

# An Investigation into the Heterogeneous Consumer Attitudes amongst Video Game Users

Aarush Agarwal<sup>1</sup>, Dr. Kedar Kulkarni<sup>2</sup>

<sup>1</sup>Class 12, GD Goenka Public School, Model Town, New Delhi <sup>2</sup>Ph.D, Applied Economics, Oregon State University, USA

#### ABSTRACT

The study investigates how gaming console prices and the psychology of video gaming affect customer attitudes in a competitive gaming market, with a focus on the emotional experience of gaming. Previous research has found that gamers frequently experience powerful emotions and a competitive spirit when gaming. A survey was done utilising a Likert scale to analyse consumer sentiments, indicating a range of emotional responses from users. According to the data, male users had higher thrill levels than female users, and younger gamers consider gaming as a method to escape into fantasy realms while still socialising. The study supports previous research on consumer behaviour in the gaming business, which implies that effective pricing tactics are determined by gamers' tastes and attitudes. Understanding these factors may help both manufacturers and customers in navigating the changing gaming market.

Keywords: Gaming console prices, gaming market, customer attitude, effective pricing tactic

#### INTRODUCTION

The price of gaming consoles significantly affects the behaviour and attitudes of consumers when purchasing new ones in a dynamic gaming market. In the past few years, the gaming industry has improved dramatically as a result of several technological advancements. A greater topic of interest is the psychology of video gaming and its implications on consumer's attitudes in a competitive and social setting. In this study, we aim to examine the presence of heterogeneous customer attitudes in the video-gaming market.

This study contributes to the literature on understanding the emotional experience of gaming. Previous literature has demonstrated the close relationship between the emotional experience of gaming and the dimensions of flow experience (Csikszentmihalyi, 1990). Poole (2000) finds that several gamers experience an intense rush of emotions while gaming akin to a 'zen' like experience. Salvador (2005) shows a strong association between video gamers and their competitive spirit with most gamers trying to one-up their opponents. To achieve the objective of this paper, a survey was conducted to determine the association between the use of video games and the consumer's attitude towards video games. The survey included twenty questions that respondents were asked to rate on a likert type scale (1=strongly agree to 5=strongly disagree). Both qualitative and quantitative methods were used to analyse the data collected.

The findings clearly suggest that video game users experience a plethora of emotions during gaming. Moreover, the analysis shows the existence of heterogeneous customer attitudes. Particularly, we find that male users experience a higher level of thrill and adrenaline rush relative to female users. We also find that video game users in the lower age group see it as a way of realising their fantastical worlds and also as a means of socialising. The study, which has wider implications for scholarly discussion on customer attitudes and pricing strategies in the industry, extends beyond its practical applications. To put it simply, whether or not gaming console prices are set optimally depends upon gamers' taste and attitude as well as how much they value a particular product. This research explores how video game users experience different emotional and social feelings. This information will equip the producers and consumers with better skills of manoeuvring in a rapidly changing market situation considering that the gaming business is progressing.

### LITERATURE REVIEW

#### Theme

The provided literature review analyses the market positioning and promotional strategies of Sony's PlayStation 4 (PS4) and Microsoft's Xbox One in the context of the video game consoles market. The emphasis is placed on the competition between two consoles with regard to hardware specifications, hardware and software content, costs, and other offers.



#### MAIN FINDINGS

#### **Marketing Strategies:**

**Play Station 4:** The PlayStation 4 was marketed using the power of its hardware achievements, exclusive games and utilization of digital services. With a variety of games on offer, the PS4 was managed as a high-end console without disappointing performance on the hardware of a few mSons. Advertising campaigns stressed on its graphic capabilities and the gaming experience provided.

**Xbox One:** Microsoft's first advertising campaign for the Xbox One eliminated focus on content distribution and other support activities. Much was made of this earlier living, making many people question why there was such a large emphasis on locking out technology that was aimed primarily at improving gaming. The changed strategy corresponded to the line laid down by Sony though taking off Exclusives, which were possessed by Xbox One, was proving tough compared to the PS4.

### **Competitive Position:**

**Hardware Specifications:** In terms of processing speed and graphics performance, the PS40 always matched the Xbox One. This technical advantage helped the PS4 to earn more good reviews from video game players and critics that further improved the competitiveness of the PS40.

**Software Offerings:** The Play Station 4 also made good use of good exclusive games, such as The Last of Us Part 2 and Spiderman that accelerated the demand and retention of gamers. The Xbox One did have some respectable exclusives, but did not muster the Khyber.

