

-RESEARCH ARTICLE-

EXPLORING CONSUMER DIFFERENTIATION IN INFORMATION PRODUCTS: A COMPARATIVE ANALYSIS OF MASS CINEMA AND AUTEUR CINEMA

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—Abstract—

The COVID-19 pandemic and the consequent demand for remote interaction technologies have accelerated the current globalization and digitalization of the

Citation (APA): Rodionov, D., Arzumanov, O., Konnikov, E. (2022). Exploring Consumer Differentiation in Information Products: A Comparative Analysis of Mass Cinema and Auteur Cinema. *International Journal of eBusiness and eGovernment Studies*, 14 (4), 290-314. doi:10.34111/ijepeg.202214213

information environment. This fact results in the interpenetration of the interests and values of various population groups, which inevitably leads to the gradual formation of universal representations of information consumers. An analysis of the intricacies of the differentiation of these avatars will enhance the quality of these information products from the consumer's perspective, as well as their promotion and distribution processes. Films were chosen as one of this study's most prominent and representative information products. This study aims to quantify and analyze the consumer properties of films in the context of auteur and mass cinema, as manifested in the information environment through the artistic performance and commercial lens. The results of this study are presented through a system of regression equations that describe the distinction between the avatars of auteur and mass-market filmgoers and their system of information environment quantifiers. Marketers and sociologists specializing in information environment analysis and researchers of the digitalization process can benefit from this study's findings.

Keywords: information environment, mass cinema, auteur cinema

1. INTRODUCTION

Cinema as an art form tends to be perceived as spontaneous expressions of individual genius, which directly opposes the mission of film art's social analysis (Zolberg, 1990). Picasso once stated that attempting to comprehend art would be comparable to attempting to comprehend "bird song," as cited in Jarvie (1988). On the other hand, a significant group of sociologists boldly enter the field of art (and film in particular). According to them, artistic production, like other forms of social activity, cannot exist in isolation. The artwork can be considered a "social phenomenon" or "social fact." Do Nascimento, (2019). The aim of a "sociology of art" should be to analyze a "continuous social process," according to a German sociologist and musician (Muhammad, 2022). This process would disclose the interdependent relationships between the artist, the artwork, and society, compelling us to consider the interplay between the various elements. Based on this concept, the sociology of art would be able to study a variety of topics, including the relationship and interdependence between artist and audience, the social background of certain categories of artists and their social context, the social impact of a work of art, the audience that receives and responds to works, etc. Applying the trend mentioned above of examining the relationship between art and society to the cinema, it is clear that contemporary cinema should be considered in its two hypostases: auteur cinema and mass cinema. Whether we are referring to auteur or mass cinema, it is evident that society's attitude, be it consumers or critics, will vary. The topic of the relationship between film and society is not a novel one. Since the Lumière brothers screened their first film in 1895, cinema has become an integral part of modern society as a product and a means of self-expression. With the development of cinema's technical and creative aspects, its function in society shifted from mere amusement to a legitimate art form with a growing impact on the public consciousness. Georges Méliès was the

first filmmaker who, at the juncture of the 19th and 20th centuries, demonstrated that cinema could be art by viewing it as a means to enrich the scene. With the changing role of cinema in public life, the structure of cinema has evolved and become more complex. Cinema has been divided into documentary and fiction, different genres have been allocated and developed, and the distinction between commercial and creative approaches to filmmaking has been established (Chen, 2022). It is essential to distinguish between auteur cinema and mass cinema (mainstream cinema, commercial cinema). During the First World War, European society became acquainted with film as an art, known as "auteur theory," which would later serve as the foundation for European avant-garde cinema. After World War II, European avant-garde artists, such as André Breton, Salvador Dali, and Marcel Duchamp, introduced the concept of "auteur cinema" – "art cinema" – to the United States (Ullah et al., 2021). The purpose of this study is to examine the attitudes of contemporary society toward mass and independent art through the lens of mass and auteur cinema, as well as to determine the disparity between the perception of said art by the general public and experts (as opposed to the general public). Before discussing the relationship between society and film, it is necessary to delineate two major perspectives.

2. LITERATURE REVIEW

Auteur cinema is a form of authorial self-expression through cinematography in which the author controls all aspects of the creation of their film to disclose their perspective on certain things and their inner world. In filmmaking, "author" refers to a director who exercises a high degree of control over all aspects of the film to express their artistic vision (Ahmad et al., 2022). Author directors tend to have a distinct style throughout their filmography and frequently have additional responsibilities, such as scriptwriting, editing, and acting.

Mass cinema (or mainstream) is traditionally opposed to auteur cinema, which necessitates greater self-awareness and empathy. Mass cinema connotes popularity, mass appeal, profit, and the satisfaction of the greatest number of consumers imaginable. As a result, mass films are frequently referred to as conventional or commercial films. Because the filmmaking process is based on hiring and coordination, studios and producers engage the director, screenwriters, actors, etc. The production concept of American cinema best exemplifies the commercial approach to cinema, in which the creative person (director, cameraman, "author") is relegated to the background, and the producer, responsible for the film's box office success, plays the dominant role. During Hollywood's Golden Age, the commercial film production system flourished and evolved into the Hollywood studio system, which is prevalent today.

The history of cinema begins with auteur cinema, so it is necessary to commence an introduction to cinematography there. According to Zvonkine (2016), the genesis of the auteur cinema phenomenon lies not in the films themselves but in how they are presented

to society. Thus, in the early 1950s, the concept of cinema as an art form took shape in France as the auteur theory ("author's theory"). This new theoretical foundation allowed the concept of cinema as art to continue to exist as an independent approach to film. According to [Gerasimov and Tereshchenko \(2020\)](#), the essence of auteur cinema is a maestro's free exploration of the world with their own vision. Auteur cinema primarily aims for a singularly personal, confessional expression, projecting a solely individual viewpoint.

Even though a film is the result of the collaboration of a large team, the director is a central figure in the filmmaking process. They are the creator of the artistic work, often acting as a screenwriter, producer, and film editor at the same time, or at least carefully controlling these processes.

[Hadida \(2010\)](#) continues the description of American cinema by examining the relationship between filmmaking's commercial and artistic aspects. She identifies the importance of commercial success in the United States and the institutional status of American filmmaking as primarily an industry, as opposed to European countries where the filmmaker exerts a great deal of influence. In all models, significant relationships between budget, commercial performance, and critical acclaim indicate that, in general, the most expensive films are also those with the highest box office and critical acclaim.

Moreover, the relationship between cinema and society has been studied by [Do Nascimento \(2019\)](#), in which the author contends that viewing a film becomes a socially significant event due to its emotional, psychological, and pedagogical effects on us. This article examines sociological perspectives on the relationship between art, cinema, and society. The author concludes that people perceive and evaluate films based on their social context and moral values and that film functions as a social phenomenon. We perceive the world (and movies) not "as it is" but "as we are."

In his article, [Alcolea-Banegas \(2009\)](#) investigates human perception by taking a closer look at the form and characteristics of cinema. Several distinctions between the film's verbal and visual arguments are highlighted. The film is predominantly a visual art, so visual arguments are crucial in their perception and interpretation. Once interpreted, these arguments can potentially polarize society, as there will always be disagreements regarding the correct interpretation. Understanding a film is a complex process of perception, interpretation, correlation with one's experience, and reflection that transcends logic, according to the article's thesis. The cinematic techniques, the director's intentions, and the characters' emotions are crucial in determining the significance of the film's visual arguments and, ultimately, in persuading the audience to embrace the thesis the director intended to establish. As part of the director's strategy, the audience's emotional responses are influenced by the emotions experienced by the film's characters.

[Cranford \(2020\)](#) discusses the issue of attitudes toward mass-market cinema. He argues that mainstream films are just as excellent as auteur films by comparing them to

academic journalism, in which multi-authored scholarly works are more fundamental and comprehensive. The author concludes from this context that collaborative filmmaking following the studio model is just as essential as auteur filmmaking because a few ideas can generate a new, more meaningful idea.

The article by [Governo and Teixeira \(2014\)](#) examines the difference in demand for auteur and mainstream films. The authors identify the difference in demand for auteur films versus mainstream films from the perspective of different countries, demonstrating that some countries have a more exclusive attitude toward mainstream films. In contrast, others view films as works of art. In most contemporary societies, however, no art is free of economic connections, and regardless of the reason for viewing a film, all moviegoers seek technological excellence. A 2008 article by [Holbrook and Addis](#) considers ratings and hype as separate phenomena and proposes a two-path model of film success. The results support this model, which differentiates approaches to auteur and commercial films: both reviewers and audiences appreciate the aesthetic value of low-budget, low-profile auteur films with limited cinematic release; industry representatives who vote for the Oscars and other awards prefer films that reviewers and consumers consider high on cinematic excellence; and both reviewers and consumers enjoy the blockbuster aspects of big-budget, high-profile mass-market films.

