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Final Round: Component Analysis Applied to Attributes of Ninth Generation Videogames

Final Round: Análise de Componentes Aplicada a Atributos de Videogames de Nona Geração

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ABSTRACT

Objective: The objective of this article is to discover which groups of attributes exist in a ninth generation video game and which are the most relevant of these.

Method: For this, a survey was carried out, using a Likert scale questionnaire distributed in the main gamer groups on Facebook, obtaining 413 respondents and 39 attributes. To consolidate the attributes, component analysis and the Top Two Box technique were used and to verify the most relevant group.

Originality/Relevance: There is a considerable gap in knowledge on the subject, the situation is worsening in marketing terms, as the majority of work is related to Health and Education.

Results: 5 groups of attributes were obtained that consolidate the 39 attributes mentioned. These are Price and Consistency; High yield; Games and Brand; Service and Social; and Appearance, Control and Innovation. Of these, the most relevant declared by the Brazilian consumer was the first, Price and Consistency.

Theoretical/methodological contributions: Performing a component analysis on a long list of product attributes is especially interesting as it helps to identify the most important ones and directs efforts for further studies.

Keywords: video games, attributes, gamer, gender, games, groups, component analysis

RESUMO

Objetivo: O objetivo desse artigo é descobrir quais grupos de atributos existentes em um videogame de nona geração e quais os mais relevantes destes.

Método: Para isso realizou-se uma survey, com o uso de questionário em escala likert distribuídos nos principais grupos gamers do Facebook, obtendo 404 respondentes e 39 atributos. Para consolidar os atributos foi utilizada a análise de componentes e a técnica de Top Two Box e para verificar o grupo mais relevante.

Originalidade/Relevância: Há uma lacuna considerável de conhecimento no assunto, a situação se agrava em termos mercadológicos, pois a maioria dos trabalhos são relacionado a Saúde e Educação.

Resultados: Obteve-se 5 grupos de atributos que consolidam os 39 atributos citados. Estes são Preço e Consistência; Alto Rendimento; Jogos e Marca; Serviço e Social; e Aparência, Controle e Inovação. Deste o mais relevante declarado pelo consumidor brasileiro foi o primeiro, Preço e Consistência.

Contribuições teóricas/metodológicas: Realizar uma análise de componentes em uma lista longa de atributos de um produto é especialmente interessante pois ajuda na identificação dos mais importantes e direciona esforços para estudos posteriores.

Palavras-chave: videogames, atributos, gamer, gênero, jogos, grupos, análise de componentes

INTRODUCTION

Video games have become an essential part of leisure activities and social interaction in many families, changing the way people play, learn, and perceive culture (Bassiouni and Hackley, 2016; Guins, 2016). In 2017, the global video game market had a turnover of US$1.9 trillion, and forecasts point to additional growth of 5.3% by 2022, according to data from consultancy Newzoo (2016) and the 19th Global Survey of Entertainment and Media at PWC (2018). It is important to highlight that this growth is not limited to the economic sphere(Arruda Filho, 2018; Higuchi, 2018), a bibliometric analysis carried out by García-Sanchez (2019) revealed a significant increase in academic production, with a 60% increase in number of articles published on the topic between 2013 and 2018.

Despite the growing academic interest, there is still a notable gap in knowledge in this field, since studies are scarce, particularly in terms of a marketing approach, as most research is related to the areas of Health, Psychology and Education (Martins et al., 2015; Wang and Goh, 2017). Therefore, the present study aims to identify how many and which groups of attributes will be generated after the component analysis and discover the most relevant ones for consumers in Brazil.

To achieve this objective, exploratory and descriptive research was conducted, based on an extensive literature review and documentary research, to survey the attributes, which were researched in academic and non-academic sources, scanning all the main video games released in recent years, as well as similar technological products, thus bringing recent and specialized data on the topic.

Furthermore, quantitative research was also carried out using the hypothetical-deductive scientific method on a sample of 413 Brazilian players, using a questionnaire as a data collection instrument.

