Market Segmentation in the Film Industry Based on Genre Preference: the Case of Millennials

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One of the industries that has been hit the most by the Covid-19 is the film industry. Practitioners and experts in the field are in need to better understand the changed consumers and their new behaviour so that they can adequately communicate with them. The population segment which attracts the most attention are the Millennials due to the fact they have a high level of self-interest, they mix streaming services, and their purchase intention building is much slower compared to other generations. This study aimed to propose a segmentation approach in the film industry based on genre preference. To verify the proposed approach, an online survey on consumer habits and attitudes towards different elements of film marketing mix was conducted at the beginning of the Covid-19 lockdown in Serbia. Upon that, biclustering algorithm was employed to segment the respondents. Finally, similarities and differences between retained segments were explored, which provided insights on which elements of film (elements of product, Word of Mouth, Frequency of consumption, and elements of promotion) respondents pay attention to based on their genre preference. The observed similarities and differences led to the creation of tailored communication strategies for each segment, which could improve the effectiveness of marketing activities in the film industry during the Covid-19 era, and could be extended in the post-Covid era.

Keywords: *Market Segmentation; Film Iindustry; Genre Preference; Communication Strategy; Biclustering.*

Introduction

The Covid-19 pandemic started in late 2019 and has spread across the world at an extraordinary pace. Post-pandemic marketing practitioners are likely to face a radically different marketing landscape and much-changed customers (Sheth, 2020). Covid-19 measures closed entire sectors, forced industries to move, almost exclusively, online, and completely changed the nature of consumer spending. All organisations reflecting on the post-pandemic world will need to re-evaluate their visions, missions, and their objectives to account for the changes to their customers, competitors, amongst other shifts (He & Harris, 2020). Kang, Diao and Zanini (2020) provide an extensive review on identified marketing responses in product development management process, supply chain management process, and customer relationship management process in the post-Covid era. Some of them include changing product combination, shortening supply chains, and online monitoring of customers. Without any question, tremendous changes are happening and marketing responses to the Covid-19 crises are needed.

One of the industries which has been upended due to Covid-19 is the film industry (Hall & Pasquini, 2020). The overall film and television production fell 97.8 % since the beginning of the Covid-19 era, so much of the industry's staff on production sets, agents, publicists, and analysts were rendered unemployed overnight (Johnson Jr, 2020). Big cinema chains such as Cinemark theatres AMC declared a decrease in revenue or were on the verge of declaring bankruptcy (Szalai & Vlessing, 2020). Due to lockdown, theatres have been closed and the list of delayed production series and films started to form (Indiwire, 2020).

Leaving the effects of Covid-19 on the film industry aside for a moment, for audiences, film genre categories are means to know what to initially expect from a film. According to Desai and Basuroy (2005) it is the most important factor that consumers consider when deciding to consume a film. Information on the genre provides primary product differentiation by classifying films in categories such as comedy, horror, thriller, action, drama, science fiction, and others (Langford, 2005). Preferences for the genre are developed by creating an interest in the content associated with the genre itself and it is built over time with viewing similar content over and over again (Kamalesh, Lakhotia, & Pandey, 2019). In a recent study, Palomba (2020) explored how demographics and life-style impact the preference of a genre so as to better understand how genre preference is developed. Gazley and co-authors (2011) found that preference of comedies, dramas, and horror films plays a significant role in the decision-making process to consume a film. The study by Matthes (2015) emphasised that different people have different taste and preference for films.

Redfern (2012) pointed out that understanding audiences' preferences for certain types of films is a priority for film producers and distributors as this is a factor in determining which films to produce and how to market them effectively. Therefore, the genre of the film leads to specialisation at all levels of not only of production and post-production process, but also the communication both within the industry and with potential viewers (Abrams, Bell, & Udris, 2010). According to Neale (2005), the genre is indispensable in psychological terms as a way of formulating the interplay between films and filmmakers on one side, and audience on the other.

In recent research, the consumers' genre preference played an important role. For example, El Bolock et al. (2020) proposed a film meta recommender algorithm, which starts by getting the genre of films the user prefers before applying machine learning techniques. Nalabandian and Ireland (2019) provide an extensive literature review on how genre preference affects consumer behaviour. Therefore, the film genre can have a detrimental impact on how the film is going to be accepted by the audience and how and to whom it will be recommended.

