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Understanding Audience Engagement with Cinemas: Investigating Influential Factors in Modern Media Consumption

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Abstract **Engagement with cinemas is influenced by various factors including Over-the-Top (OTT) usage, satisfaction with OTT content, cinema experience, advertisements/marketing campaigns, and exposure of adult content to minors. This study examines the relationships between these independent variables and cinema engagement using Karl Pearson's coefficient of correlation, Sir Francis Galton's regression, and histograms. The findings shed light on the dynamics of audience behavior in the context of modern media consumption.**

Keywords — Advertisements, Adult content exposure, Cinema experience, Engagement with cinemas, OTT usage, Satisfaction with OTT content.

I. INTRODUCTION

In the rapidly changing media environment of today, movie going behavior has gained a lot of attention and scrutiny. It is more crucial than ever to understand the variables that impact audience engagement considering the emergence of Over-The-Top (OTT) platforms that offer a wide range of content alternatives in addition to the immersive experience that movies offer.

The ways that people consume entertainment have changed significantly as society makes its way through the digital transformation. People's choices and preferences are greatly influenced by a variety of factors, including their use of over-the-top (OTT) content, their satisfaction with it, the allure of going to the movies, the success of their marketing campaigns and ads, and the careful balancing act involved in preventing minors from viewing adult content.

Moreover, the global pandemic, COVID-19, has made a huge impact on consumer behavior. With restrictions on social gatherings and a surge in remote work, the traditional temptation of cinemas may have shifted. This unprecedented disruption has prompted a reevaluation of entertainment consumption habits and preferences, further complicating the dynamics for cinema operators and content creators.

Considering these multifaceted influences, this report aims to delve into the complex relationship between the previously mentioned independent variables and their impact on engagement with cinemas. Drawing inspiration from established research methodologies, including Spearman's Rank Correlation Coefficient and Regression Analysis, this study aims to provide valuable insights into audience behavior and preferences.

By employing a cross-sectional survey approach and skillfully designed questionnaires containing *Likert Scale* questions, we have attempted to capture the complex opinions of a wide range of participants. Our handy selection strategy allowed us to choose a sample of 305 participants who reflect a wide range of moviegoers, which allowed us to draw relevant conclusions from our study.

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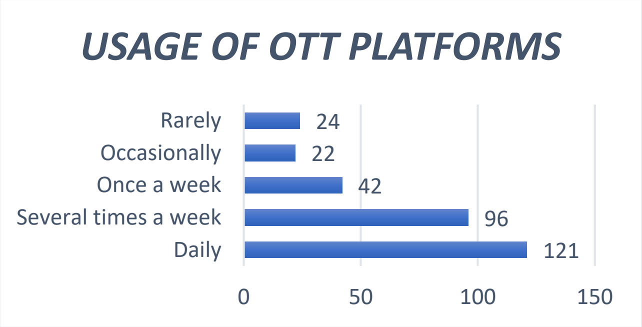
To better understand the intricacies of movie going, we employ both descriptive and explanatory study approaches. We want to provide a thorough summary of our findings using data visualization techniques like pie charts and histograms, illuminating the complex interactions between independent factors and the dependent variable of movie involvement.

We urge readers to join us on this research and discovery trip to help us solve the puzzle of how audiences interact with movies in the digital era. Our aim is to enhance comprehension of this expanding phenomena by means of data analysis and interpretation, so facilitating well-informed decision-making and tactical interventions in the entertainment sector.

II. Factors and Statistics

A. OTT Usage

Figure 1- Usage of OTT Platforms



The frequency of Over-The-Top (OTT) platform usage among individuals is influenced by various factors like personal preferences, demographic characteristics, technological accessibility, financial constraints, and time availability.

The data presented in the survey illustrates the distribution of OTT usage frequencies among respondents, offering a comprehensive snapshot of modern media consumption behaviors. Visualized through a series of blue bars representing the frequency of OTT usage, the survey encapsulates the diverse spectrum of consumer engagement within the digital entertainment realm.

At the forefront of OTT consumption are individuals categorized under the "Daily" usage frequency, comprising a significant proportion of the surveyed audience, totaling 121 respondents. This substantial cohort underscores the pervasive influence of OTT platforms in meeting the entertainment needs of a large segment of the population. Their consistent and frequent engagement with OTT content signifies a pronounced preference for the convenience, variety, and accessibility afforded by streaming services, potentially overshadowing the appeal of traditional cinema experiences.

Following closely behind are respondents falling within the "Several Times a week" category, comprising 96 individuals who exhibit an above-average level of OTT usage. This segment represents a demographic subset that prioritizes OTT platforms as primary sources of entertainment, leveraging their capabilities to access a diverse array of content across genres, formats, and languages. While these individuals may still partake in cinema outings or other offline activities, their heightened reliance on OTT services underscores the platform's integral role in shaping contemporary media consumption habits.