**Pricing Approaches:** At launch, the PS4 was priced lower than the Xbox One, partially due to the Xbox One's inclusion of the Kinect sensor impacting its initial price point. The initial lower priced platform created strong momentum in the market that continued as both platforms adapted their pricing over time. The PS4's price advantage at the start was an important factor in its market success.

**Additional Services:** Sony's PlayStation Network took the approach of offering free monthly games, while Microsoft focused on providing an enhanced multiplayer and exclusive content experience for Xbox Live Gold. Each platform was able to differentiate both services while still adding value to their marketing approach.

**Consumer Behavior:** The success of PS4 can be attributed to a combination of hardware advantages, strong exclusive titles, and competitive pricing strategies. Consumers appreciated the PS4's performance and exclusive games, which contributed to a better market share experience and consumer sentiment compared to Xbox One.

The analysis indicates that the PS4 proved superior to the Xbox One in a variety of important ways, including hardware performance, exclusive games, and pricing. Sony's marketing strategies, in conjunction with competitive pricing, gave it a significant advantage. The Xbox One's initial emphasis on a computer entertainment system, followed by a reemphasis on gaming, was not enough to offset its disadvantages. This review illustrates the necessity of designing marketing strategies around consumer preferences and industry tendencies to derive market success.

#### DATA AND METHODOLOGY

### Hypotheses

We aim to investigate the following three hypotheses.

H1: There exist differences in attitudes towards gaming across gender.

H2: There exist differences in attitudes towards gaming across age groups.

H3: There exist differences in attitudes towards gaming across income groups.

#### Data

For this study, a structured questionnaire (see appendix) was designed to collect data (using google forms) from various people about their gaming habits and attitude towards video-games. The questionnaire was divided into three sections. The first section consisted of questions pertaining to the demographic characteristics of the respondent. In the second section, the focus was on respondent's gaming habits such as monthly expenditure on video-games, gaming experience, genres of games played etc. Lastly, the third and final section captured respondent's attitude towards gaming. Here, the respondents were asked to rate each question on a likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).



The questionnaire was first tested amongst a small group of people (N=25). After incorporating feedback received from the pilot round, the questionnaire was then floated online in various social media and interactive platforms (e.g. WhatsApp).

Data collection techniques such as those using questionnaires come with their own set of limitations and advantages. It is possible that the data received may not be completely accurate, as the respondents may not be fully true with their responses. Some people are reluctant to answer questions on sensitive topics, which can lead to wrong responses in the questionnaire. However, we found that all respondents chose to answer all the questions. We chose the online method of data collection as it is economical and cost-effective. Moreover, the data collected is completely original as it is directly received from the respondents. The data is also free from personal bias of the investigator as the respondents directly answer the questions.

#### METHODOLOGY

Analysis of the data collected from the above questionnaire was conducted using both descriptive and inferential methods. Basic statistical tools such as bar-graphs and measures of central tendency and dispersion were utilised to capture the socio-economic characteristics of the gamers. Hypothesis testing was performed using a difference in means test.

#### **RESULTS**

#### **Descriptive Statistics**

We received a total of 85 responses from the questionnaire, which constitute our sample. Figure 1 shows the distribution of gender in our sample. Out of the 85 respondents, 47 identified as males, constituting about 55% of the sample while 38 identified as females, representing 45% of the sample. With respect to the age distribution, the data shows (figure 2) that close to half of the respondents, about 47%, are over the age of 25 followed by 35% in the age group of 12-18. Similarly, with respect to the annual household income, we see that (figure 3) 49% of the respondents come from wealthy households with an yearly income of 25+ lakhs, 26% belong to the 10-25 lakhs income category and so on.