[Addis and Holbrook \(2010\)](#) analyzed how the personal characteristics of filmgoers influence their preference for auteur or commercial films. He investigates whether there is a correlation between personality traits and an appreciation for a particular genre of film, specifically mainstream or auteur films. There was a significant correlation between a person's preference for auteur films and their receptivity to experience, according to the findings. Only openness to experience predicts a preference for auteur films over mainstream cinema, and the lower the scores for neuroticism and openness, the greater the preference for mainstream films.

[Gemser et al. \(2021\)](#) investigated whether the genre of film (auteur or mainstream) could be a significant factor in determining whether a film's reviews have an effect. In the case of mass-market cinema, success is determined by the quantity and magnitude of reviews. In the case of auteur cinema, film critics play a crucial role in molding consumer interest in auteur films as influencers. [Ullah et al. \(2023\)](#) also investigated which categories of awards have the most influence on the competitiveness of award winners, confirming the role of film critics in auteur cinema. In mass-market cinema, consumers pay roughly equal attention to different awards. In contrast, in independent cinema, an award from specialists and film critics has a greater impact on consumers than any other award.

It is also important to consider the impact of cinemas (and streaming services) on modern societies, as they have become an integral part of the film-viewing culture ([Aurier & Guintcheva, 2014](#)). In today's technological climate of streaming services and large-screen televisions, [Flynn \(2018\)](#) investigates what motivates audiences to view a film in

a theater rather than at home. Due to a desire to experience a sense of community, the results indicate that remakes and superhero films with a large fanbase are the most popular films in theaters today. When a film's subject matter is related to pre-existing elements of popular culture, audiences are particularly drawn to theaters. This reinforces the social aspect of cinema (Austin, 1983). Audiences want to watch these types of films in an environment with a sense of community to remain current and participate in a common conversation, reinforcing the social aspect of cinema. This encourages studios and online services to make strategic decisions regarding the production and distribution of films. This aspect is discussed in Khan et al.'s (2022) article, which identifies the problem of the declining role of cinemas in the film industry due to the advantages of online services that encourage consumers to view films at home.

By evaluating the effect of critics' reviews on the public success of a film, Reinstein and Snyder (2005) revealed another role that film critics can play: the results demonstrated that positive reviews have a particularly large impact on demand for dramas and films of limited circulation, i.e., they can be an effective means of informing the public about obscure films of uncertain quality.

Suárez-Vázquez (2011) investigates how individual moviegoers' ratings are affected by two variables: the critics' reviews and the stars. The outcome demonstrated that consumers rely on critics' opinions before viewing a film, but their opinions change afterward. Also, the individual study indicates that the correspondence between critics' and consumers' ratings is merely a coincidence of tastes and not the result of critics' influence on viewers.

It has also been discovered that the number of actors in a film does not affect consumers' pre- or post-viewing evaluations. This is generally supported by the article by Austin (1983), which investigates how closely film critics and the general public evaluate films. The article provides a logical explanation for the limited influence that film critics have on audience behavior by demonstrating the disparity between critic and consumer ratings. The results presented suggest that audiences are aware of the discrepancy between their evaluations and those of critics and, as a result, do not rely on critics as a significant variable in film selection and attendance decisions. However, the results described above do not align with the findings of Tsao's (2014) study, which examined the impact of consumer and expert evaluations on moviegoers' selections and ratings. Consumer opinions are more influential than critical opinions. It should be noted that negative reviews from both sources lowered the film's rating after viewing, but consumer reviews were more disruptive.

Consumers base their opinion of a film primarily on the current consensus but also consider the reputation of critics and the director. When a new film receives positive reviews from critics, consumers' opinions are influenced by the director's, not the critic's reputation. When critics' assessments are negative, however, the opposite pattern of

effects is observed. Here, the influence of the critic's notoriety is substantial, whereas the impact of the director's reputation is negligible.

An article by [Oghina et al. \(2012\)](#) reflects the social media context, which has become an important tool in modern society. It suggests that correlations between IMDb ratings and discussion activity for the same films on channels such as social media can be found. It was discovered that user activity on social networks such as YouTube and Twitter corresponded closely with IMDb user ratings.

[Gutzeit et al. \(2021\)](#) investigated the factors that influence viewers' selection of particular films or television series on streaming services, taking into account age categories. Despite obtaining algorithmic recommendations, viewers still rely on the reviews and recommendations of other viewers when deciding what to watch, and the effect may be strong enough to create echo chambers with self-reinforcing preferences. The article by [Iyengar et al. \(2011\)](#) investigates opinion leadership and social contagion, as well as the influence of product characteristics on contagion, contributing to our comprehension of how opinions form in social networks and laying the groundwork for enhancing marketing effectiveness.

It is snobbish to disregard mass cinema as a sociological or aesthetic phenomenon, according to [Jarvi \(2013\)](#), who asserts that the critical success of mass ("trash") cinema also depends on its aesthetic level, its informativeness, and its versatility (even though these factors are more frequently the strengths of authorial, intellectual cinema).

[Hart et al. \(2016\)](#) investigate what influences people's decisions to view or not watch a film (now or later, with whom, and in what setting). It was discovered that consumer viewing decisions are influenced by communication with other observers. Resources such as review websites, social media profiles of friends, and interactions with peers help consumers decide if a film suits them. Everyone has a unique preference pattern comprised of the characteristics of the film, the environment, and the viewing circumstance, all of which affect the decision to watch a film ([Badiou et al., 2013](#)). The classification process includes three dimensions that influence decision-making practices and the overall presentation of the film experience: film characteristics (genre, type, style); viewing environment (consumption at home or in a theater); and situational environment (time, season, and mood).

[Khan et al. \(2020\)](#) describe the success of a film from a psychological perspective. This paper proposes methods for predicting a user's genre preference and rating behavior based on psychological traits extracted from their social media interactions. The study found that films with storylines that include social, emotional, and enjoyable themes and themes of friendship, love, and success are rated highly. In contrast, films with emotionally negative storylines are rated poorly. It was confirmed that personality traits influence film appreciation. Openness to new experiences and extroversion significantly negatively correlate with film ratings. People with a high receptivity to new experiences

may give a film a low rating because they expect more novelty in its content than is typically provided.

Zhang et al. (2015) examine how users typically rate when they see an object's average rating based on previous ratings by other users. Generally, users rate a film based on its average rating, but two categories rate higher when the rating is low and lower when it is high. Gaenssle et al. (2018) investigated the factors influencing the box office performance of films in China and Russia, with proposed models capable of predicting box office revenues based on pre-defined factors. This study will shed light on commercial and auteur cinema separately, considering distinct audiences and markets.

3. METHODOLOGY

The sample size for the regression analysis was 200 films (100 auteur films and 100 bulk films). If the director and screenwriter are the same individuals, the film is considered an auteur film; otherwise, it is regarded as a mass film. The films span the years 2000 to 2022. Following is a description of interaction logic and a set of factors.

Y_1 - Auteur film ratings from viewers (IMDb);

Y_2 - Auteur film ratings from critics (Rotten Tomatoes);

Y_3 - Mainstream film ratings from viewers (IMDb);

Y_4 - Mainstream film ratings from critics (Rotten Tomatoes);

X_1 - As the individual responsible for the film's conception and presentation, the director influences the audience and the critics, or every Y factor. Comparing levels of interest based on inquiries to the base director (in auteur cinema, it is Denis Villeneuve. In mass cinema, it is Joseph Kosinski) from 2004 to 2022 indicates director popularity. It demonstrates that a director's fame should influence a film's success, as the most prominent directors are the most esteemed filmmakers. In addition, it can affect the popularity of the actors, as the greater the prestige of the director, the greater the interest that will be generated in the actors who feature in the films directed by that director.

X_2 - Actors: Similar to directors, popular actors (generally) have the skill and aptitude to elicit a stronger emotional response from moviegoers. This can affect the box office performance of a film. Actors' popularity rankings are derived from the IMDbPro website; the lower the ranking, the greater the actor's popularity (a very conventional division: 200 000 and below indicates a regular (average) actor, 2000 and below - a famous actor, and 200 and below - a celebrity). The actor affects the film's return on investment through the influence described above.

X_3 - Payback (box office/budget): Payback indicates the number of times a film's budget has been recouped (typically, a film is considered financially successful when its box office is greater than or equal to two to three times its budget as the actual costs of the

film are significantly higher than its advertised budget). Even though the return on investment (ROI) is unrelated to the artistic merit of a movie, this metric may reflect the film's rating dependence on its box office, as in such cases, the film's promotion campaign uses its box office success to showcase the film at its finest.