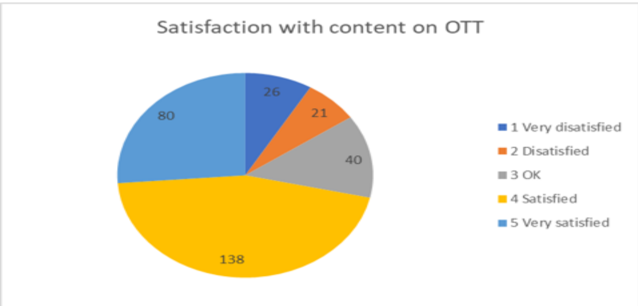
The "Once a week" category encompasses 42 respondents, indicative of a moderate level of OTT engagement within the surveyed audience. Positioned between the more frequent usage categories, this cohort represents individuals who maintain a consistent but less intensive interaction with OTT platforms. Their weekly utilization patterns suggest a balanced approach to entertainment consumption, incorporating both digital streaming and offline leisure pursuits.

In contrast, the "Occasionally" and "Rarely" categories, comprising 22 and 24 respondents, respectively, signify the smallest cohorts within the OTT consumption spectrum. These individuals demonstrate a minimal inclination towards OTT engagement, preferring alternative modes of entertainment such as cinema experiences or other recreational activities. Their sporadic or infrequent utilization patterns suggest a nuanced interplay of preferences, perhaps influenced by factors such as content availability, viewing preferences, or technological accessibility.

The different levels of OTT platform usage among survey respondents show how people consume media in diverse ways. Although OTT platforms play a big role in shaping entertainment choices, the mix of usage frequencies highlights the complexity of individual preferences, lifestyles, and changing technology. It's important for entertainment industry players to keep up with these trends to stay connected with audience preferences as digital media evolves.

B. Satisfaction from the Content of OTT

Figure 2- Satisfaction with content on OTT



One of the significant determinants influencing satisfaction levels with Over-The-Top (OTT) platforms is content preferences. When viewers' content preferences coincide with their cultural and language inclinations, it often leads to higher satisfaction levels.

A substantial proportion of respondents, totaling 138 individuals, find themselves categorized under the

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"Satisfied" bracket. This categorization suggests a prevalent sentiment of contentment among the surveyed audience regarding the offerings on OTT platforms. The prevalence of satisfaction in this group hints at the resonance of the available content with viewers' tastes, potentially fostering a sense of loyalty and sustained engagement with these platforms.

In the "Very Satisfied" category, comprising 80 individuals, we witness an even more pronounced endorsement of OTT content. The significant presence of individuals expressing a high level of satisfaction underscores the appeal and quality of the programming available through these digital platforms. It implies that OTT platforms effectively cater to the diverse preferences and expectations of their audience, thereby fostering a deeply gratifying viewing experience.

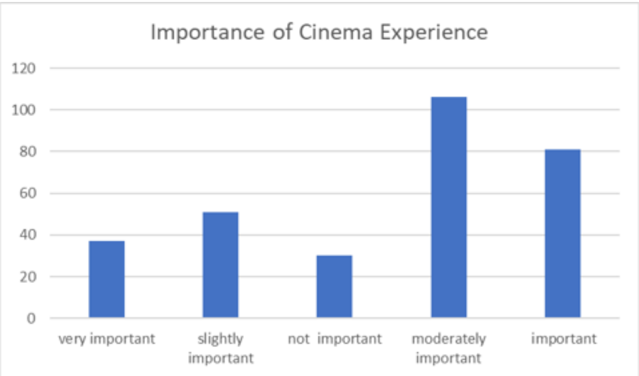
Meanwhile, the "Ok" category, encompassing 40 respondents, represents a segment of the audience with a more reserved stance towards OTT content. While not overtly dissatisfied, individuals in this group exhibit a neutral disposition, suggesting that they find the content on OTT platforms passable but may not be particularly enthusiastic or engaged with it. This ambivalence underscores the importance of continually refining and diversifying content offerings to cater to varying audience tastes and preferences.

Conversely, the lower echelons of the satisfaction spectrum, namely the "Dissatisfied" and "Very Dissatisfied" categories, encompass 21 and 26 respondents, respectively. These individuals articulate varying degrees of discontentment with the content provided by OTT platforms. Their dissatisfaction may stem from issues related to content quality, diversity, relevance, or alignment with personal preferences. Addressing the concerns of these segments is crucial for OTT platforms to enhance user satisfaction and retain their patronage.

The varied satisfaction levels with OTT content show how viewer preferences, content choices, and platform performance all influence each other. By recognizing and addressing these factors, OTT platforms can improve their content strategies, build stronger connections with their audience, and stay competitive in the ever-changing digital media world.

C. Cinema Experience

Figure 3 – Importance of Cinema Experience



The importance of the cinema experience can vary significantly from person to person, depending on individual preferences and priorities. For some, factors like top-notch projection quality, convenient ticketing and seating options, and a wide selection of snacks and refreshments may be crucial. However, others may prioritize only high-quality projection, disregarding other amenities.

