, Stole Our Hearts, and Rewired Our Minds. *Boston: Little, Brown & Co.*
- Hirschman, E. C., Pieros, A. (1985). Relationships Among Indicators of Success in Broadway plays and motion pictures. *Journal of Cultural Economics*, 9, 35–63.
- Holbrook, M. B., Hirschman, E. C. (1982). The Experiential Aspect of Consumption: Consumer Fantasies, Feelings, and Fun. *Journal of Consumer Research*, 9(2), 142-140.
- Inman, J.J. (2001). The Role of Sensory-Specific Satiety in Attribute-Level Variety Seeking. *Journal of Consumer Research*, 28, 105-120
- Jenkins, H. (2002). Art Form for the Digital Age. Retrived on Ferbruary 10, 2010 from http://twist.lib.uiowa.edu/webclass/student/kapler_anne/tracingimage/index.html
- Keller, K.L., Aaker, D.A. (1992). The Effects of Sequential Introductions on Brand Extensions. *Journal of Marketing Research*, 29, 35-50.
- Kerr, A., & Flynn, R. (2003). Revisiting Globalization Through the Movie and Digital Games Industries. *Convergence*, 9(1), 91-111.
- King, G., Krzywinska, T. (Eds.). (2002). ScreenPlay: Cinema/Videogames/Interfacings. *London: Wallflower Press.*
- Kirmani, A., Sood, S., Bridges, S. (1999). The ownership effect in consumer responses to brand line stretches. *Journal of Marketing*, 63(January), 88–101
- Kotler, P. (1991), Marketing management: Analysis, Planning, Implementation and Control. *Englewood Cliffs, NJ: Prentice Hall.*
- Leenders, M.A.A.M., Van Telgen., J., Gemser, G., Van der Wurff, R. (2005). Success in the Dutch Music Festival Market: The Role of Format and Content. *International Journal on Media Management*, 7 (3- 4), 148 – 157
- Leuthesser, L. (1988) Defining, Measuring, and Managing Brand Equity. *Summary of MSI Brand Equity Conference in Austin, TX.*
- Levinson, M., Underwood A., Nayyar S., Shenitz B. (1993). Stand by Your Brand. *Newsweek* (April 19), 38-39.

- Levinson, M., Underwood A., Nayyar, S., Shenitz, B. (1993). Stand by Your Brand. *Newsweek*, 19 (April), 38-39.
- Loken, B., John, D.R (1993). Diluting Brand Beliefs: When Do Brand Extensions Have a Negative Impact? *Journal of Marketing*, 57 (July), 71-84
- Manski, C. F. (2006). Interpreting the predictions of prediction markets. *Economics Letters*, Elsevier, 91(3), 425-429.
- Morein, J. (1975), Shift From Brand to Product Line Marketing. *Harvard Business Review*, 53 (September-October), 56-64.
- Morris, S. (2002). First person shooters—a game apparatus. In G. King & T. Krzywinska (Eds.), *Screen- Play: Cinema/videogames/interfaces* (pp. 82-85). London: Wallflower.
- Orwant, J. (2000). EGGG: The Extensible Graphical Game Generator. Boston, US: MIT PhD thesis. Chapter 2. Retrieved from <http://orwant.com/eggg.html> on February 17, 2010
- Oxford English Dictionary (2nd ed.). (2007). Oxford, UK: Oxford University Press
- Park C, Lee T.M. (2009). Information direction, website reputation and eWOMeffect: a moderating role of product type. *Journal of Business Research*, (62), 61–67.
- Pine, B. J., Gilmore, J.H. (1999). The Experience Economy: Work is Theatre and Every Business a Stage. *Harvard Business School Publishing, Harvard*.
- Poole, S. (2000). Trigger happy: the inner life of videogames. *New York: Arcade*.
- Rangaswamy, A., Burke, R.R., Oliva, T.A. (1993). Brand Equity and the Extendibility of Brand Names. *International Journal of Research in Marketing*, 10 (1), 61-75.
- Reddy, S. K., Holak, S. L., Bhat, S. (1994). Extend or Not to Extend: Success determinants of Line Extensions. *Journal of Marketing Research*, 31 (May), 243-262.
- Ries, A., Trout, J. (1986). Positioning: The Battle for Your Mind. *New York: McGraw Hill, Inc*.
- Riezebos, R., Riezebos, H.J., Kist, B., Kootstra G. (2003) Brand management: a theoretical and practical approach. *FT: Prentice Hall*