Compreehending the attributes and their groupings is fundamental to understanding the Brazilian video game market. This understanding enables companies to analyze consumption, segment the market effectively, identify

business opportunities and increase their competitiveness internationally, adapting their strategies to the preferences of local consumers (Rocha, 2012).

In a recent study, Silva et al., (2021) used attributes to analyze their influence on the quality of hotel service based on regressions and correlations, and with this they discovered that investments in the structure of rooms, service and cleaning, could increase customer satisfaction, as they are most likely to influence satisfaction. In the case of video games, if players prefer certain attributes such as interaction and multiplayer, companies need to provide technologies and resources that better meet these demands.

LITERATURE REVIEW

The consumer journey goes through several stages, as described by Blackwell, Miniard and Engel (2001). It begins with the pre-purchase phase, marked by the awakening of the need. This need arises from the perception of an imbalance between the consumer's current situation and the desired situation (Solomon, 2002). The search for information about available alternatives continues, including comparing, evaluating and judging the differences between products, brands and services offered (Lovelock et al., 2011).

During this process, product attributes identified by customers play a fundamental role in forming judgments for making purchasing decisions. Each person can attribute different relevance to the same attribute (Szybillo and Jacoby, 1974; Solomon, 2002; Rocha, 2012). For Peter and Olson (1996), product attributes are the main purchase stimuli.

Video games, also known as consoles or platforms, are part of information technology entertainment (X. Wang and D.H, Goh, 2017). This industry encompasses not only consoles, but also handheld devices, computers, tablets and smartphones. Video games are essentially an experience, and consumers will only know if they like them after playing, which implies a considerable risk due to high prices (Marchand and Hennig-Thurau, 2013).

A unique component of these products is the control, responsible for handling the platform and moving characters in games. Each platform has its own standard, with specific format and buttons. Regarding attributes, cell phones and computers, also competitors (Nascimento, 2013), have characteristics such as interaction interface, ease of use, simultaneity, performance and usability (A.J Van Rooij et al., 2017) as a reference.

When it comes to video games, the diversity of games and high quality are important attributes considered when purchasing the console (Sobota et al., 2022).

Performance in video games is strongly linked to graphics/processing, being cyclical, as performance depends on the capabilities of the hardware. Other attributes include comfort, durability, available accessories, customization, storage, video recording, sound, weight, and design (Dhargalkar et al., 2016). The creation and customization of avatars and profiles is an attribute that has been extensively studied mainly from a psychological perspective as players often develop strong relationships with them (Kim et al., 2023).

Furthermore, aspects such as ease of use, brand, color, design and warranty are also relevant and have been studied in similar technological products such as cell phones and laptops (Parasuraman et al., 1985; Arruda Filho and Gammarano, 2018; Solomon, 2002; J. Jacoby and L. Kaplan, 1976). Other attributes that emerged more recently with the expansion of video games into true entertainment hubs, such as multiutility, intersystemic capacity, convergence, among others, were identified through a historical analysis of the evolution of video games (Gallaguer and Park, 2003; Gammarano , 2018; A. Nascimento, 2013). And more specifically in relation to games, we have the addition of Subscriptions and Services for games and Internet access being praised by players (GRECO and DAL BELLO, 2021).

This enormous number of attributes is due to 50 years of intense competition between a few players in the market, in a constant demand for aggressive technological innovation between them (Gammarano, 2018). These companies seek to generate value for users by adding and implementing different attributes with each generation. The ninth generation, the object of this study, has a total of

39 attributes raised after an extensive study of the video game market and industry (Nascimento and Oriol, 2022).