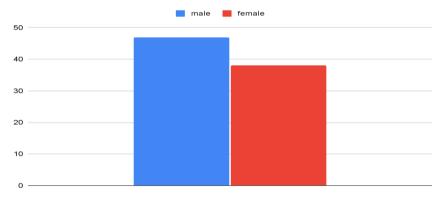


Figure.1- Gender ratio of the sample

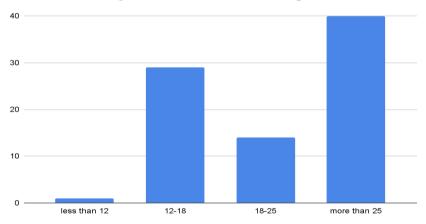


Figure.2 - Gaming experience of respondents



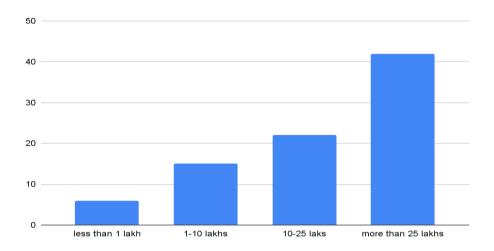


Figure 3.- Income distribution of the sample

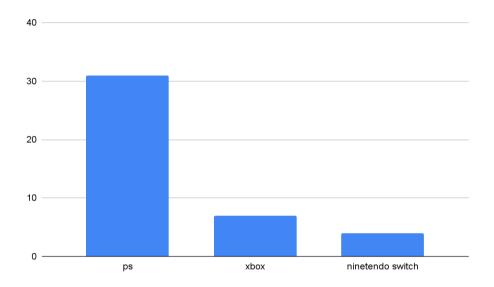


Figure 4.- Gaming consoles played on by respondents

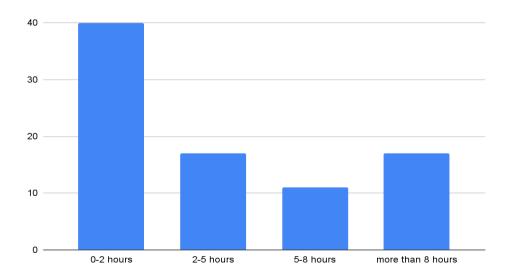


Figure 5.- Average time spent on gaming

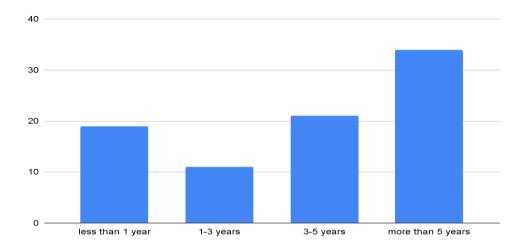


Figure 6.- Gaming experience of participants

Figure 6 shows the distribution of the gaming experience of the respondents, where we see that 34 respondents have a gaming experience of more than 5 years, which constitutes 40% of the sample, while 21 respondents have an experience of 3-5 years, constituting about 25% of the sample. We also observe that 45 respondents or 53% respondents of the sample do not play video-games of the genre- action, sports or racing, whereas 33 respondents, or 39% of the sample play action-based video-games. We also observed that the most used gaming console is PS with about 75% of the sample playing video-games on PS, followed by X-box with about 17% of the sample.

**Table 1: Summary Statistics.** 

Question	Observati ons	Min	Max	Mean	S.D
I like to play to prove to my friends that I am the best.	85	1	5	2.22	1.53
When I lose to someone, I immediately want to play again in an attempt to beat him/her.	85	1	5	2.58	1.97
I need to be the fastest and most skilled person playing the game.	85	1	5	2.65	1.05
I get upset when I lose to my friends.	85	1	5	2.26	1.35
I feel proud when I master an aspect of a game.	85	1	5	3.46	1.49
It is very rewarding to get to the next level.	85	1	5	3.16	1.50
I play until I complete a level or win a game.	85	1	5	3.11	1.38
I enjoy finding new and creative ways to work through video games.	85	1	5	2.89	1.37



My friends and I use video games as a reason to get together.	85	1	5	3.07	1.42
Often, a group of friends and I will spend time playing video games.	85	1	5	2.96	1.55
I play video games when I have other things to do	85	1	5	2.42	1.45
I play video games instead of other things I should be doing.	85	1	5	2.47	1.51
I play video games because they let me do things I can't do in real life.	85	1	5	2.40	1.55
Video games allow me to pretend I am someone/somewhere else.	85	1	5	2.34	1.52
I like to do something that I could not normally do in real life through a video game	85	1	5	2.47	1.52
I enjoy the excitement of assuming an alter ego in a game.	85	1	5	2.44	1.28
Playing video games raises my level of adrenaline.	85	1	5	2.86	1.17
Video games keep me on the edge of my seat.	85	1	5	2.93	1.27
I play video games because they stimulate my emotions.	85	1	5	2.53	1.25

Table 1 displays the summary statistics of key variables based on the responses from 85 respondents. The respondents rated statements directed towards capturing their attitudes on competitiveness, engagement, social interaction etc. on a scale of 1 (lowest) to 5 (highest).

Our findings indicate that on an average, respondents are less competitive (mean score of 2.22) while engaging in gaming-related activities.