- Schmitt, B. (1999). *Experiential Marketing. How to Get Consumers to Sense, Feel, Think, Act, Relate. Free Press, New York.*
- Shah, N., Haigh, C. (2005). *The Video Game Industry: An Industry Analysis from a VC Perspective. Center for Digital Strategies. Retrieved on March 15, 2010 from http://mba.tuck.dartmouth.edu/digital/Programs/MBAFellowsProgramArchive/05_shah.pdf*
- Shocker, A., Weitz, B. (1988). *A Perspective on Brand Equity Principles and Issues, Summary of Marketing Science Institute Conference, Report No. 88-104, Cambridge, MA.*
- Simmons, C. J., Lynch J.G. Jr. (1991). *Inference Effects Without Inference Making? Effects of Missing Information on Discounting and Use of Presented Information. Journal of Consumer Research, 17 (March), 477–91.*
- Sochay, S. (1994). *Predicting the Performance of Motion Pictures. The Journal of Media Economics, 7(4), 1–20.*
- Sood, S., Dre'ze, X. (2006). *Brand Extensions of Experiential Goods: Movie Sequel Evaluations. Journal of Consumer Research, 33, 352-361*
- Styles, C., Ambler, T. (1995), *Brand Management, in Crainer, S. (Eds), Financial Times Handbook of Management, Pitman, London, pp. 581-93.*
- Tauber, E. M. (1981). *Brand Franchise Extensions: New Products Benefit from Existing Brand Names. Business Horizons, 24 (2), 36-41.*
- Tauber, E. M. (1988). *Brand Leverage: Strategy for Growth in a Cost-Controlled World. Journal of Advertising Research, 28 (August-September), 26-30.*
- Terry, N., Butler, M., De'Armond, D. (2004). *The Economic Impact of Movie Critics on Box Office Performance. Academy of Marketing Studies Journal, 8 (1), 61-73.*
- Volckner, F., Sattler, H. (2006). *Drivers of Brand Extension Success. Journal of Marketing, 70, 18-34.*
- West, P.M, Broniarczyk, S.M (1998). *Integrating Multiple Opinions: the Role of Aspiration Level on Consumer Response to Critic Consensus. Journal of Consumer Research, 25 (June), 38–51*

Yang, J., Mai, E (S). (2009). Experiential Goods With Network Externalities Effects: An Empirical Study of Online Rating System. *Journal of Business Research*,
doi:10.1016/j.jbusres.2009.04.029

Ye, Z (2004). Genres as a Tool for Understanding and Analyzing User Experience in Games. *As presented on the Conference on Human Factors in Computing Systems, April 2004, Vienna, Austria.*

Zufryden, F. (2000). New Film Website Promotion and Box-Office Performance. *Journal of Advertising Research*, 40(1/2), 55–64.

Online sources:

www.gamestats.com

www.dfcint.com

www.gamepro.com

www.gamespot.com

www.metacritic.com

www.theesa.com

www.vgchartz.com

www.uk.ign.com

www.onlive.com

Appendix 1.

Table 2. Categorization of video game genres (*adopted from Herz (1997)*)

Genre	Characteristics
strategy	The player commands armies within recreations of historical battles and wars.
sports	The player acts in the environment based on the characters and rules of real sports.
simulations	The player has to succeed within some simplified recreation of a place or situation (e.g. mayor of a city, controlling financial outlay and building works).
role-playing	The player assumes the characteristics of some person or creature type (e.g. elf or wizard).
puzzle	The player has to solve some logical or skill-required problems.
fighting	The player controls fighting computer-controlled characters or those controlled by other players.
action	The player controls the character in some action centered environment. This genre can subcategorized into shooting games, 'platform' games and other types of reaction-based games.
adventure	The player solves a number of logic puzzles (with no time constraints) in order to progress through some described virtual world.