Table 1 – 39 attributes

Allow Avatar and Profile Creation and Customization
Allow taking photos and recording videos for sharing
Allow Video Streaming
Backward Compatibility (play games from previous versions)
Be innovative (e.g., Kinect)
Be portable (e.g. Gameboy)
Brand
Color Diversity
Comfortable Joystick
Country of Origin (prefer to be American, Japanese, Korean, etc.)
Design
Device customization
Differentiated / Innovative Joystick (ex: Wii Joystick)
Distribute Free Games
Durability
Famous Exclusive Games
Game Subscriptions and Services (e.g., Live Gold and Game pass)
Have many games available
Have Multiple Apps available to download from the store (e.g., Netflix, Spotify, YouTube, and Explorer)
Have rewards and achievements for use (e.g. Gs and Microsoft Rewards)
Have Several Popular Games
High performance and processing
High quality games
High Quality Graphics
High Quality Sound
High Storage Capacity
Interact with other objects, such as cell phones and computers

Large Number of Players with the Console
Lightweight
Package
Pleasant Interaction Interface (Menus and Store)
Possess Various Accessories (e.g., keyboard, external HD, steering wheel)
Presence of several friends and acquaintances on the same platform
Price
Run programs at the same time. Ex: switching between Netflix and the game. (Simultaneity)
USB input for exchanging files and accessories
Warranty
Wi-Fi and Bluetooth

METHOD

The original study obtained respondents from the dissemination of the questionnaire, prepared in Microsoft Forms, in groups of gamers present on Facebook in May 2021. The questionnaire had 18 questions, of which 7 questions to understand the sociodemographic aspect and one with the 39 attributes in topics.

This core followed a 5-point non-comparative ordered semantic differential scale, called Likert, this scale is very efficient, and allows the distance between respondents to be assessed (Kinnear & Taylor, 1996; Samartini, 2006). Ranging from "Not Important" to "Very Important", following the study of attributes by Loriato and Pelissari (2017). To validate the semantic clarity of the questionnaire and performance, following the guidance of Malhotra et al. (2017), a pre-test was carried out with 10 individuals, including 3 heavy video game players, 1 statistician, 2 masters in administration, and 5 casual players, all of whom proposed adjustments to the wording of the questions, among other improvements, providing greater clarity in reading.

Table 2 – Socio-Demographic Block Questionnaire

1. Name
2. What gender do you identify with? (Male or female)
3. What was your birth year? (Ex: 1985)
4. Region of the country in which he spent most of his life. (Southeast; Northeast; South; Central-West or North)
5. Level of education (Elementary Education; Secondary Education; Higher Education; MBA or Master's/Doctorate)
6. How often do you currently play? (High (6 to 7 days per week); Medium (3 to 5 days per week) or Low (0 to 2 days per week))
7. What is the net monthly income of those who will actually pay for this video game? (From 1 thousand to 3 thousand reais; From 3 thousand to 5 thousand reais; From 5 thousand to 7 thousand reais; From 7 thousand to 10 thousand reais or Greater than 10 thousand reais)

The database originally obtained underwent filtering and data cleaning treatment, based on checking the standard deviation of responses, when equal or close to zero, characterizing someone as having responded without care. Furthermore, a reliability analysis was carried out based on internal consistency and the item-rest correlation, to verify the reliability of the item in association with the whole.

Principal component analysis (PCA) is a statistical technique that transforms a set of correlated variables into a set of uncorrelated variables, called principal components. PCA is a powerful tool for dimensionality reduction, which can be used in a wide variety of applications, such as: identifying patterns and trends in data; reduce the number of variables in a data set, without losing much information and improve the accuracy of prediction models (Jolliffe, I. T., 2002).

This technique is robust and insensitive to outliers and violations of normality and can be used in a wide variety of applications. It is based on the idea that correlated variables can be represented by a set of uncorrelated variables, which capture most of the information in the original data (Jolliffe, I. T., 2002).

PCA is performed by calculating the covariance matrix of the original data, then finding the eigenvalues and ordering them in descending order. Eigenvalues represent the proportion of variance in the original data that is captured by each principal component (Hotelling, H., 1933).

In the study, the ACP was rotated by VARIMAX. To check whether the component analysis was appropriate, two measures were used, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity. The KMO ranges from zero to one, and compares the magnitudes of the observed correlation coefficients and partial correlation coefficients (Malhotra, 2017).