The data sheds light on how respondents perceive the importance of the cinema experience, offering insights into the factors that influence audience engagement with traditional cinema venues.

The largest group of respondents, totaling 106 individuals, falls into the "Moderately Important" category. This indicates a moderate level of importance placed on the cinema experience. While these respondents appreciate traditional cinemas, other factors may also play a role in their entertainment choices.

Following closely behind are respondents in the "Important" category, comprising 81 individuals. This group places significant emphasis on the value of the cinema experience, suggesting that a considerable portion of the surveyed audience considers it integral to their entertainment preferences. Factors such as the immersive atmosphere, social interactions, and high-quality audiovisuals likely contribute to their appreciation of traditional cinemas.

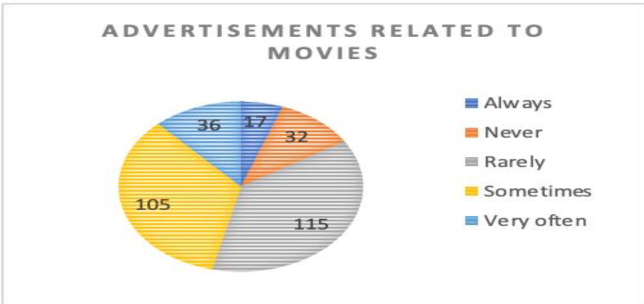
The "Slightly Important" category includes 51 respondents who attribute a modest level of importance to the cinema experience. While not their top priority, they still recognize its significance in their entertainment preferences, indicating a balanced perspective on cinema-going.

On the lower end of the importance scale, the "Not Important" and "Very/Extremely Important" categories encompass 30 and 37 respondents, respectively. These individuals express varying degrees of indifference or exceptional importance towards the cinema experience, reflecting the diversity of attitudes within the surveyed audience.

Overall, the data highlights the nuanced nature of audience perceptions regarding the cinema experience. Understanding these varying perspectives is essential for cinema operators and stakeholders to tailor their offerings and enhance audience engagement with traditional cinema venues.

D. Advertisements/Campaigns

Figure 4- Advertisements related to movies



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The data provides valuable insights into how often respondents encounter advertisements and marketing campaigns related to movies, offering perspectives on the factors influencing audience engagement with cinema-related promotional activities.

The largest group of respondents, totaling 115 individuals, fall into the "Very Often" category. These individuals demonstrate a high level of awareness and engagement with movie-related advertisements, indicating that they frequently notice promotional materials and marketing campaigns associated with upcoming films. Their frequent exposure suggests a keen interest in staying updated on movie releases and industry news.

Following closely behind are respondents in the "Sometimes" category, comprising 105 individuals. This group acknowledges occasional exposure to movie-related advertisements and marketing campaigns, indicating that while they may not notice them as frequently as the first group, they still encounter such promotional materials from time to time. Their intermittent exposure may influence their awareness of upcoming movie releases and influence their decision-making process.

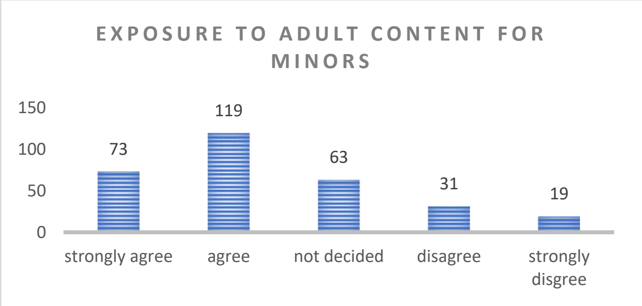
In contrast, the "Rarely" category is a smaller cohort, with 36 respondents indicating infrequent notice of movie-related advertisements and marketing campaigns. This suggests that a smaller portion of the surveyed audience does not regularly encounter such promotional materials, potentially impacting their awareness of new movie releases and their level of engagement with cinema-related marketing efforts.

Another smaller group of 32 respondents falls into the "Always" category, indicating heightened awareness of advertisements and promotions related to movies and cinema. Their acute attention to promotional materials suggests a strong influence on their movie-going or cinema-visiting habits, with marketing campaigns playing a significant role in shaping their entertainment choices.

On the opposite end of the spectrum, the "Never" category comprises 17 respondents who indicate a complete lack of notice of advertisements or marketing campaigns related to movies. This group represents individuals who may actively avoid or overlook such promotional materials, indicating minimal engagement with cinema-related marketing efforts and potentially relying on other sources for movie information.

E. Exposure of adult content to minors

Figure 5- Exposure to Adult content



With the upcoming usage of OTT, the content which was rated A in cinemas and not accessible to minors, is now available for them on OTT. The minors, without any restrictions, can consume such content.