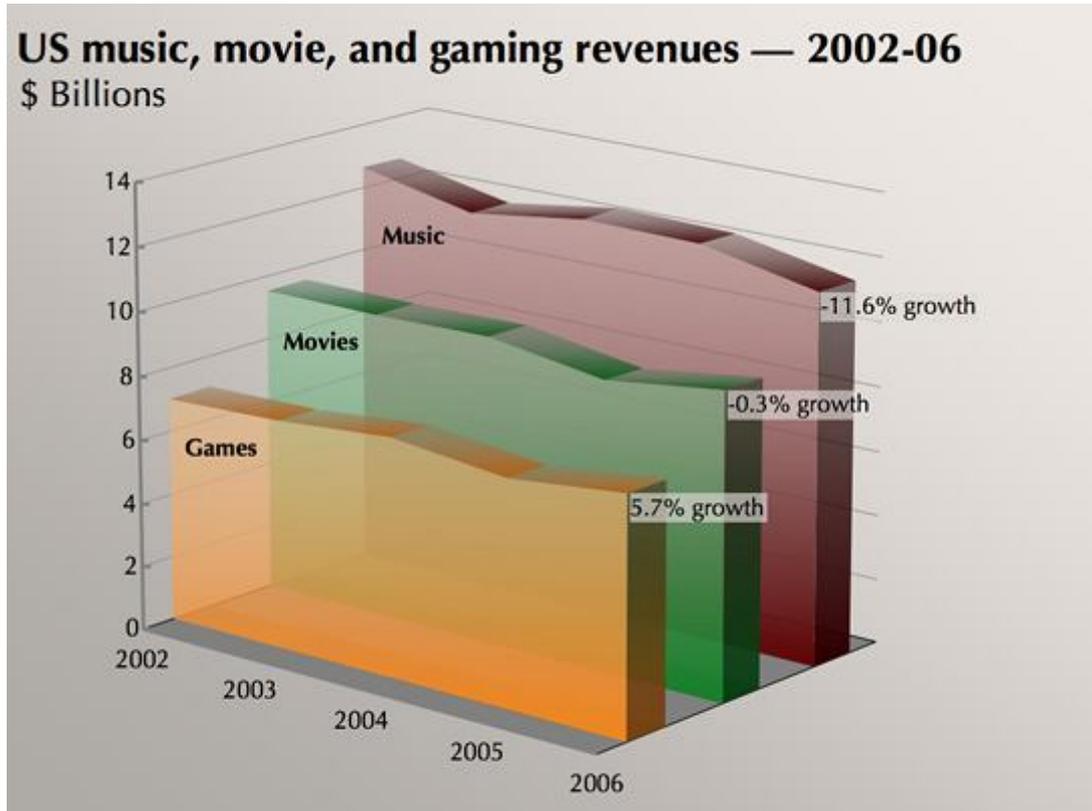
Appendix 2.

Table 3. List of prominent articles on brand extension and experiential goods.

Authors and year of publication	Key findings
Aaker and Keller(1990)	Results of this central to the brand extension literature study reveal that (1) attitude toward brand extension was higher when there was ‘fit’ between the original brand and its extension, and (2) potentially negative associations can be neutralized by elaborating on the attributes of the brand extensions.
Bassi (2010)	The study investigated aspects of consumption process of hedonic goods and how they are related to satisfaction. Attention is driven to the three important aspects of experiential goods are identified (1) characteristics of hedonic goods are primarily intangible. They are considered as a potential arising from the combination of attributes; (2) the most important criteria for the choice of hedonic goods is subjective criteria (personality expression, dream realization and so on); (3) experiential model focuses on consumption rather than on purchase.
Boush and Loken (1991)	The results of laboratory experiment shows that evaluations of brand extensions were influenced both by the extension’s similarity to the parent brand (brand extension typicality) and by variation among a brand’s current products (brand breadth).
Broniarczyk and Alba (1994)	The findings of the experiments in the study show that brand-specific associations may dominate the effects of brand affect and category similarity, particularly when consumer knowledge of the brand is high.
Inman (2001)	Extensive study based on 25 years of research on physiobehavior revealed that consumers are more likely to switch between sensory attributes than nonsensory. Examination of sensory-specific satiety (phenomenon that reflects significant decrease of the pleasantness of the product consumption while the actual pleasantness of the product remained unchanged).led to the conclusion that consumers are seek variety on sensory attributes of the product.
Sood and Dreze (2006)	The study examined movie sequels as brand extensions and results reveal that (1) dissimilar extensions are rated higher than similar; (2) naming strategy in the title of the game was perceived more dissimilar and therefore rated higher than the numbering strategy, thereby illustrating consumers’ level of satiation of experiential attributes.
Eliashberg and Shugan (1997)	The study examined role of critics in the movie industry and their influence on the market performance of entertainment services. They show empirically that critical reviews correlate with box office receipts, however suggests that critics appear to be leading indicators rather than opinion leaders.

Appendix 3.