And finally, to obtain a ranking of attribute groups, an accumulated frequency distribution of attributes was carried out in the groups they belonged to using the Top/Bottom Two Box technique, that is, a higher percentage of respondents assigning degrees of importance in the two most and least favorable categories of the scale, 4 and 5, and 1 and 2, respectively (Dillon, Madden, & Firtle, 1993).

Regarding this, for van Doorn et al. (2007) and Oliver (1997), it makes sense that only the extreme points are considered, as the middle, called the zone of indifference, are moderate attitudes. The ideal method of direct ranking, in which the preference position is given directly, without repetition per attribute, is not applicable when there is a large list of attributes, as in this study (Lagerkvist, 2013). With this, it was possible to define a ranking of which groups were considered the most important

RESULTS

Regarding the sample profile, 80% were male; 83% are between the ages of 20 and 39; 65% have higher education or above; 43% earn between 1 thousand and 3 thousand reais; 71% spent most of their lives in the Southeast region and 72% play more than 3 days a week.

Regarding quality tests, the calculation of Cronbach's Alpha coefficient (Malhotra, 2001) obtained a high score of 0.887, higher than the target value of 0.8

(Hair et al., 2009). The item-rest correlation was 0.3 when the requirement is 0.2 (from Groot & Van Naerssen, 1969) and most items had good discrimination, above 0.3. It was also analyzed whether removing those below would affect the general reliability of the scale measured by Cronbach's Alpha, but all items had good discrimination, and no item was removed.

Regarding the KMO, it was 0.849, exceeding the standard of 0.5, reaching the optimal level, greater than 0.8 in the overall. Bartlett's test of sphericity was also very positive, from p <0.001, thus rejecting the null hypothesis that the statements in the correlation matrix are not correlated (HAIR et al., 2009).

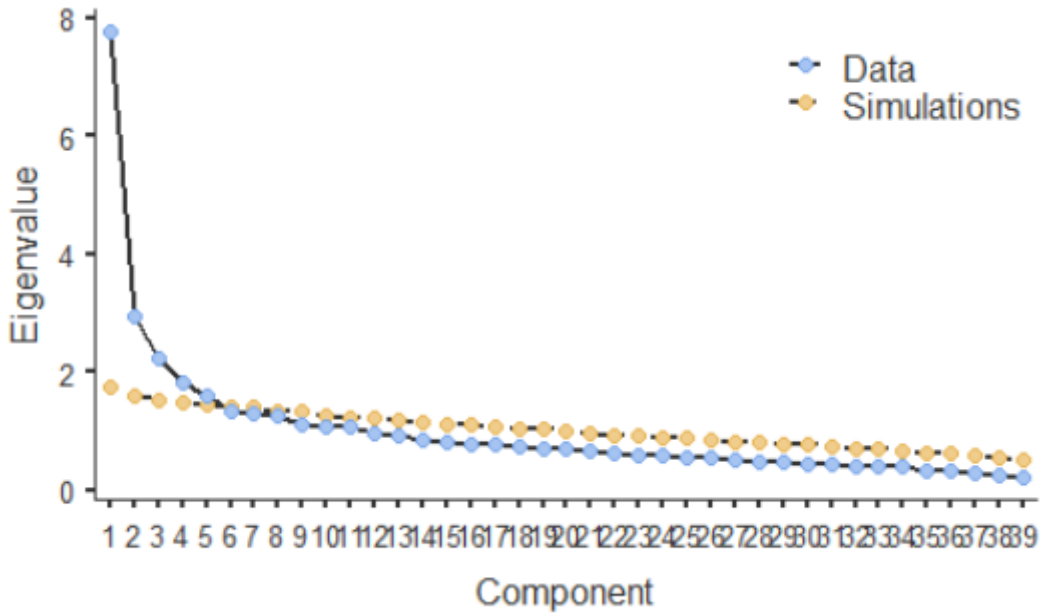
Table 3 – KMO

Attribute	MSA
Overall	0.849
High performance and processing	0.791
Comfortable Control	0.869
Differentiated/Innovative Control (e.g. Wii Control)	0.799
Device customization	0.853
Design	0.834
Color Diversity	0.882
Durability	0.788
Packaging	0.861
USB input for exchanging files and accessories	0.900
High Quality Graphics	0.781
Lightweight	0.852
Have Various Accessories (e.g. keyboard, external hard drive)	0.905
Run programs at the same time.	0.836
WiFi and Bluetooth	0.926
Allow Broadcast Live Video Streaming	0.863
Have Multiple Apps available to download from the store	0.815