This data provides insights into respondents' perceptions regarding the exposure of adult content to minors, offering valuable perspectives on the factors influencing audience engagement with cinemas and the importance of age-appropriate content.

A significant portion of respondents, comprising 119 individuals in the "Agree" category, and 73 individuals in the "Strongly Agree" category, advocate for preventing the exposure of adult content to minors. This suggests that a substantial proportion of the surveyed audience recognizes the importance of ensuring age-appropriate content in cinema offerings, with the belief that such exposure may negatively impact engagement with cinema experiences.

The "Undecided" category, encompassing 63 respondents, represents individuals who express uncertainty or neutrality regarding the issue of exposure of adult content to minors. While they may not hold strong opinions on the matter, these respondents may still be influenced by prevailing societal norms and regulations governing content accessibility in cinemas.

On the opposite end of the spectrum, the "Strongly Disagree" and "Disagree" categories, comprising 19 and 31 respondents, respectively, indicate a belief that there is minimal exposure of adult content to minors. These individuals do not perceive a significant impact on cinema engagement and may not have concerns about minors viewing adult content.

Overall, the data underscores the varying attitudes and perceptions regarding the exposure of adult content to minors among respondents, reflecting diverse perspectives on the importance of age-appropriate content in cinemas. Understanding these nuances can inform efforts to promote responsible content management practices and enhance audience engagement with cinemas by ensuring a safe and inclusive viewing experience for all.

III. Descriptive Statistics

(Figure 6)	Engagement with cinemas	OTT usage	Satisfaction from the content of OTT	Cinema Experience	Advertisements/ Market campaigns	Exposure of adult content to minors
Mean	2.488525	3.878689	3.737705	3.144262	2.642623	3.642623

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Standard Error	0.060929	0.070628	0.067064	0.065158	0.05764	0.065025
Median	2	4	4	3	3	4
Mode	2	5	4	3	2	4
Standard Deviation	1.064081	1.233458	1.171223	1.137941	1.006632	1.135616
Sample Variance	1.132269	1.521419	1.371764	1.294909	1.013309	1.289625
Kurtosis	-0.00452	0.069836	0.300096	-0.62093	-0.08415	-0.1798
Skewness	0.673258	-1.01656	-1.02295	-0.19164	0.471301	-0.71616
Range	4	4	4	4	4	4
Minimum	1	1	1	1	1	1
Maximum	5	5	5	5	5	5
Sum	759	1183	1140	959	806	1111
Count	305	305	305	305	305	305

1. Engagement with Cinema:

The data suggests that respondents have a relatively low level of engagement with cinemas, with a mean score of 2.49. This indicates that, on average, individuals aren't highly involved in traditional cinema experiences. The slightly positive skewness of the data implies that more respondents tend to have lower engagement scores, with fewer reporting higher levels of engagement. This skewness could be due to factors like the availability of alternative entertainment options or changing viewing habits.

Additionally, the relatively flat distribution of responses, indicated by the low kurtosis value, suggests that responses are spread somewhat evenly across the range of engagement scores. This indicates a diversity of engagement levels among respondents, with some showing higher interest in cinemas while others exhibit lower interest.

The range of responses from 1 to 5 underscores the variability in engagement levels among respondents. Some individuals indicate very low engagement (scoring 1), while others express moderate (scoring 3) or higher engagement (scoring 5). This diversity suggests that preferences and behavior regarding cinema engagement vary among the surveyed population.

2. OTT Usage:

In contrast to engagement with cinemas, respondents demonstrate higher levels of engagement with Over-The-Top (OTT) platforms, with a mean score of 3.88. This suggests that, on average, individuals are more actively involved in using OTT platforms for entertainment compared to traditional cinema experiences. The negatively skewed distribution indicates that more respondents tend to have higher OTT usage scores, with fewer individuals reporting lower usage levels. This skewness reflects the growing popularity of OTT platforms as primary sources of entertainment.

Furthermore, the slightly peaked distribution, as indicated by the positive kurtosis value, suggests that responses are concentrated towards the higher end of the scale, with a significant portion of respondents reporting relatively high OTT usage. This concentration implies a consistent preference among respondents for consuming content through OTT platforms.

Despite the similarity in the range of responses compared to engagement with cinemas, the notably higher mean score for OTT usage underscores the greater prevalence and importance of OTT platforms in contemporary entertainment consumption habits.

3. Satisfaction from OTT Content:

Respondents generally express moderate satisfaction with the content available on OTT platforms, with a mean score of 3.74. This suggests that, on average, individuals find the content offered by OTT platforms to be satisfactory, although not overwhelmingly so. The negatively skewed distribution indicates that more respondents tend to have higher satisfaction scores, indicating that a majority of individuals are content with the variety and quality of content available on OTT platforms.

Similar to OTT usage, the slightly peaked distribution suggests a concentration of responses towards the higher end of the satisfaction scale, indicating that a significant portion of respondents report relatively high levels of satisfaction with OTT content. This concentration highlights the overall positive perception of OTT content among the surveyed population.