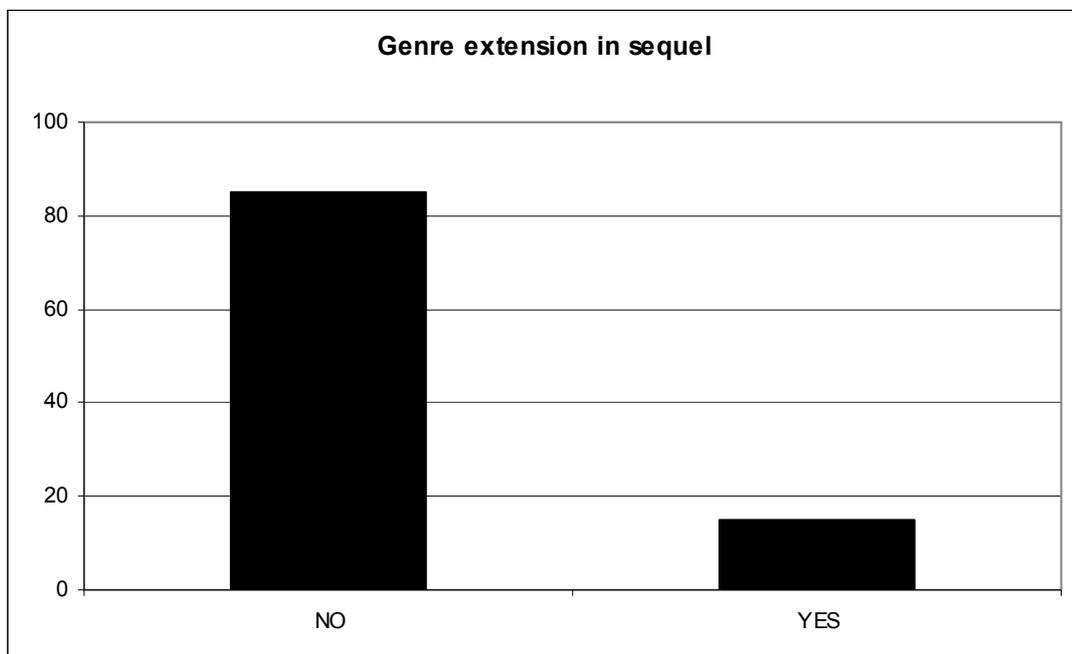
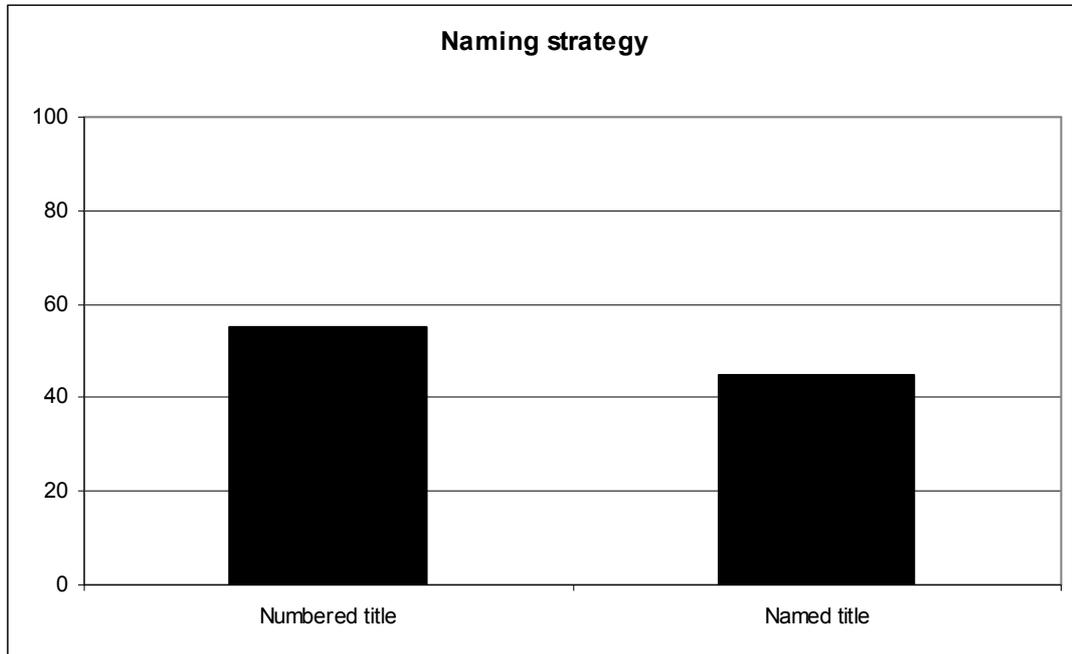
Graph 1. The comparison in growth rates of three experiential industries⁶