Backward compatibility (run games from previous versions)	0.859
Be innovative (e.g. Kinect)	0.797
High Quality Sound	0.909
Be portable (e.g. Gameboy)	0.813
Price	0.622
Guarantee	0.848
Have Several Popular Games	0.868
Subscriptions and Services for games (e.g. Live Gold and Gamepass)	0.851
Allow creation and customization of Avatar and Profile	0.889
High Storage Capacity	0.904
Famous Exclusive Games	0.747
Distribute Free Games	0.867
Large Number of Players with the Console	0.859
Interact with other objects, such as cell phones and computers	0.922
Pleasant Interaction Interface (Menus and store)	0.925
Highest quality games	0.806
Brand	0.822
Have many games available	0.845
Have rewards and achievements for use (e.g. Gs and Microsoft Rewards)	0.852
Presence of several friends and acquaintances on the same platform	0.871
Allow taking photos and recording videos for sharing	0.908
Country of Origin (give preference to be American or Japanese)	0.721
Have many Exclusive Games	0.663

The MSA (Sample Adequacy Measure) of each attribute was also positive, with the majority of attributes (95%) close to or above 0.7. The MSA ranges from 0 to 1, reaching 1 when each variable is perfectly predicted without error by the other variables.

Graph 1 – Scree Plot



The Scree graph showed the inflection point after the fifth component, explaining 41.7% of the variance. The first component explains 19.8% of the variance, the second drops to 7.5%, but in total 11 components had an eigenvalue above 1.

A Scree chart is a tool commonly used in principal component analysis to determine the number of components to retain. There will generally be a sharp drop in variance values as you move along the x-axis. This inflection point is where the amount of information explained begins to decrease significantly, so all components are retained before the point at which the decline stabilizes because from that moment on the components do not add to the explanation of the variance in the data. And the Eigenvalues are the explained variance values, the higher the Eigenvalue of a component, the more variance in the data it explains. (HAIR et al., 2009).

Table 4 - Eigenvalues per Component

Component	Eigenvalue	% of Variance	Cumulative
1	7.742	19.852	19.9
2	2.938	7.535	27.4
3	2.216	5.682	33.1
4	1.807	4.634	37.7
5	1.578	4.045	41.7
6	1.316	3.375	45.1
7	1.292	3.314	48.4
8	1.252	3.211	51.6
9	1.103	2.828	54.5
10	1.071	2.745	57.2
11	1.051	2.696	59.9
12	0.971	2.490	62.4
13	0.914	2.343	64.7
14	0.854	2.189	66.9
15	0.817	2.094	69.0
16	0.782	2.005	71.0
17	0.761	1.952	73.0
18	0.739	1.896	74.9
19	0.710	1.821	76.7
20	0.677	1.736	78.4
21	0.649	1.665	80.1
22	0.623	1.598	81.7
23	0.579	1.484	83.2
24	0.567	1.453	84.6
25	0.539	1.383	86.0
26	0.532	1.363	87.4
27	0.522	1.339	88.7

28	0.483	1.239	90.0
29	0.467	1.197	91.2
30	0.447	1.146	92.3
31	0.415	1.065	93.4
32	0.408	1.046	94.4
33	0.391	1.001	95.4
34	0.382	0.981	96.4
35	0.337	0.865	97.3
36	0.328	0.840	98.1
37	0.277	0.710	98.8
38	0.237	0.608	99.4
39	0.224	0.575	100.0

This analysis allowed us to answer the first questions of the objective: How many and which groups of attributes will emerge from the analysis. In this case, 5 groups were discovered, which were named based on an assessment of the attributes that made them up, and are: Service and Social; Appearance, Control and Innovation; Games and Brand; Price and Consistency; and High Performance. The first group Service and Social, relates to attributes that bring different entertainment to the game, such as "Simultaneity" and "Having different accessories", on the Service side; and for Social, "Allow taking photos and recording videos for sharing" and "Presence of several friends on the platform".