Instead, they are more driven by a sense of personal achievement, enjoying the pride and reward of mastering challenges or levelling up (mean score of 3.46). Social interactions also play a role, with gamers valuing time spent with friends (mean score of 3.07), although it's not always their primary motivation.

While escaping reality and adopting new roles in games are less significant drivers (mean scores between 2.34 and 2.47), the excitement and emotional stimulation provided by games (mean score of 3.16) are appreciated as added benefits.



### TEST OF DIFFERENCE IN MEANS

Table 2: Test of differences between means across gender

Variables	(i	1) ale		(2) Female		3) rence
	Mean	SD	Mean	SD	Mean	t-stat
I like to play to prove to my friends that I am the best.	2.298	1.413	2.132	1.455	0.166	-0.53
When I lose to someone, I immediately want to play again in an attempt to beat him/her.	2.745	1.567	2.368	1.403	0.376	-1.16
I need to be the fastest and most skilled person playing the game.	2.702	1.587	2.579	1.464	0.123	-0.37
I get upset when I lose to my friends.	2.170	1.404	2.368	1.324	-0.198	0.66
I feel proud when I master an aspect of a game.	3.596	1.455	3.289	1.575	0.306	-0.92
It is very rewarding to get to the next level.	3.085	1.544	3.263	1.554	-0.178	0.52
I play until I complete a level or win a game.	3.340	1.464	2.816	1.540	0.525	-1.59
I enjoy finding new and creative ways to work through video games.	3.128	1.583	2.605	1.405	0.522	-1.61
My friends and I use video games as a reason to get together.	3.277	1.470	2.816	1.608	0.461	-1.36
Often, a group of friends and I will spend time playing video games.	3.191	1.484	2.684	1.629	0.507	-1.48
I play video games when I have other things to do	2.468	1.427	2.368	1.324	0.100	-0.33
I play video games instead of other things I should be doing.	2.426	1.426	2.526	1.484	-0.101	0.31



I play video games because they let me do things I can't do in real life.	2.362	1.510	2.447	1.408	0.165	0.26
Video games allow me to pretend I am someone or somewhere else.	2.426	1.571	2.237	1.532	0.090	-0.55
I like to do something that I could not normally do in real life through a video game.	2.553	1.544	2.368	1.567	0.189	-0.54
I enjoy the excitement of assuming an alter ego in a game.	2.574	1.625	2.263	1.389	0.048	-0.95
Playing video games raises my level of adrenaline.	3.234	1.478	2.395	1.424	0.168**	-2.65
Video games keep me on the edge of my seat.	3.255	1.375	2.526	1.447	0.454**	-2.36
I play video games because they stimulate my emotions.	2.851	1.351	2.132	1.398	0.060**	-2.39
I play video games because they excite me.	3.404	1.378	2.868	1.597	0.536	-1.63

Note: Column (1) provides the mean and standard deviation for the variables amongst males and column (2) does the same but amongst females. Column (3) presents the t-test for the statistical significance of the difference across the two groups. Total observations is 85. \*p<0.10, \*\*p<0.05, \*\*\*p<0.01

Table 3: Test of differences between means across age groups

Variables	(1) Male		(2) Female		(3) Difference	
	Mean	SD	Mean	SD	Mean	t-stat
I like to play to prove to my friends that I am the best.	2.377	1.386	2.050	1.466	0.327	1.05
When I lose to someone, I immediately want to play again in an attempt to beat him/her.	2.777	1.459	2.349	1.528	0.428	1.31
I need to be the fastest and most skilled person playing the game.	2.800	1.560	2.475	1.484	0.325	0.98
I get upset when I lose to my friends.	2.000	1.187	2.550	1.501	-0.550*	-1.85



I feel proud when I master an aspect of a game.	3.444	1.589	3.475	1.432	-0.031	-0.09
It is very rewarding to get to the next level.	3.489	1.408	2.800	1.620	0.689**	2.07
I play until I complete a level or win a game.	3.555	1.438	2.600	1.446	0.955***	3.04
I enjoy finding new and creative ways to work through video games.	3.244	1.479	2.500	1.484	0.744**	2.31
My friends and I use video games as a reason to get together.	3.555	1.306	2.525	1.617	1.03***	3.20
Often, a group of friends and I will spend time playing video games.	3.466	1.375	2.400	1.581	1.066***	3.29
I play video games when I have other things to do	2.400	1.338	2.450	1.431	0.050	-0.16
I play video games instead of other things I should be doing.	2.355	1.334	2.600	1.565	-0.245	-0.76
I play video games because they let me do things I can't do in real life.	2.377	1.511	2.425	1.412	-0.048	-0.14
Video games allow me to pretend I am someone or somewhere else.	2.333	1.537	2.350	1.577	-0.017	-0.04
I like to do something that I could not normally do in real life through a video game.	2.511	1.590	2.425	1.517	0.086	0.25
I enjoy the excitement of assuming an alter ego in a game.	2.466	1.486	2.400	1.581	0.066	0.19
Playing video games raises my level of adrenaline.	3.222	1.396	2.450	1.535	0.772**	2.41
Video games keep me on the edge of my seat.	3.244	1.246	2.570	1.583	0.674**	2.14