Since the beginning of the film industry as we know it today, the film industry had been turning to market research to obtain detailed knowledge about the tastes, desires, and habits of consumers (Bakker, 2003). One of the aspects which has attracted their attention as it proved relevant for the film consumption is stratification (Veenstra, Meers, & Biltereyst, 2020). To our knowledge, although there has been research on the topic, we believe that a literature gap in a specific area of market segmentation in the film industry based on the genre preference exists. Therefore, we strived to extend the current body of literature.

Film consumption is an activity whose preference, behaviours, habits, and interests differ from generation to generation. Therefore, it is not valid to explore the film consumption of the overall population, rather it is more feasible to observe specific generations individually. In this study we focused on observing the Millennials, those born between 1981 and 1996. The research done by Movio (2015) compared the behaviour of Millennials with the film-going audience as a whole, on a sample of 1,000,000 loyalty members between the ages of 14 and 80 from across the United States that attended at least one movie in 2015. Results of the research highlighted the fact that Millennials make up more than 30 % of the general loyalty population and 28 % of the US population, when it comes to film industry. Also, the next year, The Wrap (2016) pointed out that the world's largest living generation, Millennials, are starting to enter their prime spending years and that as a result they are having growing interest to the film industry. As Tkarch (2015) says Millennials like to be told stories, stories that make a real impact and stories that they can pass on and talk about to their peers. This especially applies to topic such as watching films. According to a survey held between late 2018 and early 2019, 70 % of Millennials reported streaming movies on a weekly basis, and 40 % said that they did so daily. Millennials in particular are frequently in the media spotlight, as some experts believe these generations are the future of digital media and drive different and changing film viewing habits more so than older adults (Statista, 2019). Having this in mind it is also important to draw attention to the results of the HowToWatch report which found that millennials watch 6.6. hours of Netflix a day, which equals out to 46.2 hours per week. The data from the report calculates that Millennials will therefore spend 13 years of their lives watching the streaming giant, which averages to more than 16 % of their expected life span (Cinemablend, 2019).

The question which has especially attracted our attention is how and whether Millennials can be segmented based on the genres they prefer or dislike to watch. It is believed that consumers who prefer specific film genres display specific behaviours in terms of attention and importance they address to people in the film, promotion, WOM (Word of Mouth), and others. In this vein, we addressed the topic of genre impact on consumer behaviour and strived to observe whether such impact exists. The purpose of this study is to create and test a conceptual model for segmentation of movie goers based on their genre preferences and exploring the differences in their behaviour that exist. The proposed segmentation model attempts to improve the currently devised segmentation models and fill in the gaps in the film marketing literature.

Moreover, our research idea can be linked to previous research. Market segmentation was seen as prominent field of study by Djokic et al. (2013). In his research study Ngoc (2020) aimed to get insights into the research question "How to distinguish and attract consumers of potential market segments with appropriate digital marketing communications?" The outcomes from the analysis of surveyed database revealed certain changes to the market segments from 2017 to 2020. The 2020 market segments formed more accurate groups of different mix of personas instead of highlighting solely one persona to represent one group as in 2017. This better reflects the tendency of an average enthusiast to relate to more than one persona type. This is an important study as it indicates that there is interest in segmentation studies in the field of creative industries and that it is valuable to conduct such studies every couple of years as the behaviour of consumers as well as segments change.

We hypothesise that film consumers can be segmented using advanced machine learning algorithms by their genre preference, that there will be significant differences between the segments, and that based on the observed differences, specific communication strategies can be formulated for each of them. To test our approach, we conducted an online survey during the lockdown due to Covid-19. It is believed that the proposed approach to segmenting film consumers could lead to new business communication practices and new opportunities in the film industry. The study is also expected to provide insight on the genre preference in a particular country, Serbia, as it is proven that genre preference differs across countries (Neelamegham & Chintagunta, 1999). Additionally, as the Millennials were the primary respondents, the study is expected to provide new insights on the behaviour of Millennials regarding film consumption.