The attributes that had the highest load were: "Allow live streaming" and "Have multiple applications available". The second group Appearance, Control and Innovation, is related to the physical image of the video game, containing "Color", "Design" and "Customization", the latter two with the highest load in the group. Also containing the control attributes, "Comfortable Control" and "Innovative Control"

The third group Games and Brand groups the attributes that had within the context of games, which is in fact the objective of a video game. “Famous exclusive games” and “Have many exclusive games” had the highest loads.

The fourth group Price and Consistency includes the attribute “Price” itself, but also “warranty”, “durability”, and “storage”, which also had the highest loads in order, respectively. And the fifth, and last group, brought together performance characteristics, such as performance, sound and graphics, the latter having the greatest load.

Figure 2 shows the distribution of attributes by the main components and their respective loads, the largest ones were highlighted in gray and based on them the attributes were defined in groups. As can be seen, several attributes had very close loadings in more than one group, and some of these would be more appropriate if they were in a different group than the one identified in the test. For example, Allow avatar creation would be more related to the first group, Service and Social, as it concerns the player's image in the community, but is in the second group, Appearance, Control and Innovation.

Despite this, in all groups, most attributes had loadings greater than 0.5, and some between 0.3 and 0.49. The loading represents the correlation of each variable with the group. According to Hair et al. (2009), load values above 0.5 are significant, and above 0.30 are considered significant in samples larger than 350, as is the case. The country of origin attribute was the only one that did not have a load above 0.3 and was not related to any group, confirming again that it may not be an attribute of a video game. And finally, it is worth saying that the groups accumulated some attributes that had different concepts from the other attributes of the group.

Figure 2 – Component Analysis

Attribute	**Services and Social**	**Appearance, Joystick and Innovation**	**Games and Brand**
Allow Video Streaming	0.705		
Have Multiple Apps available to download from the store (e.g.	0.690		

Netflix, Spotify, YouTube, and Explorer)			
Run programs at the same time. Ex: switching between Netflix and the game. (Simultaneity)	0.671		
Allow taking photos and recording videos for sharing	0.591		
Interact with other objects, such as cell phones and computers	0.570		
Game Subscriptions and Services (e.g., Live Gold and Game pass)	0.558		
Presence of several friends and acquaintances on the same platform	0.506		0.393
Have rewards and achievements for use (e.g., Gs and Microsoft Rewards)	0.488		
Wi-Fi and Bluetooth	0.449		
Possess Various Accessories (e.g., keyboard, external HD, steering wheel)	0.418	0.352	
Pleasant Interaction Interface (Menus and Store)	0.416	0.306	
Backward Compatibility (play games from previous versions)	0.312		
Device customization		0.665	
design		0.651	
Color Diversity		0.644	
Differentiated / Innovative Joystick (ex: Wii Joystick)		0.603	0.302
Package		0.559	
Be portable (e.g., Gameboy)		0.530	
Be innovative (e.g., Kinect)		0.526	
Lightweight		0.483	
USB input for exchanging files and accessories		0.454	
Allow Avatar and Profile Creation and Customization	0.381	0.451	
Comfortable Joystick		0.306	

Famous Exclusive Games			0.786
Have lots of Exclusive Games			0.733
Have Several Popular Games			0.543
Large Number of Players with the Console	0.422		0.468
Brand			0.420
Warranty			
Durability			
High Storage Capacity	0.352		
Price			
Have many games available			
Distribute Free Games			
High Quality Graphics			0.374
High performance and processing			
High quality games			0.457
High Quality Sound			
Country of Origin (prefer to be American, Japanese, Korean, etc.)			