I play video games because they stimulate my emotions.	2.688	1.293	2.350	1.528	0.338	1.09
I play video games because they excite me.	3.733	1.303	2.525	1.449	1.208***	4.02

Note: Column (1) provides the mean and standard deviation for the variables amongst the under-25 age group and column (2) does the same but amongst the over-25 age groups. Column (3) presents the t-test for the statistical significance of the difference across the two groups.

Table 4: Test of differences between means across income groups

Variables	(1) Income < 25 Lakhs		(2) Income > 25 Lakhs		(3) Difference	
	Mean	SD	Mean	SD	Mean	t-stat
I like to play to prove to my friends that I am the best.	2.372	1.527	2.071	1.313	0.301	0.97
When I lose to someone, I immediately want to play again in an attempt to beat him/her.	2.745	1.559	2.404	1.432	0.341	1.04
I need to be the fastest and most skilled person playing the game.	2.697	1.640	2.595	1.415	0.102	0.30
I get upset when I lose to my friends.	2.604	1.498	1.904	1.12	0.700***	2.44
I feel proud when I master an aspect of a game.	3.348	1.571	3.571	1.450	-0.223	-0.67
It is very rewarding to get to the next level.	3.023	1.595	3.309	1.489	-0.286	0.85
I play until I complete a level or win a game.	3.046	1.572	3.167	1.463	-0.121	-0.36
I enjoy finding new and creative ways to work through video games.	3.139	1.520	2.642	1.495	0.497	1.51
My friends and I use video games as a reason to get together.	3.348	1.541	2.785	1.506	0.563*	1.70
Often, a group of friends and I will spend time playing video games.	3.325	1.538	2.595	1.515	0.73**	2.20



	ı	ı		ı	ı	1
I play video games when I have other things to do	2.790	1.423	2.047	1.228	0.743**	2.578
I play video games instead of other things I should be doing.	2.697	1.520	2.238	1.339	0.459	1.47
I play video games because they let me do things I can't do in real life.	2.790	1.406	2.00	1.414	0.790**	2.58
Video games allow me to pretend I am someone or somewhere else.	2.767	1.673	1.904	1.284	0.863***	2.67
I like to do something that I could not normally do in real life through a video game.	2.720	1.578	2.214	1.490	0.506	1.52
I enjoy the excitement of assuming an alter ego in a game.	2.720	1.578	2.142	1.424	0.578*	1.77
Playing video games raises my level of adrenaline.	3.116	1.515	2.595	1.466	0.521*	1.67
Video games keep me on the edge of my seat.	3.162	1.494	2.690	1.370	0.472	1.51
I play video games because they stimulate my emotions.	2.674	1.442	2.380	1.378	0.294	0.95
I play video games because they excite me.	3.303	1.520	3.023	1.473	0.280	0.85

Note: Column (1) provides the mean and standard deviation for the variables amongst low-income groups and column (2) does the same but amongst high-income groups. Column (3) presents the t-test for the statistical significance of the difference across the two groups.

Our study aimed to test three key hypotheses specified in section III. With respect to the first hypothesis, the test of difference in means across gender (see table 2) shows that there is no statistically significant difference between males and females for all the variables except in the emotional aspect. Results indicate male gamers experience a higher level of thrill and adrenaline compared to female gamers. With respect to the age groups, the test of difference in means (see table 3) shows that teenagers and adults below 25 find gaming to be a more challenging, exciting and socially engaging process.

Next, turning to the second hypothesis, the test of difference in means across low and high earning groups (see table 4) shows that there is no statistically significant difference between the groups for all the variables except in the social and fantasy aspect. The findings suggest that gamers belonging to the lower income groups (households with income less than 25 Lakhs) see gaming as a mode of social interaction as opposed to gamers from high-income groups. Furthermore, results also indicate that gamers from low-income households use gaming as a way to indulge in fantasy elements, particularly in games where the gamer is likely to take on superhuman and similar fantasy roles. Finally, our findings also suggest that gamers from low-income households experience a higher level of thrill and adrenaline compared to gamers from high-income households.