X₄ - View count: this factor may have a dual effect; on the one hand, a higher view count indicates that the film has been viewed by a much broader audience, which may result in a lower proportion of high scores; on the other hand, successful films may receive higher and higher scores, and vice versa. Consequently, the Y factors can influence this factor. This factor affects the film's ROI in the same manner as word of mouth. Depending on where it was more prevalent, this factor is derived from either the movie-centric social network Letterboxd or IMDb.

X₅ - As a measure of media activity, the ratio of interest levels from Google trends to a base film (Inherent Vice in auteur cinema, Top Gun 2: Maverick in mass cinema) was used during the year of the film release. The number of views is predominantly influenced by media activity; the greater the interest in a film, the more likely it is to be viewed.

X₆ - Trailer reaction (likes/views): This metric represents the ratio of likes to views and indicates the trailer's emotional impact. It influences the number of views because those who enjoy the trailer are likelier to watch the actual film.

X₇ - The number of cinemas in which a film is distributed indicates the film's availability to the public. This factor also impacts return on investment, as greater accessibility translates to a larger audience and, as a result, higher box office receipts.

X₈ - Average distribution duration: this indicator refers to a film's ability to maintain audience interest; if audience interest, as measured by box office returns, declines considerably, studios will typically pull the film from distribution, thereby affecting its return on investment.

X₉ - Number of awards: awards are a potent impetus for an interest in a film, creating a context of public esteem and significance around it. The logic behind this factor's influence is that the number of awards a film has will affect its popularity, as measured by media activity conveyed through inquiries. The awards themselves may be affected by Y; high ratings clearly indicate which film is more likely to win awards during award season.

X₁₀ - Genre: genre effectively segments audience tastes and preferences, making it essential for every Y;

X₁₁ - Film length is likely one of the most important technical parameters a viewer considers when selecting a film to observe. Therefore, longer films can alienate them, particularly in mainstream cinema, as long films are generally perceived negatively due

to the viewer's unwillingness to watch for an extended period. In contrast, shorter films are preferred, as dynamic and brief stories do not require much effort or time from the viewer. Consequently, this indicator can affect every Y.

X₁₂ - Originality of plot (original concept or adaptation): The plot of a film may play a significant role in how spectators evaluate it. The affection for the source material is the primary criterion for assessing adaptations, and the film's deviations from the source material may be grounds for a low score.

X₁₃ - This factor is determined by the number of Letterboxd users who have marked the film as one of their preferences. It affects the ratings because everyone awards their favorite films high marks; it follows that the more fans a film has, the higher its rating will be.

X₁₄ - This indicator is derived from Letterboxd as the ratio of likes (indicating that the film has generated a strong emotional connection) to views. It indicates the degree of affection or emotional attachment to the film and influences the ratings, as the greater the emotional connection to the film, the higher its score.

X₁₅ - The film's country of origin may impact its return on investment, as national film markets vary in their conjuncture, and audiences perceive films differently based on the country in which they were produced.

X₁₆ -

Participation in one of three film festivals (Berlin, Cannes, and Venice): this factor is only relevant for feature films. It thus affects their ratings, as commercial films are not included in festival programming. This binary indicator determines whether a film will be screened at one of the festivals listed below. The three most renowned film festivals are Cannes, Venice, and Berlin. Typically, film festivals determine the major trends and preferences during the awards season, affecting the number of awards. In addition, film festivals are prestigious and significant events in the film industry. They can highlight lesser-known authors and their films and allow journalists and critics to remark on premieres. This generates interest among their article's consumers, thereby impacting media activity.

All indicators, their symbols, units, and sources are listed in [Table 1](#).

The initial stages of the study consist of generating data and importing the data table into the KNIME environment. The data are then, if required, reduced to a similar dimensionality (in this study, it is the number of viewings and the number of theaters). The presence and type of relationships are then evaluated, and linearization is conducted if necessary.

Table 1. Summary Table of Indicators

Title	Unit designation	Units of measure	Source
Auteur film ratings from viewers	Y ₁	Weighted average 10-point scale	imdb.com
Auteur film ratings from critics	Y ₂	Weighted average 10-point scale	rottentomatoes.com
Mainstream film ratings from viewers	Y ₃	Weighted average 10-point scale	imdb.com
Mainstream film ratings from critics	Y ₄	Weighted average 10-point scale	rottentomatoes.com
Director	X ₁	Relative value	trends.google.com/trends/explore
Actors	X ₂	Relative value	www.imdb.com
Payback	X ₃	Share	www.imdb.com
Number of views	X ₄	Thousands	letterboxd.com/imdb.com
Media activity	X ₅	Relative value	trends.google.com/trends/explore
Reaction to trailers	X ₆	Share	youtube.com
Number of cinemas	X ₇	Thousands	the-numbers.com
Average distribution duration	X ₈	Weeks	the-numbers.com
Number of awards	X ₉	Pieces	imdb.com
Genre:	X ₁₀	Nominal/binary	imdb.com
Action	X _{10.1}	Nominal/binary	imdb.com
Adventure	X _{10.2}	Nominal/binary	imdb.com
Biographical drama	X _{10.3}	Nominal/binary	imdb.com
Drama	X _{10.4}	Nominal/binary	imdb.com
Comedy	X _{10.5}	Nominal/binary	imdb.com
Sci-fi	X _{10.6}	Nominal/binary	imdb.com
Thriller	X _{10.7}	Nominal/binary	imdb.com
Crime	X _{10.8}	Nominal/binary	imdb.com
Horror	X _{10.9}	Nominal/binary	imdb.com
Western	X _{10.10}	Nominal/binary	imdb.com
Musical	X _{10.11}	Nominal/binary	imdb.com
Film length	X ₁₁	Hours	imdb.com
The originality of the story	X ₁₂	Binary	Information about the film, its description
The number of fans of the film	X ₁₃	Thousands	letterboxd.com
Degree of love for the film	X ₁₄	Share	letterboxd.com
The film's origin:	X ₁₅	Binary/nominal	imdb.com
USA	X _{15.1}	Binary/nominal	imdb.com
Europe	X _{15.2}	Binary/nominal	imdb.com
Asia	X _{15.3}	Binary/nominal	imdb.com
Participation in one of three major film festivals	X ₁₆	Binary	Program of film festivals for the relevant year

The conceptual model is provided in Figure 1.

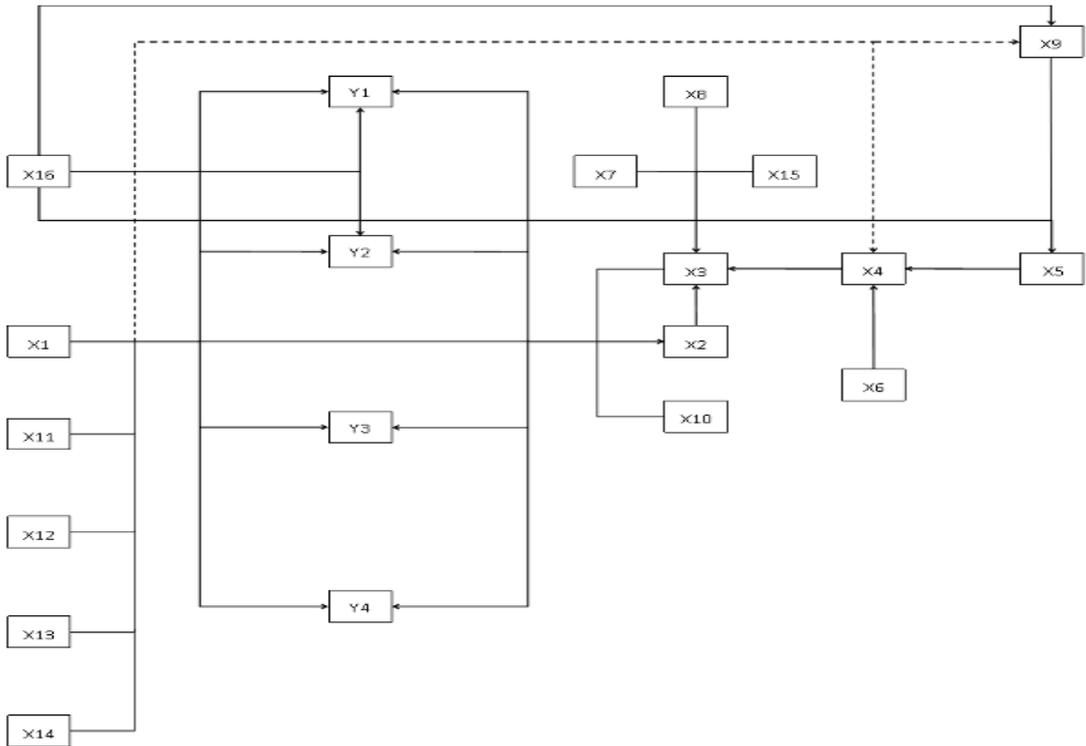


Figure 1. Conceptual Model

After the transformations described above, a linear regression model is constructed in the data table. The optimization procedure eliminates the factors with a higher P-level (the threshold value is 11%). When the optimized model is obtained, the theoretical value of Y is computed, and a graph depicting the correspondence between Y's theoretical and actual values is drawn. In addition, the approximation error and residuals are calculated. Based on the residuals' distribution, homoscedasticity or heteroscedasticity is determined.