The consistency in skewness and kurtosis values between satisfaction from OTT content and OTT usage suggests a strong correlation between usage levels and satisfaction levels. Individuals who engage more frequently with OTT platforms also tend to be more satisfied with the content offered.

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4. Cinema Experience, Advertisements/Market Campaigns, Exposure of Adult Content to Minors:

These aspects exhibit similar patterns in terms of descriptive statistics, with mean scores hovering around 3, indicating a moderate level of satisfaction or concern among respondents. The slightly negative skewness of the distributions suggests that more respondents tend to have higher satisfaction levels or lower concerns compared to lower ones, albeit to a lesser extent than observed for OTT-related variables.

This moderate level of satisfaction or concern regarding cinema experiences, advertisements/market campaigns, and exposure of adult content to minors reflects a balanced perspective among respondents. While there may be areas for improvement or concerns to address, overall satisfaction levels are neither exceptionally high nor low.

In conclusion, the descriptive statistics provide insights into the levels of engagement with cinemas and OTT platforms, satisfaction with OTT content, and concerns regarding various aspects of entertainment consumption. The data reflects the evolving landscape of entertainment preferences and highlights the increasing prominence of OTT platforms in contemporary media consumption habits.

IV. Spearman's Rank Correlation Coefficient

The Spearman's Rank Correlation Coefficient is a statistical measure that can be used to determine the direction and degree of correlation between two variables, regardless of the kind of data. It assesses how well two variables' ranks match one other, providing information about their relationship via a monotonic function. This coefficient can be used to analyze ordinal variables that are discrete or continuous.

We examined the relationships between audience engagement with cinemas and a variety of independent variables using the data from our survey and Spearman's Rank Correlation, which shed light on the factors that influence modern media consumption habits. We found substantial positive or negative correlation coefficients in every example.

Correlation signifies a form of interdependence, wherein changes in one variable are likely to correspond with changes in another. A positive correlation denotes that both variables move in the same direction, meaning an increase in one variable tends to coincide with an increase in the other, and vice versa. Conversely, a negative correlation implies that the variables move in opposite directions: an increase in one variable typically corresponds with a decrease in the other, and vice versa.

(Figure 7) Correlation	OTT usage	Satisfaction from the Content of OTT	Cinema Experience	Advertisements/Market Campaigns	Exposure of Adult Content to Minors
Engagement with cinemas	-0.7115905)	-0.6094943	0.63434849	0.80536877	-0.7996482

Analysis of Correlation Coefficients:

1. OTT Usage:

The negative correlation coefficient (-0.7115905) indicates a significant inverse relationship between audience engagement with cinemas and OTT usage. This implies that individuals who frequently utilize Over-The-Top (OTT) platforms are less inclined to engage with cinemas. It suggests a shifting preference towards streaming services over traditional cinematic experiences, potentially driven by the convenience and extensive content libraries offered by OTT platforms.

2. Satisfaction from the Content of OTT:

Similarly, the negative correlation coefficient (-0.6094943) suggests a substantial negative correlation between audience engagement with cinemas and satisfaction from the content available on OTT platforms. This implies that individuals who find OTT content more satisfying are less likely to engage with cinemas. The allure of personalized content, on-demand viewing, and diverse genres available on OTT platforms may diminish the appeal of traditional cinema experiences for these individuals.

3. Cinema Experience:

Conversely, the positive correlation coefficient (0.63434849) indicates a notable positive correlation between audience engagement with cinemas and the quality of cinema experience. This suggests that individuals who have positive experiences at cinemas are more inclined to engage with them. Factors such as the immersive environment, social interactions, and superior visual/audio quality contribute to the preference for traditional cinema venues among this demographic.

4. Advertisements/Market Campaigns:

A significant positive correlation coefficient (0.80536877) highlights a strong positive association between audience engagement with cinemas and exposure to advertisements and market campaigns related to movies. This implies that individuals who are frequently exposed to movie-related advertisements are more likely to engage with cinemas. Effective promotional efforts and heightened awareness of upcoming film releases influence their decision to patronize traditional cinema venues.

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5. Exposure of Adult Content to Minors:

Conversely, the negative correlation coefficient (-0.7996482) indicates a robust negative correlation between audience engagement with cinemas and concerns regarding the exposure of minors to adult content. This suggests that individuals who are more apprehensive about the risk of minors accessing adult content are less inclined to engage with cinemas. They may prefer entertainment options that afford greater control over content accessibility, such as parental controls available on OTT platforms.

Implications and Conclusion:

The Spearman's rank correlation coefficients elucidate the intricate interplay between audience engagement with cinemas and various factors shaping contemporary media consumption patterns. These findings offer valuable insights for stakeholders in the entertainment industry, enabling them to devise strategies to adapt to evolving consumer preferences and behaviors. As OTT platforms continue to proliferate and redefine the entertainment landscape, traditional cinemas must innovate and enhance their offerings to remain competitive and retain audience engagement.