Figure 2 – Component Analysis (Horizontal Continuation)

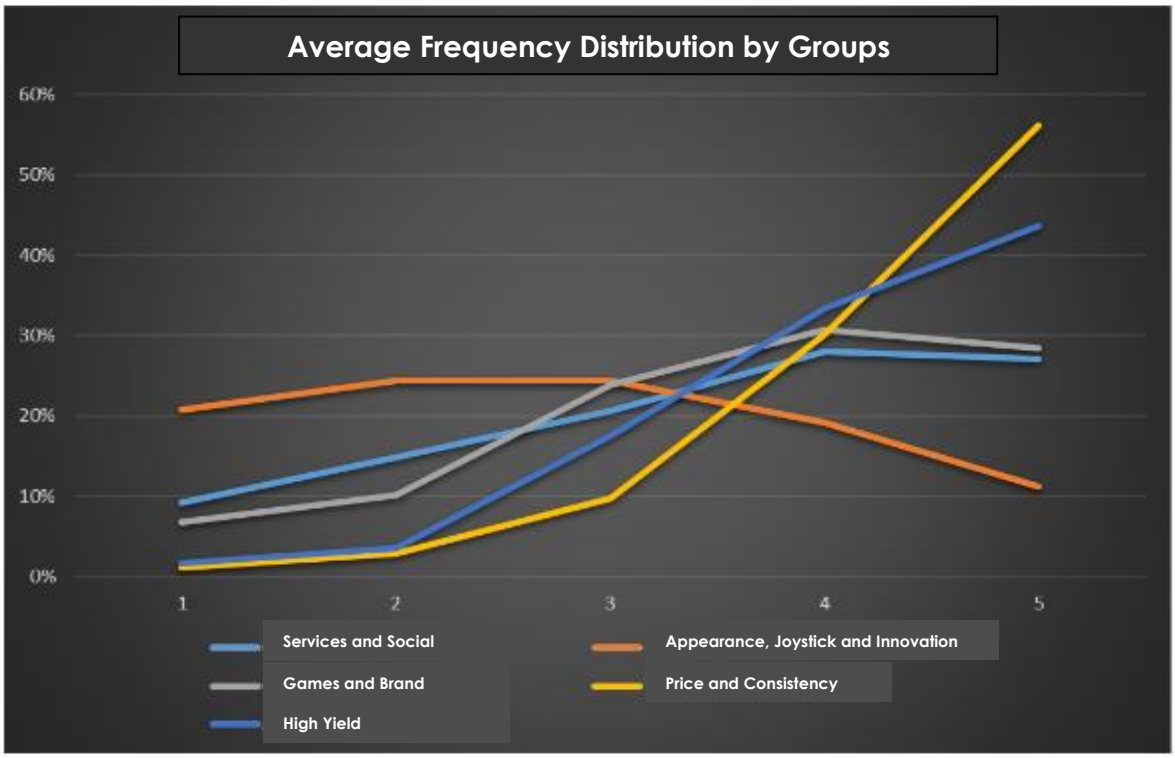
Attribute	Price and Consistency	High Yield	Uniqueness
Allow Video Streaming			0.462
Have Multiple Apps available to download from the store (e.g., Netflix, Spotify, YouTube, and Explorer)		0.319	0.410
Run programs at the same time. Ex: switching between Netflix and the game. (Simultaneity)			0.451
Allow taking photos and recording videos for sharing			0.570
Interact with other objects, such as cell phones and computers			0.542

Game Subscriptions and Services (e.g., Live Gold and Game pass)			0.653
Presence of several friends and acquaintances on the same platform			0.571
Have rewards and achievements for use (e.g. Gs and Microsoft Rewards)			0.660
Wi-Fi and Bluetooth		0.378	0.615
Possess Various Accessories (e.g., keyboard, external HD, steering wheel)			0.699
Pleasant Interaction Interface (Menus and Store)	0.338		0.579
Backward Compatibility (play games from previous versions)	0.303		0.767
Device customization			0.519
design			0.494
Color Diversity			0.537
Differentiated / Innovative Joystick (ex: Wii Joystick)			0.534
Package			0.595
Be portable (e.g., Gameboy)			0.617
Be innovative (e.g., Kinect)			0.671
Lightweight			0.678
USB input for exchanging files and accessories			0.643
Allow Avatar and Profile Creation and Customization		-0.355	0.505
Comfortable Joystick	0.303	0.300	0.703
Famous Exclusive Games			0.349
Have lots of Exclusive Games			0.421
Have Several Popular Games			0.586
Large Number of Players with the Console			0.582
Brand			0.756
Warranty	0.594		0.597