The regression analysis results determine which hypotheses proved true and which did not. The proven hypotheses should reflect the difference between the audience's preferences for auteur and mass cinema, as well as their attitude and perception of auteur cinema (the hypothesis that the audience perceives auteur cinema as a product rather than art). This study has several limitations that must be mentioned. There may be inaccurate and incomplete data, especially on indicators such as return on investment and the number of movie theaters, because the impact of these indicators is distorted;

A selection of 200 films: Too few analyzed films may not represent the results or provide objectively significant results. Abstraction from a set of indicators (psychological and social context): since cinema is an art and is inextricably linked to complex human

emotions and attitudes in life, abandoning the psychological and social context greatly limits the explanation of the behavior of viewers and critics when making evaluations.

From 2000 to 2022: as our culture evolves, so does our perception of the film, so comparing films with vastly different release dates may not always be productive.

Rating subjectivity: the ratings on IMDb and Rotten Tomatoes that were selected as Y do not represent objectivity and may be unable to reflect the film's artistic success or failure accurately. In addition, these ratings do not accurately depict the audience of viewers and critics.

4. RESULTS AND DISCUSSION

According to the results of regression analysis, 4 optimized regression equations were obtained:

The first equation is for auteur film ratings from viewers (IMDb):

$$Y_1 = 5,09 - 5,88^{(E-7)}X_2 + 0,0009X_4 - 0,03X_5 - 27,6X_6 + 0,08X_8 + 0,32X_{10.4} + 0,26X_{11} - 0,01X_{13} + 4,3X_{14} + 0,27X_{15.2} + 0,2X_{15.3} \text{ Equation (1)}$$

The determination coefficient for this equation is 77.6%, and the approximation error is 3.5%, which may signal a good quality of this model. To illustrate how well the obtained model corresponds to the actual data, a graph of the correlation between the theoretical value of Y_1 and the actual value is presented in [Figure 2](#).

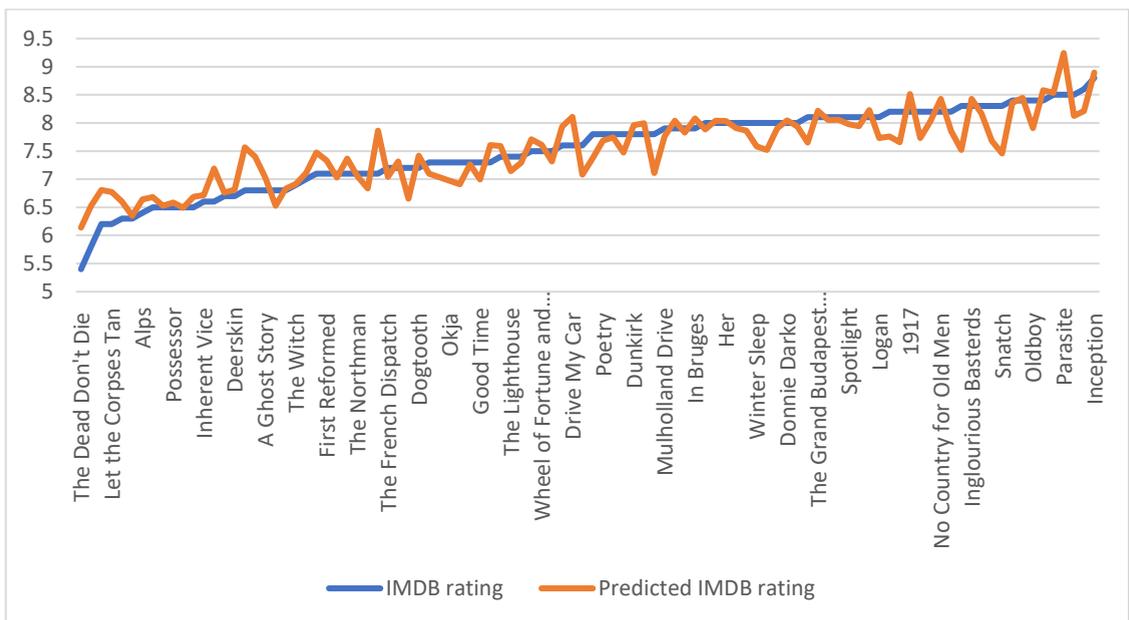


Figure 2. The Ratio of Theoretical to Actual Y_1

This chart shows that the overall trajectory of the two Y's coincides with small fluctuations of less than one point. Figure 3 further illustrates the distribution of residuals.

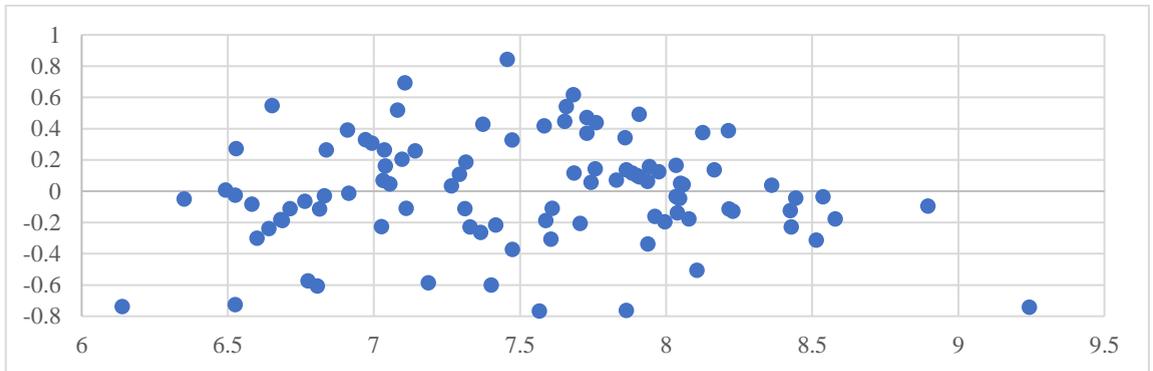


Figure 3. Distribution of Residuals for Y₁

Looking at the distribution of residuals, we can see that the homoscedasticity condition is satisfied, and the model works better for ratings below and above the mean.

The next resulting equation is for the ratings of auteur films from critics (Rotten Tomatoes):

$$Y_2 = 5,8 - 0,0005X_4 + 0,005X_9 + 0,3X_{10.4} + 5,67X_{14} \text{ (Equation 2)}$$

The coefficient of determination is 54.7%, and the approximation error is 5%. The coefficient of determination is noticeably lower than in the other equations, so the critics' ratings on auteur films are less explainable. Figure 4 visualizes the results of the model.

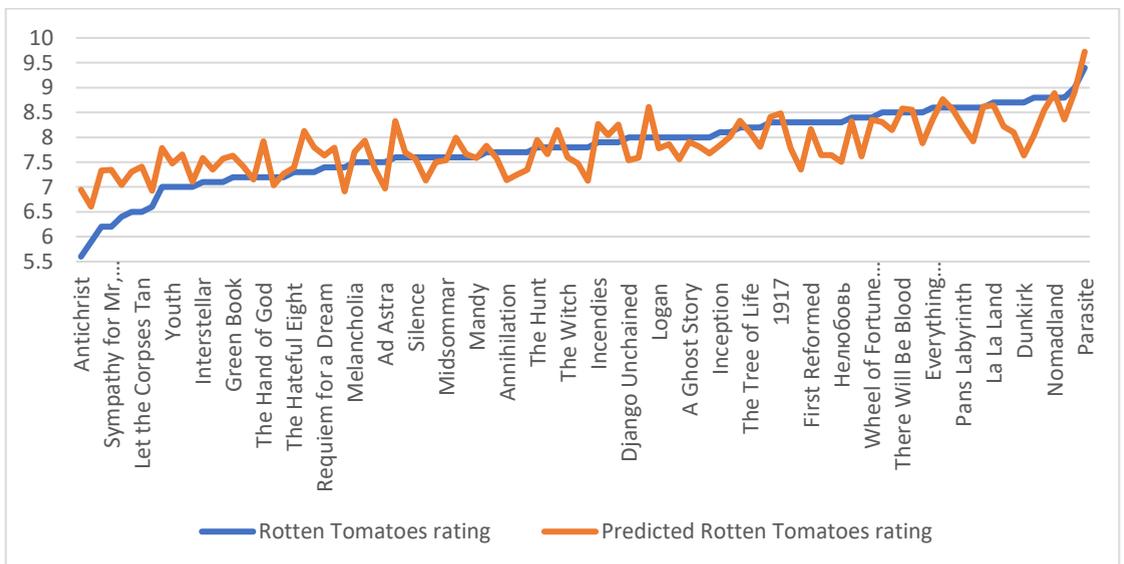


Figure 4. The Ratio of Theoretical to Actual Y₂

It can be seen from the graph that the resulting model is rather averaged concerning the actual ratings; it does not show any trend, except for films with higher ratings, which is confirmed by the residuals distribution chart in Figure 5.