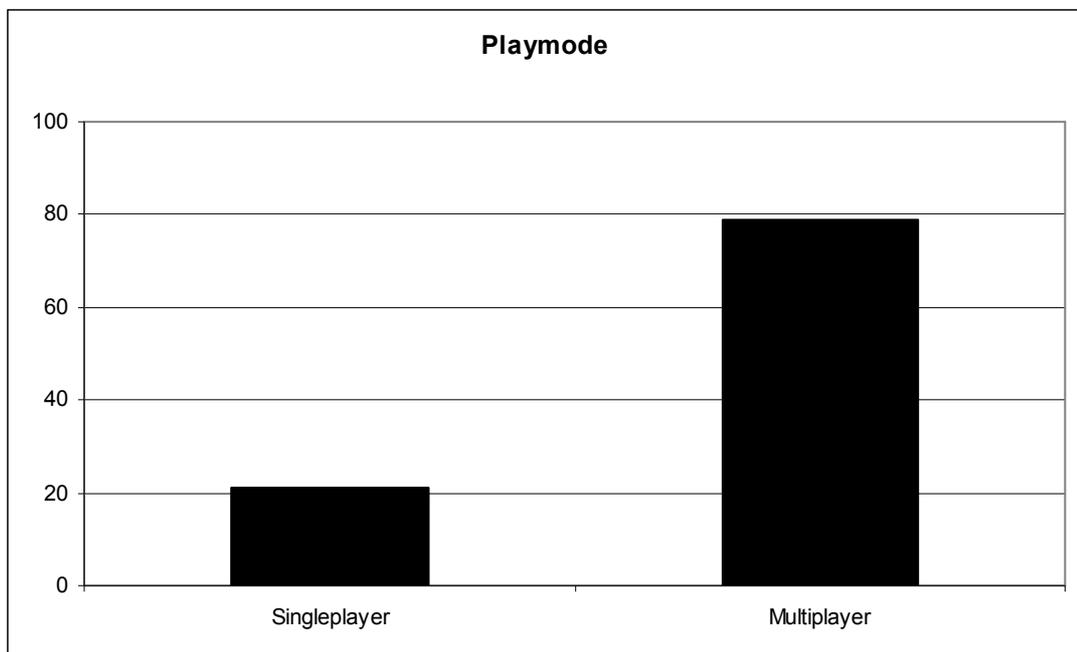
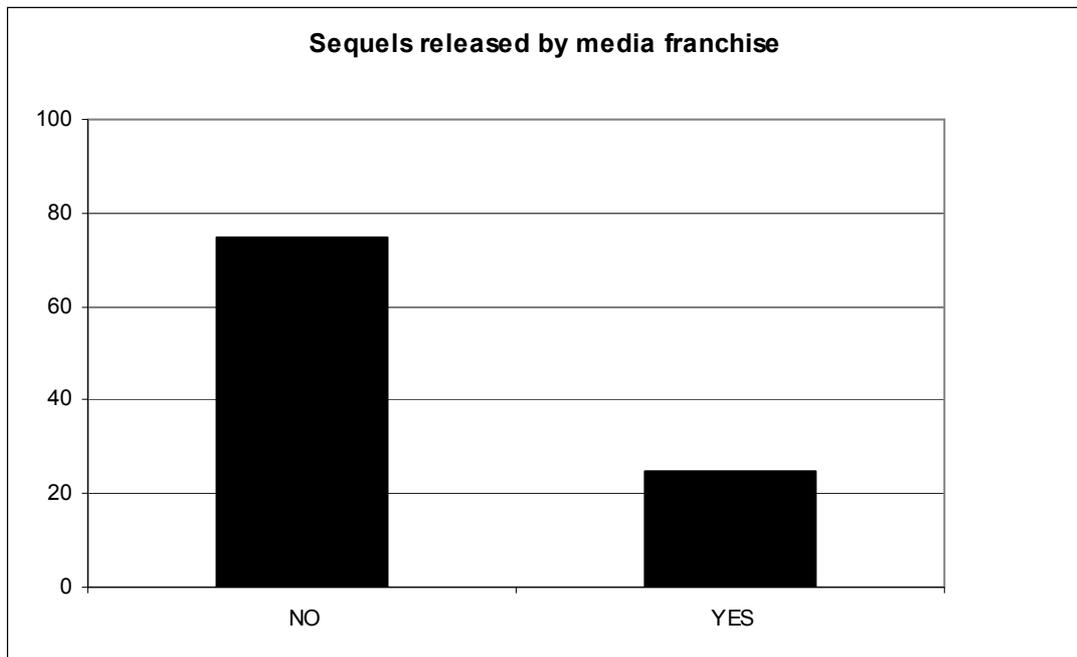
⁶ Adopted from *Video gaming to be twice as big as music by 2011* by Nate Anderson. Retrieved from March 11, 2010 from <http://arstechnica.com/gaming/news/2007/08/gaming-to-surge-50-percent-in-four-years-possibly.ars>

Appendix 4.