Durability	0.573		0.572
High Storage Capacity	0.564		0.518
Price	0.552		0.682
Have many games available	0.454	0.354	0.581
Distribute Free Games	0.441		0.652
High Quality Graphics		0.629	0.393
High performance and processing		0.569	0.635
High quality games		0.531	0.507
High Quality Sound		0.399	0.633
Country of Origin (prefer to be American, Japanese, Korean, etc.)			0.780

And finally, from figure 4, which distributes the attribute scores among their groups, it can be seen that the most prominent group is the fourth, Price and Consistency, having a higher average of the highest scores, and lower averages of the lowest grades, followed by the High Performance group. Answering the last objective: Which groups are most relevant to Brazilian consumers.

Figure 4 - Average Frequency Distribution by Groups



CONCLUSION

The video game market is one of the most dynamic and profitable in the world and in Brazil the sector has also been growing at significant rates, accounting for an important share of this business. However, the economic relevance still does not match the number of academic marketing studies on the topic, which are few. Therefore, the objective of this study was to bring a little more knowledge to this area by answering how many and which groups of attributes exist in the ninth generation video game product, as well as the most relevant ones.

The results obtained in the component analysis were essential to respond to the objectives formulated at the beginning of the research. By identifying the five groups of attributes valued by Brazilian consumers, it was possible to more deeply understand the market's preferences in relation to this product.

Regarding these, there is evidence that the price/consistency and high performance groups are considerably more relevant than the others, remembering that these contain attributes such as guarantee, durability and performance.

It is believed that consumer preferences in relation to these groups of attributes exist due to the Brazilian context, where the average income of the population is low, and the prices of imported electronic products are high due to taxation and exchange rate differences, which The high price of ninth generation video games has a substantial impact on the purchasing decision.

In practice, to buy a new and modern video game in Brazil it is necessary to save three minimum wages, while in the United States the minimum wage allows you to purchase three of the same video games.

This high price becomes a significant barrier to access for many consumers and perhaps for this reason, these new consoles are expected to offer performance worthy of the financial effort.

Therefore, Brazilian consumers will carefully evaluate whether the performance benefits offered by the console justify the additional cost in relation to older consoles or more affordable alternatives, with this preference for the two groups of attributes of the video game market in Brazil being an important finding.

And finally, for the manufacturers of these consoles, it is important that they understand these particularities of the Brazilian consumer, and adapt to bring more success to their products in the national market in order to overcome these issues. For example, offering products with attributes such as greater storage capacity or improved graphics performance, priced higher, such as a Premium line, and a basic version with more affordable prices to attract consumers with more limited budgets.

Theoretical and Practical Contributions

This study brought important knowledge to the existing gap in academia regarding the video game market, bringing a consolidation to just 5 large groups of an extensive list of video game attributes that could be used in future research to better understand issues related to the consumption of this product. In addition, it tried to rank which groups are most relevant to the Brazilian gaming public, providing valuable insights into how consumers perceive and value these new consoles, especially the relationship between high cost and performance expectations.

Limitations and Future Research

The main limitation is the motivation that gave rise to the study, the small number of studies in the area restricts a more extensive and updated literature review, and even more in-depth discussions of results, especially in Brazil, since there are few academic works in this field. area. On the other hand, in relation to future research, there are countless possibilities, such as reusing groups for ranking studies in different regions, as well as focusing on niches, such as the female gaming audience. And even as a basis for other studies related to the topic, facilitating the generation of new knowledge in this important, little-studied market.

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