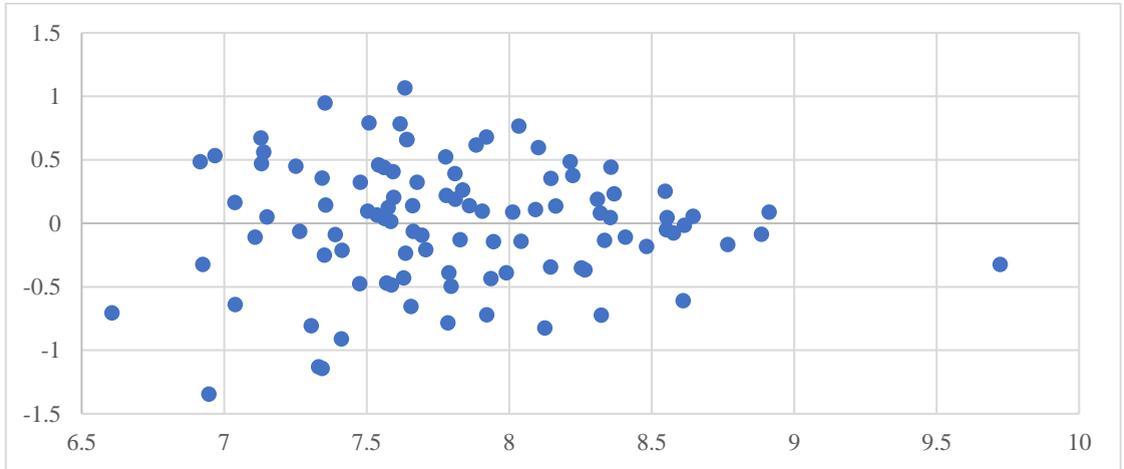


Figure 5. Residuals Distribution for Y₂

Next are the models for mainstream cinema. The third equation is for mainstream film ratings from viewers (IMDb):

$$Y_3 = 5,94 + 0,01X_1 - 0,0001X_2 + 0,0009X_4 - 32,23X_6 - 0,19X_7 + 0,28X_{10.2} + 0,31X_{10.6} + 0,31X_{10.7} + 0,32X_{12} + 7,03X_{14} \text{ (Equation 3)}$$

The coefficient of determination is 87.1%, and the approximation error is 3.2%. This model has the best coefficient of determination and approximation error and most accurately guesses the audience ratings in mass cinema, as shown in Figure 6.

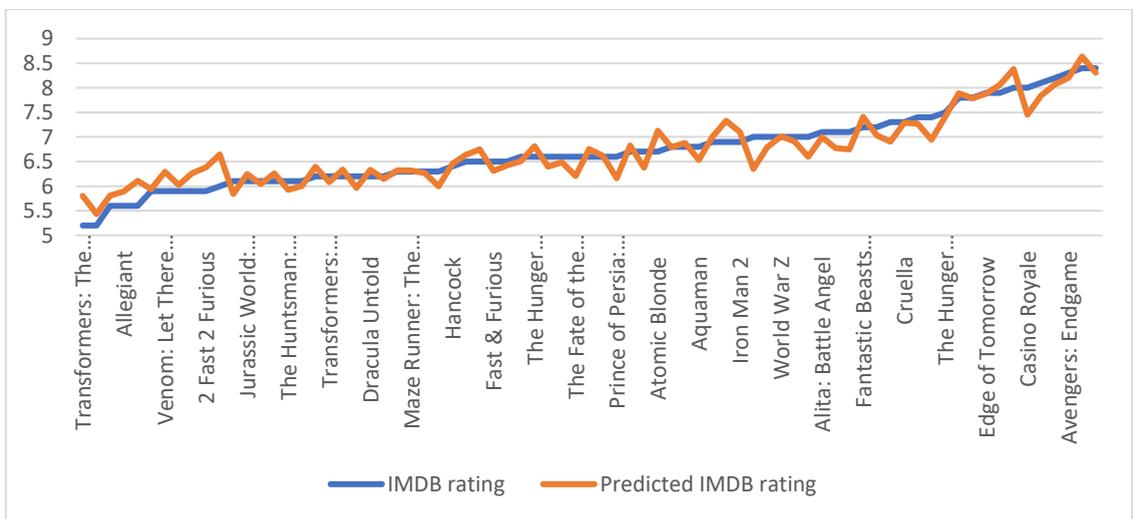


Figure 6. The ratio of theoretical to actual Y₃

In [Figure 7](#), we can also observe homoscedasticity in the residuals for this model.

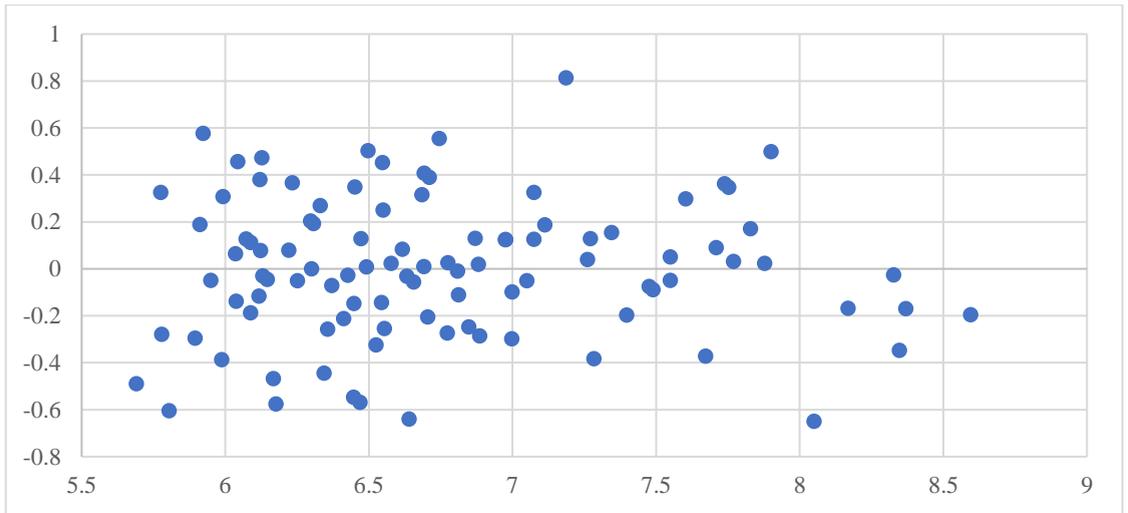


Figure 7. Residuals distribution for Y_3

The final equation is for mainstream film ratings from critics (Rotten Tomatoes):

$$Y_4 = 3,8 + 0,0013X_4 - 0,24X_5 + 0,02X_9 - 0,19X_{13} + 11,5X_{14}$$

The coefficient of determination is 79%, **and** the approximation error is 7.7%. This model has the highest average error, as seen in [Figure 8](#).

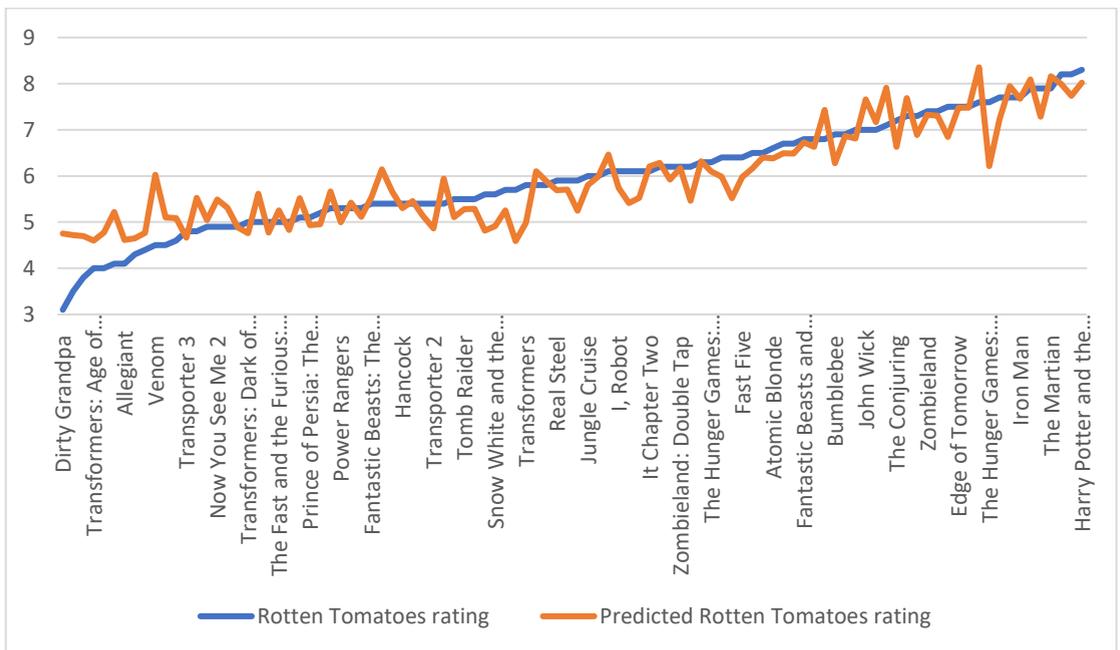


Figure 8. The Ratio of Theoretical to Actual Y_4

Figure 9 shows the distribution of residuals for ratings on mainstream films from critics; they are also homoscedastic.