#### **CONCLUSION**

This research investigates how players feel about the cost of game boxes, plus what drives their choice on buying one. It seeks to find a price that is most suitable to all gamers based on related variables like console prices and players' demographics such as age, earning capability and gaming practices. Findings can offer important tips for console makers to adjust prices according to different preferences and behaviour patterns.

This research involved collecting data from different categories of gaming people through an online survey. Questions asked in the survey included those related to prices of consoles available in terms of their quality, user purchase behaviour as well as demography such as age and income level among others. The focus was on understanding how differences among video game players' backgrounds might affect reactions to different console prices using statistics based on regression analysis. Notably, this process helped understand various trends and patterns likely to aid in coming up with appropriate pricing strategies. Thereafter, results were interpreted with a view of determining such a price point that would cater for what all game lovers desire best.

Gamers' willingness to pay their console (price) is created by age, income levels and the time they spend playing games. People with a higher income and frequent players are more likely to spend extra money on expensive consoles, whereas younger ones tend to favour cheaper alternatives. Furthermore, brand loyalty and game titles exclusivity serve as key determinants of buying behaviour. A suggested implication for marketing is that console manufacturers should implement a tiered-price strategy, which might cover both low-end and high-end models that could ensure wide coverage across all markets thereby maximising their profitability through this approach.

This research has many implications for its major actors. Thus, video-gamers should consider that understanding the market trends and price strategies will enable them to have a better choice when buying games, thus getting the best value for their money. Consequently, parents may evaluate better on what their kids would like to use in a console as well as go for the right quality in order to be cheap. From this study, gaming companies are encouraged to provide different pricing models and some exclusive product ranges that can satisfy different consumer groups because it is one of the ways of ensuring most customers are satisfied and sales increase.

#### REFERENCES

- [1]. Anderson, J. (1983, Spring). Who Really Invented the Video Game? Creative Computing Video and Arcade Games, 1, 1.
- [2]. Arakji, R. Y., & Lang, K. R. (2007). Digital Consumer Networks and Producer—Consumer Collaboration: Innovation and Product Development in the Video Game Industry. Journal of Management Information Systems, 24(2), 195-219.
- [3]. Chatfield, T. (2010). Fun Inc. Why Gaming will Dominate the 21st Century. New York: Pegasus Books.
- [4]. Comparing Video Game Sales by Gaming Platform. Jeffry Babb, West Texas A&M University Neil Terry, West Texas A&M University
- [5]. Csikszentmihalyi, M. (I 990). Flow: The Psychology of Optimal Experience. New York: Harper & Row.
- [6]. Johns, J. (2006). Video games production networks: value capture, power relations and embeddedness. Journal of Economic Geography, 6(2), 151-180.
- [7]. Landsman, V., & Stremersch, S. (2011). Multihoming in Two-Sided Markets: An Empirical Inquiry in the Video Game Console Industry. Journal of Marketing, 75, 39-54.
- [8]. Liu, H. (2010). Dynamics of Pricing in the Video Game Console Market: Skimming or Penetration? Journal of Marketing Research, XLVII, 428-443.
- [9]. PlayStation 4 vs.Xbox One; Carsten Deckert, Duc Anh Phan Ngoc; competitive analysis of the Video Game Industry
- [10]. Poole, S. (2000). Trigger Happy: Videogames and the Entertainment Revolution. New York: Arcade Publishing.
- [11]. Salvador, A. (2005). Coping with competitive situations in humans. Neuroscience and Biobehavioral Reviews, 29, 195-205.
- [12]. Shankar, V., & Bayus, B. L. (2003). Network Effects and Competition: An Empirical Analysis of the Home Video Game Industry. Strategic Management Journal, 24, 375-384
- [13]. V.G. Chartz. (2011). Video Game Sales. Retrieved 08/01/2011, 2011, from http://www.vgchartz.com
- [14]. Williams, D. (2002). Structure and Competition in the U.S. Home Video Game Industry. The International Journal on Media Management, 4(1), 41-54.
- [15]. Zackariasson, P., Styhre, A., & Wilson, T. L. (2006). Phronesis and Creativity: Knowledge Work in Video Game Development. Creativity and Innovation Management, 15(4), 419-429.