V. Regression Analysis

The regression model suggests that all independent variables contribute to explaining audience engagement with cinemas, as indicated by the coefficients for X1 to X5.

Regression analysis provides a powerful tool for understanding the relationship between variables and predicting outcomes. In the context of entertainment consumption habits, it helps unravel the complex dynamics between audience engagement with cinemas and various influencing factors. By examining the coefficients derived from the regression model, we can discern the magnitude and direction of the impact that OTT usage, satisfaction from OTT content, cinema experience, advertisements/market campaigns, and exposure of adult content to minors have on audience engagement with cinemas.

Here we have a multiple linear regression (Y=a+b1 X1 +b2 X2 +b3 X3 + b4 X4 +b5 X5 +u)

where**:** u=The regression residual or error term which here is zero.) that relates variable Y with five variables X1, X2, X3, X4, X5.

(Figure 8)	Coefficients
Intercept	2.99744
Usage of OTT	-0.211
Satisfaction from the Content of OTT	-0.0553
Cinema Experience	0.22107
Advertisements/Market Campaigns	0.3143
Exposure of Adult Content to Minors	-0.2771

We would interpret the model as the value of Y changes by –0.211x for every one-unit change in X_1 (if X1 goes up by 2, Y decreases by 0.00806, etc.) holding all else constant (all else equal). That means controlling for X5, X4, X3, X2, X1 has this observed relationship. Likewise, holding X1 constant, every one unit increase in X2 is associated with a 0.0553x decrease in Y. We can also note the y-intercept of 2.99744, meaning that Y = 2.99744 when X1, X2, X3, X4, X5 are all zero.

Interpretation of Coefficients:

1. Intercept: The intercept term (2.99744) represents the baseline level of audience engagement with cinemas when all independent variables (OTT usage, satisfaction from OTT content, cinema experience, advertisements/market campaigns, exposure of adult content to minors) are zero. It provides a reference point for understanding the relationship between the dependent variable (audience engagement) and the independent variables.

2. Usage of OTT (X1): The coefficient (-0.211) indicates that for every one-unit increase in OTT usage, audience engagement with cinemas decreases by 0.211 units, holding all other variables constant. This suggests a negative relationship between OTT usage and cinema engagement, implying that individuals who spend more time on OTT platforms are less likely to engage with cinemas.

3. Satisfaction from the Content of OTT (X2): The coefficient (-0.0553) suggests that for every one-unit increase in satisfaction from OTT content, audience engagement with cinemas decreases by 0.0553 units, controlling for other variables. This negative relationship indicates that individuals who find OTT content more satisfying are less inclined to engage with traditional cinemas.

4. Cinema Experience (X3): With a coefficient of 0.22107, cinema experience has a positive impact on audience engagement with cinemas. For every one-unit increase in the

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quality of cinema experience, engagement with cinemas increases by 0.22107 units, holding other variables constant. This implies that positive experiences at cinemas contribute to higher levels of engagement with traditional cinematic venues.

5. Advertisements/Market Campaigns (X4): The coefficient (0.3143) signifies that exposure to advertisements and market campaigns related to movies positively influences audience engagement with cinemas. For every one-unit increase in exposure to such promotional efforts, engagement with cinemas increases by 0.3143 units, controlling for other variables. This suggests that effective marketing strategies contribute to higher patronage of traditional cinema venues.

6. Exposure of Adult Content to Minors (X5): The coefficient (-0.2771) indicates a negative relationship between exposure of adult content to minors and audience engagement with cinemas. For every one-unit increase in concerns regarding such exposure, engagement with cinemas decreases by 0.2771 units, holding other variables constant. This implies that individuals who are more apprehensive about minors accessing adult content are less likely to engage with traditional cinemas.

Validation with Data:

The regression model's validity is further supported by the dataset presented in Figure 9. The data depicts a hypothetical scenario where values for OTT usage, satisfaction from OTT content, cinema experience, advertisements/market campaigns, exposure of adult content to minors, and audience engagement with cinemas are systematically varied. The consistency between the observed values of audience engagement with cinemas and the predictions derived from the regression model reinforces the model's accuracy in explaining the relationship between the dependent and independent variables.

Figure 9

X1	X2	X3	X4	X5	Y
6	6	6	6	6	2.94907
7	7	7	7	7	2.94101
8	8	8	8	8	2.93295
9	9	9	9	9	2.92489
10	10	10	10	10	2.91683

In summary, the regression analysis offers valuable insights into the factors influencing audience engagement with cinemas. By quantifying the impact of variables such as OTT usage, satisfaction from OTT content, cinema experience, advertisements/market campaigns, and exposure of adult content to minors, the regression model enhances our understanding of contemporary media consumption habits. These insights can inform strategic decision-making for stakeholders in the entertainment industry, guiding efforts to adapt to evolving consumer preferences and behaviors.