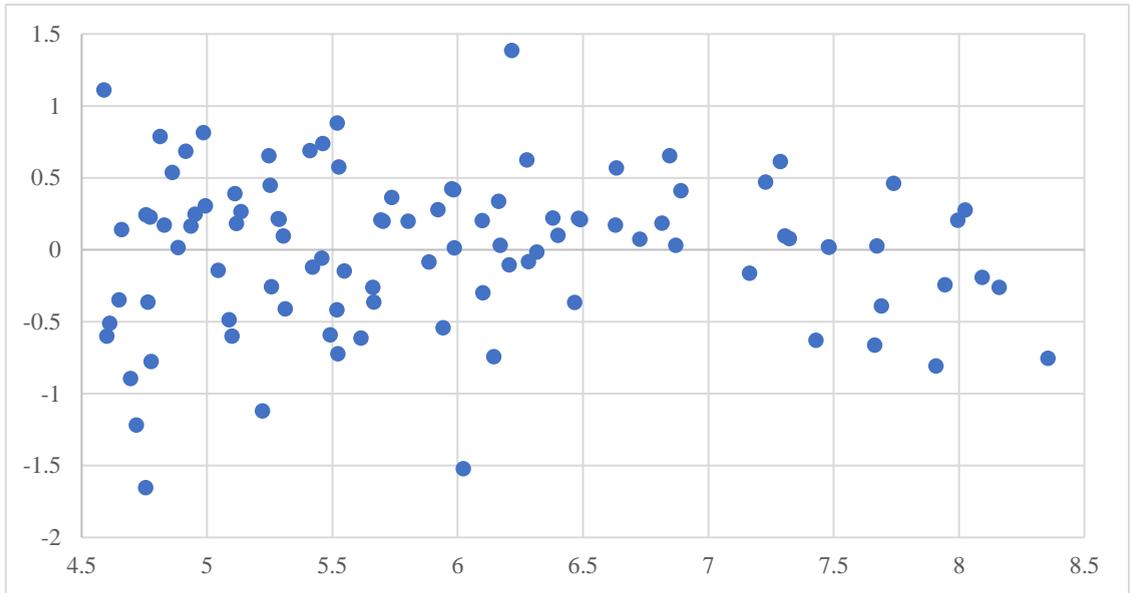


Figure 9. Residuals Distribution for Y_4

As a result, the set of significant factors and their relationships can be depicted in an optimized conceptual model, as shown in Figure 10.

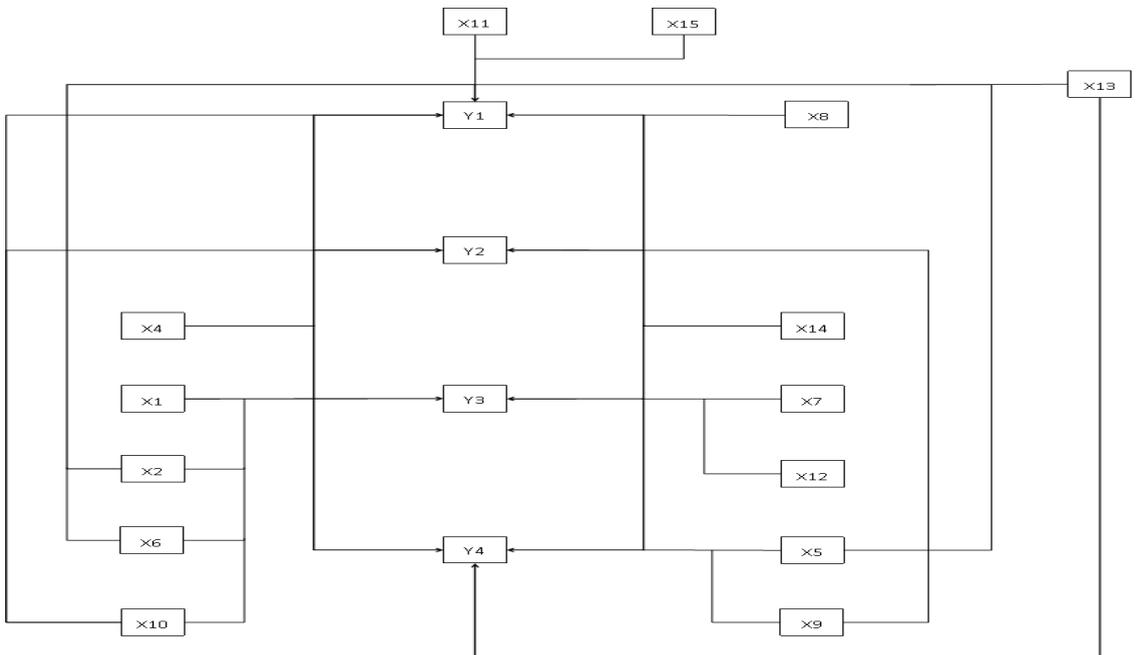


Figure 10. Optimized Conceptual Model

5. DISCUSSION

Several conclusions regarding audience and critical perceptions have been reached due to an investigation into the factors that affect the public success of auteur and commercial cinema. The discussion will center on three main blocks: the difference in audience tastes between auteur and mass cinema, the approximate similarity of factors influencing the rating of critics in auteur and mass cinema, and the attitudes towards auteur cinema - the conclusion that the audience perceives auteur cinema as consumer good, not as art.

5.1 Factors Influencing the Broader Audience Tastes in Auteur and Mass Cinema

According to the theoretical foundation, several hypotheses were validated. Contrary to expectations of influence on the ratings of auteur films, the director (X1) only became a prominent factor in mass cinema. The result was that the greater the interest in the director (number of requests), the higher the ratings of mass-market films on IMDb. The explanation is as follows: Commercial cinema is viewed as artistically monotonous and antiseptic; however, when more renowned and talented directors enter the industry, the films feel fresher and more artistically distinct. The influence of actors (X2) on film ratings in both auteur and mainstream cinema was confirmed; the lower the rating, the lower the actor's popularity index (the less well-known they are). In the case of mainstream cinema, this can be explained by the fact that audiences prefer films with well-known actors (who are also the most physically attractive), confirming the article's conclusion ([Hart et al., 2016](#)).

In all models, the influence of the number of views (X4) was also confirmed: the greater the number of views, the higher the film's rating among viewers. The result demonstrates that the most viewed films have a higher rating, possibly due to word-of-mouth recommendations, the influence of which has been corroborated by several reviewed articles ([Wallentin, 2016](#)) or a reluctance to disagree with the majority opinion.

The reviewed articles are partially consistent with the genre (X10). As the expectation of action (which is fundamental) is supported by films with mixed genres, such as adventure (X10.2), science fiction (X10.6), and thriller (X10.7), the results indicated that mass audiences perceive genre diversity more positively. The genres mentioned above provide a fictional story set in a fictional world, consistent with the claim that viewers seek escapism in films ([Simonton, 2004](#)). Drama is the most favored genre for auteur film viewers (X10.4). This is probably because, statistically speaking, the majority of auteur films are dramas. This partially contradicts the articles ([Goh et al., 2013](#)) in which viewers rate films with emotionally negative lines or violence poorly; however, the authors did not distinguish between auteur and mass cinema.

The significance of the level of affection for the film (X14) was established. Both auteur and mass films that can establish a visceral connection with a large audience are more successful.

The origin factor (X15) study contradicted [Debenedetti and Ghariani's \(2018\)](#) findings. And in mass cinema, the nation in which a film is produced is irrelevant, as the vast majority of such films are ultimately produced in the United States, and those produced in other countries are very similar to American films. In auteur cinema, audiences appreciate European (X15.2) and Asian (X15.3) cinema more. Foreign films that differ from mainstream American cinema in terms of their mentality and the cinematic techniques used to transmit it are favored by audiences. In addition, the media activity indicator (X5) in auteur films exhibited distinct results. Contrary to the article's findings ([Kohli et al., 2021](#)), it was discovered that the film's rating decreased as media interest in the film increased (as measured by the number of requests). This may be associated with inflated expectations for the film as a result of increased publicity, demonstrating the dependence of the auteur film's success on the media context.