The paper unravels as follows: the next section reviews the current literature on marketing challenges in the film industry caused by Covid-19 and the impact of genre preference on consumers' viewing habits during the Covid-19 era, while Section 3 focuses on the proposed market segmentation model based on genre preference and the rationale for its construction. The following section presents the conducted research and the obtained results. Section 5 gives the managerial implications of the obtained results, while in the next section, we finish the paper providing discussion and conclusion.

Literature Review

The literature review is in four directions: towards highlighting the specificities of the film marketing mix, exploring the marketing challenges in film industry during Covid-19, observing how genre influences film viewing during Covid-19 and post-Covid 19 period, and towards the

previous research on the topic of market segmentation in the film industry.

Film Marketing Mix

Marketing mix consists of various elements to be considered in strategic marketing planning, covering product, price, promotion and place (distribution), the original 4 Ps list. The film marketing mix harks back to the original conceptualisation of the marketing recipe. Kerrigan (2010) was the first one who highlighted the film marketing mix and proposed it as guideline for filmmakers and marketers to consider when marketing their film and is presented as a mixture of clues which consumers look to in order to select films within the marketplace.

Kerrigan (2010) has outlined the film marketing mix key elements, namely the star (actor and others), script, genre, age classification, and release strategy. Other authors continued research on film marketing mix. Madiche (2010) based his case study on film marketing mix of African movies – the case of Nollywood. He observed film elements as sound, level of creativity, and acting performance. Furthermore, Ulker-Demirel et al. (2018) in their research investigated the impact of the importance, assigned by the film consumers, of factors such as product (with its sub-elements: people of the film, film features, script), price, promotion, and distribution channels. The same author in a more recent study observed how the audience's attitudes on actor, character, film and product placement impact the brand attitude (Ulker-Demirel & Yildiz, 2020).

Marketing Challenges in Film Industry during Covid-19

Covid-19 outbreak and lockdown has changed life for everyone, thereby, influencing consumption patterns, media usage, consumer behaviour, marketing trends, and these changes are likely to stay long-term (Brindha, Jayaseelan, & Kadeswaran, 2020). The short-term impact of Covid-19 is immediately and effortlessly felt, due to the widespread lockdown and social distancing measures globally. Therefore, firms must explore feasible marketing innovations to survive the crisis. What is for sure is that corporate communication and marketing in general immediately changed as lockdowns were imposed (Argenti, 2020).

Marketing in the entertainment industry, especially in the film industry is specific. It is consumer-centric, the product is based on tangible and intangible benefits, coloured by cultural meaning and the product does not essentially exist to fulfil a market need (Colbert, 2003; Ulker-Demirel *et al.,* 2018). Therefore, it is important to point out some results of previous studies in order to understand the specificity of marketing strategies in the film industry which might be of use in the Covid-19 era.

The Covid-19 pandemic has heavily impacted the film industry. While theatres are closed and films that were scheduled for release have had their debuts pushed back for the future (Indiwire, 2020), plenty of new entertainment is still premiering on television. For example, the film "The Clark Sisters: The First Ladies of Gospel" debuted during quarantine and it made it easier for viewers to actually tune in and watch it. According to Nielsen Media Research, the same film had 2.7 million views, which made it the highest-rated original film of the year on all of television since 2016. In less than a week, the film had more than 10 million views, thanks to promotion through the television and social media (Battles, 2020). It is believed that the quarantine can actually help with the views of the film premieres through television. This can be interpreted as a light at the end of the Covid-19 tunnel for the film industry.

Genre Influence on Film Viewing During Covid-19 and Post-Covid 19 Period

During the pandemic, interesting research in film industry related to genre preferences has been done. For example, Clark (2020) researched which genres are the most popular during the Covid-19 era and how the interest in particular genres changed. Total digital purchases on the platform were up 65 % in the same period compared to last year, but the increase for specific genres was even more notable. The largest spikes were measured in the categories of family animation and sports, as well as horror and thrillers. Sports films saw a dramatic increase of 339 % in sales during the pandemic, suggesting audiences were starving for that type of content (Clark, 2020).

Gorman (2020) wrote a comprehensive article on how are the streaming habits changing during the pandemics. Based on a survey of viewers of four different streaming platforms, he showed that the viewers have discovered new genres during the pandemics which they have not preferred before. Those genres include documentary, comedy, true crime, and science fiction. He also pointed out that users of different genre are users of different platforms. Users of Netflix prefer blended genre, Hulu users tend to watch reality TV and content on foreign language, while Amazon users want to see action, fantasy, and science fiction.