VI. LIMITATIONS

Our study utilized various statistical methods, including histograms, pie charts, and Spearman's Rank Correlation Coefficient, to analyze the survey data we collected. However, each method has its drawbacks:

Histograms: These visually organize data into user-specified intervals, simplifying interpretation. However, they:

- Cannot determine exact values due to data grouping.

- Are applicable only to continuous data.

- Make it difficult to directly compare two datasets.

- Have limitations in calculating precise measures of central tendency due to interval grouping.

- Are sensitive to the number of bins employed and the variable's maximum and minimum values.

Pie Charts: While visually representing numerical proportions, pie charts:

- Become less effective with too many data segments.

- Risk overcrowding and decreased readability with numerous segments.

- Only represent one dataset at a time, hindering multiple dataset comparisons.

- Pose challenges for quick analysis and interpretation.

- May lead to inaccurate conclusions by prioritizing visual impact over data analysis.

Spearman's Rank Correlation Coefficient: This metric gauges the correlation of ranks between variables but:

- Becomes inconvenient with large sample sizes.

- Cannot obtain a combined 'R' value for different series.

- Requires ranked values rather than actual data.

- May be complex to compute, particularly with high-value data.

Other limitations impacting our study include:

- Sample Size: Small samples may lead to biased results, reduced accuracy, and limited generalizability.

-Data Availability: Biased samples and limited historical data may skew results and hinder analysis accuracy.

- Time Constraints: Limited time for data cleaning, collection, and analysis may affect accuracy and completeness.

Despite these limitations, we believe our study offers valuable insights for strategic growth.

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VII. Findings and Conclusion

1) As evidenced by the fact that the majority of respondents (121) depend on OTT platforms on a daily basis for entertainment, streaming material is significantly preferred over traditional movie going experiences. This may have an effect on how people interact with movie theatres since it indicates a shift in customer behavior towards easy, on-demand viewing.

2) The fact that 138 out of the respondents are satisfied with the material that is accessible on over-the-top (OTT) platforms indicates that a sizable segment of the population who participated in the study thought the programming provided by these services was usually good. This favorable opinion of content can encourage users to stay loyal to and engaged with OTT services.

3) 81 of respondents gave the cinema experience a high priority, indicating that a sizeable portion of the surveyed audience views elements like social interaction, immersive environment, and high-quality audio visuals as essential to their entertainment choices, which may have an effect on their engagement with conventional movie theatres.

4) Another discovery is that a sizable portion of respondents (32) often see marketing activities and commercials pertaining to films, suggesting a high degree of awareness and participation. This implies that focused marketing campaigns might have a big impact on their movie-going behaviors, which could affect the box office performance and moviegoer attendance.

5) The relevance of age-appropriate material and its potential effects on moviegoer engagement are highlighted by the overwhelming majority of respondents (192) who voiced worry about preventing children from being exposed to adult content on OTT platforms. In order to provide a secure and welcoming viewing environment for all audiences, this emphasizes the necessity of appropriate content control techniques.

6) The Spearman's Rank Correlation study demonstrated the interdependence of contemporary media consumption patterns by revealing strong positive or negative correlations between audience involvement with theatres and a variety of independent factors. This emphasizes how crucial it is to comprehend the various ways in which people's choices and behaviors with relation to going to the movies are influenced by various circumstances.

7) While helpful for displaying the distribution of data, histograms can be problematic for precisely measuring central tendency because of their inclination to clump data. Their ineffectiveness lacks communicating precise information is impacted by their sensitivity to bin selection and inappropriateness for direct dataset comparisons, especially when dealing with continuous data.

8) Large sample sizes, computational complexity, and the requirement for ranked values rather than raw data present difficulties for Spearman's Rank Correlation Coefficient, despite its usefulness in evaluating correlations between variables. This might make it less accurate and useful for analyzing large or highly valuable datasets.

Talking of market size of film industry in India 2017-2016,

the size of the Indian film industry grew to over 197 billion Indian rupees in the year 2023. While indicative of a trajectory of recovery, the industry was still reeling from the blow dealt by the coronavirus pandemic, in addition to competing with a swiftly expanding video OTT culture.

A. Indian Box office

India has one of the oldest and the largest film industries globally, with Bollywood reigning over the box office. Prior to the advent of the COVID-19 pandemic, India's box office revenue grossed over 114 billion Indian rupees. Post-pandemic, the return of movie-goers to theaters led to average movie ticket prices growing by nearly 37 percent in 2022.

B. The rise of OTT platforms across India

Video streaming services, or over-the-top (OTT) platforms, gained immense popularity among Indians especially during the pandemic and subsequent lockdowns, when they were restricted to their homes. The online video market in India comprises a mix of global and local players contending for the attention of over 400 million users. However, none of these streaming platforms have been able to penetrate the market quite like YouTube.