We also obtained previously undiscussed results characterizing viewer attitudes towards mass and auteur cinema. Reactions to trailers significantly impact the evaluation of films in both auteur and commercial cinema (X6). The result demonstrated that the lesser the rating, the greater the emotional response to a film's trailer. This result indicates that the rating is negatively affected by expectations formed from the preview, as the film does not live up to the trailer's promises. The correlation between audience ratings and story originality was also verified for mainstream films (X12). It can be argued that audiences don't connect with adaptations in general, as films with original stories have higher ratings and adaptations have lower ratings; this could be because admirers of the source material are dissatisfied with adaptations.

The average distribution duration was a significant factor for auteur films (X8). The longer a film is distributed, the higher its rating, which may be explained by the fact that people who are more likely to enjoy it have more time to learn about it. The next factor is the duration of the film (X11). The results indicate that the rating of a film increases with its length. This may be because more prepared and patient audiences view auteur films. The effect of the number of fans of the film (X13) on the rating shows the more fans the film has, the lower the rating; therefore, we can conclude that the audience on Letterboxd (a dedicated, more empathetic film audience) has different preferences than the mass audience on IMDB. In conclusion to this section, it can be stated that the preferences of audiences who watch auteur and mass cinema are distinct. However, their processes of perceiving the film are comparable because they are still members of the same society. The degree of affection for the film and the number of fans demonstrate that the audience recognizes the stylistic distinction between auteur and mass cinema and that there are distinct audiences who appreciate both qualities. The mass cinema audience is particularly interested in original tales, whereas the auteur cinema audience

is particularly fond of lengthy films. Turning to perceptions, we can conclude that audiences accept auteur and mass cinema similarly: a combination of factors such as actor, number of viewings, media activity, and reactions to trailers demonstrate that the same factors and societal attitudes influence audiences' judgment of a film regardless of whether it belongs to the auteur or the mass cinema.

5.2 Factors Influencing the Critics' (experts, as Opposed to society) Ratings in Auteur and Mass Cinema

The negative correlation between the number of supporters of a film (X13) in mass cinema and critic ratings is an intriguing finding, as it indicates that the more fans a film has, the less success it will have with critics. Following the results of the article (Konnikov et al., 2021) in this study, it was demonstrated that critics might pursue publicity when evaluating a commercial film by publishing negative and provocative reviews with low ratings for popular films. Another possible explanation is that they respond to external factors instead of the film, such as expressing disagreement with their peers. This is also demonstrated by the effect of media activity (X5), which indicates that the lower the critical rating of a mass-market film, the greater its media interest (number of search requests). The discrepancy with the article by Finsterwalder et al. (2012) was found in the critics' genre preference results. Drama was the preferred genre for critics who viewed films directed by auteurs (X10.4). This is probably because the vast majority of auteur films are dramas. The nation has no bearing on the critical evaluation of an auteur film. Genre and country have no impact on the box office performance of mainstream films. This lack of influence can be explained by the fact that critics must view films of all genres, languages, and countries as part of their job, so they have no preferences. It may also imply that critics are 'omnivorous,' possessing a high level of visual erudition and approval of work regardless of genre and country, particularly for auteur films, which reflect numerous cultures.

Influenced by the number of views (X4), critics' behavior differs for auteur and commercial films. Both auteur and commercial films exhibit the same correlation between ratings and indicators, such as the number of awards (X9) and the degree of affection for the film (X14). Critics give higher marks to movies with more awards based on the results. Award-winning, prestigious, or culturally significant films are generally viewed favorably by critics. Critics are similarly influenced by the degree of affection for a film, which means that films that create an emotional connection with more viewers are more successful. In light of these findings, it is evident that critics' attitude towards cinema is a rather contradictory phenomenon that reacts not to the film itself. Still, to the information surrounding it, with no particular difference between criticism of auteur and mass films, except that in the mass film industry, critics may be influenced by their desire for fame. Despite the perception that their expert perspective is disconnected from the larger society, they remain a part of it and are affected by it.

5.3 Attitude toward Auteur Cinema

In the introduction, it was hypothesized that contemporary society increasingly associates cinema with art less and less. The results of the two discussions mentioned above enable confirmation of this hypothesis. The fact that success is independent of the director (X1) and the media context (X5, X6) suggests that audiences perceive auteur cinema as more consumerist than artistic. The audience's lack of interest in the director indicates that they do not regard the film as a personal perspective on the world and an intimate expression of certain emotions and thoughts. This also affirms the dependence of auteur film success on expectations and media context, which is supported by the significance of media activity and reactions to trailers. In essence, this demonstrates that viewers have a low tolerance for an author's work as an independent creation that does not attempt to satisfy the needs and desires of the public. In other words, viewers cannot perceive cinema in isolation from their social environment; they are accustomed to viewing cinema as a product that must satisfy their expectations and requirements.

6. CONCLUSIONS AND RECOMMENDATIONS

This study aimed to identify the factors determining the success of auteur and mass cinema to discern how society views cinema. To accomplish this goal:

A theoretical framework was developed to comprehend the topic better and review previous research findings: 1. A model with a set of factors and their influence was created; 2. Regression analysis was performed on four models, and the results of the models were presented based on the regression analysis. A comparison with previous studies and a description of the new results obtained for this study was conducted. The study demonstrated differences in the tastes of the audience; however, in the perception of auteur cinema, the audience was subject to the same factors characteristic of mass cinema; consequently, society as a whole has a rather consumerist attitude towards films. In the case of critics, the picture was the same - they care more about what surrounds the film, proving that the specialists share the same attitude as the society they are meant to contrast. The issue of which countries have the most pronounced consumer attitudes toward films and how this manifests itself could be the subject of additional research. It would also be fascinating to consider the impact of various amateur video reviews and articles on films on society's prevalent attitudes towards films. For greater accuracy, this line of research can be continued by incorporating information environment tonality into the model.

7. LIMITATIONS OF THE STUDY

The study concentrates on the consumer properties of films within the contexts of auteur and mass cinema. The results may not directly apply to other categories of information products or industries, limiting their applicability. The study concentrates on the current state of the information environment; however, this environment is ever-changing. The

findings may not completely account for future shifts in consumer preferences, technological progress, or market dynamics. Without comparing the differentiation of consumer avatars with other information products, the study concentrates solely on films. This hinders the comprehension of how consumer properties vary across various information product varieties.

8. IMPLICATION OF THE STUDY

The analysis of consumer avatars and their differentiation provides insights for enhancing the quality of information products by considering consumer preferences and interests into account. This knowledge can improve the consumer experience and inform the process of effectively promoting and distributing these products. This study provides important insights into auteur and mass cinema consumer properties by concentrating on films as prominent information products. The findings can assist filmmakers, producers, and distributors in creating and distribute films that resonate with their intended audiences and adhere to their preferences. The research employs a system of regression equations to quantify and describe the distinction between consumer avatars and their quantifiers in the information environment. This methodology provides a framework for comprehending consumer behavior and preferences that can be applied to other digitalization and information analysis disciplines.

Funding: The Ministry of Science and Higher Education of the Russian Federation funded the research under the strategic academic leadership program "Priority 2030" (Agreement 075-15-2023-380 dated 20.02.2023).

REFERENCES

- Addis, M., & Holbrook, M. B. (2010). Consumers' identification and beyond: Attraction, reverence, and escapism in the evaluation of films. *Psychology & Marketing*, 27(9), 821-845. doi: <https://doi.org/10.1002/mar.20359>
- Ahmad, M., Turi, J. A., Al-Dala'ie, R. N. S., & Manan, A. (2022). Potential use of recycled materials on rooftops to improve thermal comfort in sustainable building construction projects. *Frontiers in Built Environment*, 235. doi: <https://doi.org/10.3389/fbuil.2022.1014473>
- Alcolea-Banegas, J. (2009). Visual arguments in film. *Argumentation*, 23(2), 259-275. doi: <https://doi.org/10.1007/s10503-008-9124-9>
- Aurier, P., & Guintcheva, G. (2014). Using affect–expectations theory to explain the direction of the impacts of experiential emotions on satisfaction. *Psychology & Marketing*, 31(10), 900-913. doi: <https://doi.org/10.1002/mar.20742>
- Austin, B. (1983). Critics' and consumers' evaluations of motion pictures: A longitudinal test of the taste culture and elitist hypotheses. *Journal of Popular Film and Television*, 10(4), 156-167. doi: <https://doi.org/10.1080/01956051.1983.10661938>