Filmpulse (2020) pointed out that there are striking differences between countries regarding the most viewed genre during the pandemic. Germany was the only country covered by the study in which the most viewed film was not "Contagion" by Steven Soderberg. In Germany, a comedy was in the top three ranks with the feature film "Long Shot – Unlikely, but not impossible". Countries like France, USA, Italy featured thrillers, mystery, science fiction, and apocalyptic films in the top ranks. The conclusion is that citizens of different countries probably fight Covid-19 with a different genre.

Previous Research on the Topic of Market Segmentation in the Film Industry

Due to the specificity of the film as a product, the short life-cycle and launching of new products constantly, the film industrials have turned to market and marketing research so as to better understand the consumers and to adequately plan the whole film creation, production, distribution, and promotion processes (Bakker, 2003).

The film industry was in a way the pioneer in understanding and utilizing the information gained from segmentation analysis. The idea of market segmentation in the film industry dates back as to 1930, when the British company Granada Theatres segmented the market by age, gender, income, and location. Since then, significant advances in the segmentation techniques and approaches have been made.

Halbrook and Schindler (1996) aimed to segment consumers based on age and attitude towards the past and nostalgia. They pointed out that there exists an age-related preference in consumer tastes and that generational imprinting may involve not only a greater salience or memorability of events and objects experienced during an early critical period, but also more positive feelings toward these events and objects. Moon et al. (2016) conducted k-means clustering to segment 3553 consumers based on their pre-launch awareness, expertise and movie frequency consumption. They identified three clusters: those aware of movies quite early, but highly critical due to their previous expertise, those who are aware of movies later and are not so frequent viewers, and those who are passive consumers, but are the largest segment which might have a vast impact on the box office.

Diaz et al. (2018) in their recent study aimed to segment the shopping centre cinemagoers based on their values and lifestyle. The segmentation technique applied was two-stage hierarchical cluster analysis. They identified four clusters, based on the agreement and disagreement with 28 statements. Their results are valuable as they showed that consumers differently perceive going to the cinema in shopping centre ranging from apathetic to serious.

The presented papers indicate that the issue of segmentation in the movie industry is a topic that attracts the interest of researchers and the industry.

Market Segmentation Model Development

The question of grouping and segmenting consumers has been attracting the attention of scholars in different fields of expertise. The goal of market segmentation is to identify groups of consumers who share common characteristics and develop a tailored marketing mix for each group to improve the effectiveness of marketing activities (Dolnicar, Kaiser, Lazarevski, & Leisch, 2012). So far, several approaches to the issue have been identified (Dolnicar, 2004): commonsense segmentations, data-driven segmentations, combinations of commonsense and data-driven segmentation, and a sequence of two common-sense segmentations. The approach which we focus on in this study is the data-driven approach founded in the application of machine learning algorithms, biclustering specifically to group consumers. So far biclustering has been employed in tourist segmentation (Dolnicar *et al.,* 2012), consumer segmentation based on satisfaction (Wang *et al.,* 2016), on profitability (Lin *et al.,* 2019), and others. Herein, we propose a novel segmentation approach for the film industry based on genre preference. The flowchart of the proposed approach is given in Figure 1.
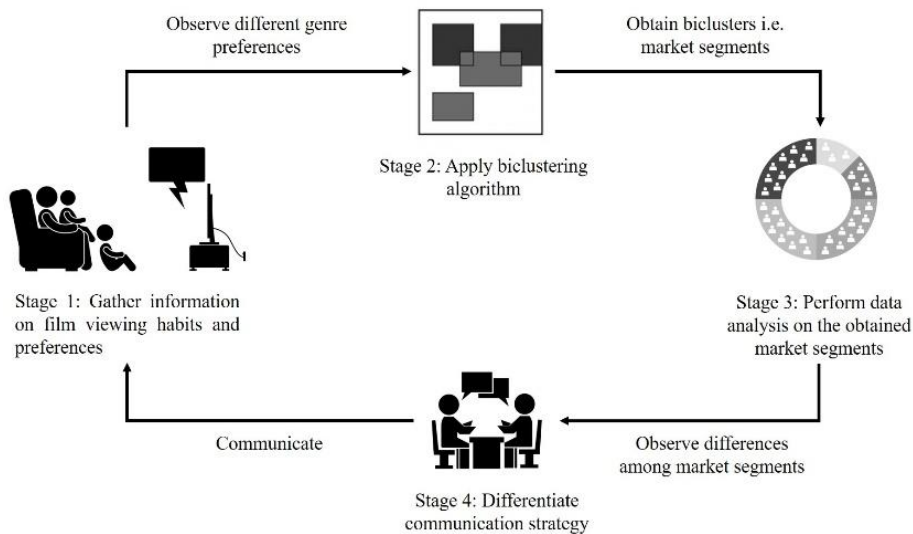
Figure 1. Flowchart of the Proposed Market Segmentation Approach