Graphs 2, 3, 4, 5. Descriptive statistics for the dichotomous variables



Appendix 4 (continued)



Appendix 5.

Table 5. Correlation matrix

		Media franchise	Multiplayer mode	Genre extension	Named title	Critic rating	User rating	Sales of sequel	Sales of prequel
Media franchise	Pearson Correlation Sig. (2-tailed)	1,000 ,							
Multiplayer mode	Pearson Correlation Sig. (2-tailed)	-,027 ,539	1,000 ,						
Genre extension	Pearson Correlation Sig. (2-tailed)	,241** ,000	,009 ,843	1,000 ,					
Named title	Pearson Correlation Sig. (2-tailed)	,317** ,000	-,063 ,217	,264** ,000	1,000 ,				
Critic rating	Pearson Correlation Sig. (2-tailed)	-,267** ,000	-,51 ,267	-,114** ,007	-,274** ,000	1,000 ,			
User rating	Pearson Correlation Sig. (2-tailed)	-,110** ,008	-,093* ,040	-,076 ,067	-,142** ,003	,348** ,000	1,000 ,		
Sales of sequel	Pearson Correlation Sig. (2-tailed)	-,096* ,017	-,046 ,296	-,075 ,064	-,128** ,006	,394** ,000	,116** ,003	1,000 ,	
Sales of prequel	Pearson Correlation Sig. (2-tailed)	-,084 ,073	-,087 ,088	-,041 ,380	-,037 ,430	,252** ,000	,014 ,780	,602** ,000	1,000 ,

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Appendix 6

Table 6. Results of regression analysis

Model 1	B	Std. Error	Beta	t	Sig.
(Constant)	-3,837	,663		-5,789	,000
Media franchise	,136	,197	,030	,689	,491
Multiplayer mode	,298	,190	,064	1,566	,118
Genre extension	2,699E-02	,203	,006	,133	,894
Named title	-7,27E-02	,162	-,020	-,448	,654
Critic rating	,518	,074	,327	7,045	,000
User rating	3,367E-02	,059	,025	,574	,567
Sales of prequel	,447	,037	,514	12,156	,000
<p><i>Dependent Variable: Sales of sequel</i> <i>R Square = ,452</i> <i>Model. Sig. ,000</i></p>					

Appendix 7

Table 7. Results of regression analysis with interactions

Model 2	B	Std.Error	Beta	t	Sig.
(Constant)	2,389	2,943		,812	,418
Media franchise	,202	,179	,044	1,127	,261
Multiplayer mode	,129	,170	,028	,759	,448
Genre extension	1,750E-02	,178	,004	,098	,922
Named title	-,233	,138	-,064	-1,691	,092
Critic rating	,885	,160	,558	5,516	,000
User rating	-,673	,324	-,501	-2,078	,039
Sales of prequel	-2,063	,273	-2,376	-7,558	,000
INT(sales of prequel and genre extension)	-,204	,147	-,058	-1,387	,166
INT(sales of prequel and media franchise)	,197	,143	,056	1,380	,169
INT(sales of prequel and named title)	,212	,068	,176	3,116	,002
INT(sales of prequel and playmode)	,266	,068	,218	3,891	,000
INT(user rating and named title)	,212	,147	,145	1,439	,151
INT(user rating and critic rating)	6,926E-02	,040	,362	1,713	,088
INT(sales of prequel and critic rating)	,283	,035	2,619	7,992	,000
INT(critic rating and media franchise)	-,211	,163	-,059	-1,295	,196
INT(critic rating and named title)	-,260	,136	-,107	-1,909	,057
INT(critic rating and playmode)	-,255	,168	-,148	-1,516	,131
<p><i>Dependent Variable: Sales of sequel</i> $R^2 = ,618$ <i>Model Sig. ,000</i></p>					

Appendix 8

Graphs 5, 6, 7. Interaction plots