In conclusion, our in-depth exploration of audience engagement with cinemas and Over-The-Top (OTT) platforms has revealed compelling insights into contemporary media consumption trends. The data highlight a discernible trend wherein individuals are delicately balancing their entertainment choices between traditional cinema visits and the convenience offered by OTT streaming services. This reflects a significant shift in consumer preferences, influenced by factors such as accessibility, content variety, and viewing comfort.

While satisfaction levels vary across both OTT content and cinema experiences, indicating a spectrum of opinions among viewers, the pervasive presence of movie-related advertisements underscores the substantial impact of marketing on audience decision-making. These findings emphasize the need for industry stakeholders to strategically leverage marketing campaigns to enhance audience engagement and drive participation.

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Despite relatively low concerns regarding minors' access to inappropriate content, it remains imperative for industry players to prioritize responsible content management practices. This includes implementing robust parental controls and collaborating with regulatory bodies to ensure the availability of age-appropriate content on both cinema screens and OTT platforms, thereby fostering a safe and enjoyable viewing environment for all audiences.

Furthermore, insights gleaned from additional comments provided by respondents shed light on the unparalleled allure of the cinematic experience, particularly for larger-than-life content. While OTT platforms offer convenience and accessibility, the unique ambiance and immersive nature of cinema viewing continue to hold significant appeal, especially for high-quality productions and captivating storytelling.

In summary, our comprehensive findings offer a vivid portrayal of audience behaviors and preferences, illuminating the dynamic landscape of modern entertainment consumption. Armed with these insights, industry leaders are empowered to navigate this evolving landscape with heightened understanding, endeavoring to create compelling and inclusive experiences that resonate with audiences worldwide.

VIII. RECOMMENDATIONS

Based on our findings, we propose the following actionable recommendations for cinema operators and content creators to enrich audience experiences and maximize engagement:

1. Enhance the Cinema Experience: Invest in upgrading technological infrastructure to offer state-of-the-art audiovisual experiences. Additionally, prioritize improving customer service by training staff to provide personalized assistance and create a welcoming atmosphere. Innovative marketing strategies, such as hosting exclusive events or partnering with local businesses, can also enhance the overall cinema experience and foster a sense of community among moviegoers.

2. Promote Responsible Content Management: Collaborate with industry regulators to establish clear guidelines for age-appropriate content in cinemas and OTT platforms. Implement robust parental control features to empower caregivers to monitor and regulate minors' access to content. By ensuring a safe and secure viewing environment, cinemas can build trust with audiences and encourage repeat visits.

3. Boost Awareness of Cinema Offerings: Increase the visibility of cinema-related advertisements and marketing campaigns through targeted promotions across various channels. Leverage social media platforms, email newsletters, and partnerships with influencers to reach a broader audience and generate excitement around upcoming releases and special events. Engage with local communities through outreach programs and sponsorships to cultivate a loyal customer base and drive attendance.

APPENDIX

Survey conducted:

1. How often do you go to the cinemas? *

Mark only one oval.

- 1 (less than once a month)
- 2 (once a month)
- 3 (twice a month)
- 4 (more than twice a month)
- 5 (once-twice a week)

OTT Consumption Habits

2. How often do you use OTT platforms? *

Mark only one oval.

- (5) Daily
- (4) Several times a week
- (3) Once a week
- (2) Occasionally
- (1) Rarely

3. On a scale of 1 to 5, how satisfied are you with the content available on OTT platforms? *

Mark only one oval.

	1	2	3	4	5	
Very	◯	◯	◯	◯	◯	Very Satisfied

4. Do you think with the introduction of OTT platform, children below 18 are able to consume content above 18?

Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly Agree

Cinema Experience Preferences

5. On a scale of 1 to 5, how important is the cinema experience to you? *

Mark only one oval.

	1	2	3	4	5	
Not	◯	◯	◯	◯	◯	Very Important

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6. How often do you notice advertisements/marketing campaigns related to movies? *

Mark only one oval.

	1	2	3	4	5	
Nev	◯	◯	◯	◯	◯	Always

Additional Comments

7. Please feel free to share any further thoughts, opinions, or suggestions related to your experiences with big screens and movie-going. Your feedback is valuable to us and will help us gain deeper insights into audience engagement with cinemas.

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REFERENCES

[1]- Norway: Laerd Statistics,2018

[2]- Qualtrics xm, 2024

[3]- Baranidharan S. India: Time of India, 2023

[4]- J. Punwani. India: Hindustan Times, 2024

[5]- D. Sinha. India: New Indian Express, 2024

[6]- A. Jha. India: Cnbctv18, 2020

[7]- Dr. S.P.Gupta, Statistical Methods. India: Sultan Chand and Sons, 2021

[8]- T.Basuroy, Market size of film industry in India 2017-2026. India: Statista, 2024

[9]- Conducted Survey