- Alain, B., & Li, Y. (2013). Cinema as philosophical experimentation. *Theoretical Studies in Literature and Art*, 33(4), 180-194. Retrieved from <https://tsla.researchcommons.org/journal/vol33/iss4/9>
- Chen, H. L. (2022). Project Technological Capacity and Project Outcomes: The Moderating Role of Team Creativity. *Journal of Advances in Humanities Research*, 1(2), 69-76. doi: <https://doi.org/10.56868/jadhur.v1i2.20>
- Cranford, S. (2020). The Decline of the Academic Auteur. *Matter*, 2(3), 507-510. Retrieved from [https://www.cell.com/matter/pdf/S2590-2385\(20\)30059-X.pdf](https://www.cell.com/matter/pdf/S2590-2385(20)30059-X.pdf)
- Debenedetti, S., & Ghariani, G. (2018). To quote or not to quote? Critics' quotations in film advertisements as indicators of the continuing authority of film criticism. *Poetics*, 66, 30-41. doi: <https://doi.org/10.1016/j.poetic.2018.02.003>
- Do Nascimento, J. (2019). Art, cinema and society: sociological perspectives. *Global Journal of Human Social Science Research:(C) Sociology & Culture*, 19(5), 19-28. Retrieved from <https://www.researchgate.net/profile/Jonas-Do-Nascimento/publication/337032532>
- Finsterwalder, J., Kuppelwieser, V. G., & De Villiers, M. (2012). The effects of film trailers on shaping consumer expectations in the entertainment industry—A qualitative analysis. *Journal of Retailing and Consumer Services*, 19(6), 589-595. doi: <https://doi.org/10.1016/j.jretconser.2012.07.004>
- Flynn, E. (2018). Discovering audience motivations behind movie theater attendance. *Elon Journal of Undergraduate Research in Communications*, 9(2), 94-103. Retrieved from <https://eloncdn.blob.core.windows.net/eu3/sites/153/2018/12/09-Flynn.pdf>
- Gaenssle, S., Budzinski, O., & Astakhova, D. (2018). Conquering the box office: Factors influencing success of international movies in Russia. *Review of Network Economics*, 17(4), 245-266. doi: <https://doi.org/10.1515/rne-2019-0017>
- Gemser, G., Van Oostrum, M., & Leenders, M. A. (2007). The impact of film reviews on the box office performance of art house versus mainstream motion pictures. *Journal of Cultural Economics*, 31, 43-63. doi: <https://doi.org/10.1007/s10824-006-9025-4>
- Gerasimov, S., & Tereshchenko, P. (2020). Public narratives in modern Russian cinematography. *Russian Journal of Communication*, 12(1), 32-47. doi: <https://doi.org/10.1080/19409419.2020.1726163>
- Goh, K. Y., Heng, C. S., & Lin, Z. (2013). Social media brand community and consumer behavior: Quantifying the relative impact of user-and marketer-generated content. *Information Systems Research*, 24(1), 88-107. doi: <https://doi.org/10.1287/isre.1120.0469>
- Governo, F., & Teixeira, A. A. C. (2014). Marketing and technology sophistication as key determinants of the demand for 'art house'cinema films: A cross country analysis. *Tékhnē*, 12(1-2), 15-25. doi: <https://doi.org/10.1016/j.tekhne.2014.05.001>

- Gutzeit, J., Dorsch, I., & Stock, W. G. (2021). Information behavior on video on demand services: User motives and their selection criteria for content. *Information*, 12(4), 173. doi: <https://doi.org/10.3390/info12040173>
- Hadida, A. L. (2010). Commercial success and artistic recognition of motion picture projects. *Journal of Cultural Economics*, 34, 45-80. doi: <https://doi.org/10.1007/s10824-009-9109-z>
- Hart, A., Kerrigan, F., & Vom Lehn, D. (2016). Experiencing film: Subjective personal introspection and popular film consumption. *International Journal of Research in Marketing*, 33(2), 375-391. doi: <https://doi.org/10.1016/j.ijresmar.2015.08.005>
- Holbrook, M. B., & Addis, M. (2008). Art versus commerce in the movie industry: A two-path model of motion-picture success. *Journal of Cultural Economics*, 32, 87-107. doi: <https://doi.org/10.1007/s10824-007-9059-2>
- Iyengar, R., Van den Bulte, C., & Valente, T. W. (2011). Opinion leadership and social contagion in new product diffusion. *Marketing Science*, 30(2), 195-212. doi: <https://doi.org/10.1287/mksc.1100.0566>
- Jarvie, I. C. (1988). Local Knowledge: Further Essays in Interpretive Anthropology. *International Studies in Philosophy*, 20(3), 113-115. doi: <https://doi.org/10.5840/intstudphil198820382>
- Jarvie, I.C. (2013). Towards a sociology of the cinema: a comparative essay on the structure and functioning of a major entertainment industry. London: Routledge.
- Khan, U., Ullah, S., & Rui, T. (2022). Ruling the Periphery: Pakistan state ruling practices in Lower Dir. *Journal of Asian and African Studies*, 00219096221125801. Doi: <https://doi.org/10.1177/00219096221125801>
- Khan, E. M., Mukta, M. S. H., Ali, M. E., & Mahmud, J. (2020). Predicting users' movie preference and rating behavior from personality and values. *ACM Transactions on Interactive Intelligent Systems (TiiS)*, 10(3), 1-25. Retrieved from <https://dl.acm.org/doi/abs/10.1145/3338244>
- Kohli, G. S., Yen, D., Alwi, S., & Gupta, S. (2021). Film or film brand? UK consumers' engagement with films as brands. *British Journal of Management*, 32(2), 369-398. doi: <https://doi.org/10.1111/1467-8551.12401>
- Konnikov, E., Konnikova, O., Rodionov, D., & Yuldasheva, O. (2021). Analyzing natural digital information in the context of market research. *Information*, 12(10), 387. doi: <https://doi.org/10.3390/info12100387>
- Muhammad, N. (2022). Analyzing the Role of Media Causing Conflict in the Conflict-affected Areas, A Case Study of the Northwest Province of Pakistan. *Journal of Advances in Humanities Research*, 1(2), 32-45. doi: <https://doi.org/10.56868/jadhur.v1i2.33>
- Oghina, A., Breuss, M., Tsagkias, M., & De Rijke, M. (2012, April). Predicting IMDB Movie Ratings Using Social Media. In *ECIR* (503-507). doi: <https://doi.org/10.1007/978-3-642-28997-2>

- Reinstein, D. A., & Snyder, C. M. (2005). The influence of expert reviews on consumer demand for experience goods: A case study of movie critics. *The Journal of Industrial Economics*, 53(1), 27-51. doi: <https://doi.org/10.1111/j.0022-1821.2005.00244.x>
- Simonton, D. K. (2004). Film awards as indicators of cinematic creativity and achievement: A quantitative comparison of the Oscars and six alternatives. *Creativity Research Journal*, 16(2-3), 163-172. doi: <https://doi.org/10.1080/10400419.2004.9651450>
- Suarez-Vazquez, A. (2011). Critic power or star power? The influence of hallmarks of quality of motion pictures: an experimental approach. *Journal of Cultural Economics*, 35, 119-135. doi: <https://doi.org/10.1007/s10824-011-9140-8>
- Tsao, W. C. (2014). Which type of online review is more persuasive? The influence of consumer reviews and critic ratings on moviegoers. *Electronic Commerce Research*, 14, 559-583. doi: <https://doi.org/10.1007/s10660-014-9160-5>
- Ullah, S., Khan, U., Rahman, K. U., & Ullah, A. (2021). Problems and benefits of the China-Pakistan Economic Corridor (CPEC) for local people in Pakistan: a critical review. *Asian Perspective*, 45(4), 861-876. doi: <https://doi.org/10.1353/apr.2021.0036>
- Ullah, S., Barykin, S., Jianfu, M., Saifuddin, T., Khan, M. A., & Kazaryan, R. (2023). Green Practices in Mega Development Projects of China–Pakistan Economic Corridor. *Sustainability*, 15(7), 5870. Doi: <https://doi.org/10.3390/su15075870>
- Wallentin, E. (2016). Demand for cinema and diverging tastes of critics and audiences. *Journal of Retailing and Consumer Services*, 33, 72-81. doi: <https://doi.org/10.1016/j.jretconser.2016.08.002>
- Zhang, Y. L., Guo, Q., Ni, J., & Liu, J. G. (2015). Memory effect of the online rating for movies. *Physica A: Statistical Mechanics and its Applications*, 417, 261-266. doi: <https://doi.org/10.1016/j.physa.2014.09.012>
- Zolberg, V. L. (1990). *Constructing a Sociology of the Arts*. Cambridge University Press. Retrieved from <https://books.google.ae/books?hl=en&lr=&id=nxjIO8TisL4C&oi=fnd&pg=PR9&dq=Zolberg>
- Zvonkine, E. (2016). Auteur cinema during the Thaw and Stagnation. *A Companion to Russian Cinema*, 178-201. doi: <https://doi.org/10.1002/9781118424773.ch8>