Stage 1: Gather information on film viewing habits and preferences

In the initial stage, it is necessary to collect the data on the respondents. In the case study presented, the focus is on the film industry and the consumers' habits and preferences on different elements of the film marketing mix.

Interstage: Observe different genre preferences

The focus of the proposed market segmentation approach is to segment the respondents based on their preference of different film genres. Therefore, one of the mandatory information that should be gathered is the respondents' attitudes towards different film genres. It is suggested that the questions related to film genre preference are on a five-point Likert scale to facilitate further analysis.

Stage 2: Apply the biclustering algorithm

In the second stage, the biclustering algorithm is applied. As mentioned above, the algorithm should be chosen in line with the collected data, as there are specific algorithms for specific type of data. Whichever algorithm is chosen, parameter tuning should be done carefully as suggested in Kasim et al. (2016).

Interstage: Obtain biclusters i.e. market segments

As the result of biclustering algorithm, consumer segments are obtained. In this interstage the researcher should assess the obtained segments taking into account the number of consumers in a segment, the number of retained segments, the number of consumers which have not been segmented, and the number of variables used to form segments.

Brassington and Pettit (2005) suggest that the minimum segment size should be 5 % of the sample. Fang et al. (2020) suggest to retain a smaller number of diverse segments than to have a lot of segments which do not make sense.

Stage 3: Perform data analysis on the obtained market segments

After the segments have been created, they should be closely inspected and verified. The obtained segment structures according to gender, education, age, and other socio-demographic characteristics should be observed and compared to the previous research. Also, all the segments should be named according to specific attitudes and detected pattern behaviours. It is also suggested to statistically explore the external validity of the segments and see whether there are significant differences in the socio-demographic variables between them.

Interstage: Observe differences among market segments

After the segments have been defined and verified it is of great importance to observe the similarities and differences in consumer behaviour between them. In this interstage opinions and attitudes of consumers within different segments are compared. The observed differences are the input for stage 4.

Stage 4: Differentiate communication strategy

Having in mind the observed differences in attitudes between segments, marketing experts can tailor a marketing communication strategy for each segment. Therefore, the consumers will be targeted with specific information which suits their interests, affections, attitudes, and beliefs. It is expected that such communication could increase the consumers' satisfaction and the effectiveness of marketing activities.

Interstage: Communicate

When the differences between segments have been explored and communication strategies have been devised, the final interstage is to communicate them with the segmented consumers.

The proposed approach can be repeated, in related-samples survey preferably, to monitor how consumers' preferences on genre are changing or not and how should the communication strategy be adapted.

Based on the presented market segmentation approach the following two hypotheses can be defined:

H1: Consumers can be successfully segmented based on their genre preference using biclustering approach

H2: There are statistically significant differences between the obtained segments related to the importance of elements of the film marketing mix

To accept or reject the devised hypotheses, the market segmentation approach has been tested on the film industry during Covid-19.

The Empirical Study

Data Collection

The survey was conducted online from April 1st until April 10th 2020 using Google Forms service. At the time when the survey was open, the state of emergency and quarantine due to Covid-19 pandemic were declared in Serbia. The survey was distributed on Facebook groups related to films, students' groups, and on personal profiles of authors. We chose several Facebook groups related to film which count more than 10,000 followers, contacted the administrators, and asked them to share the link to the survey. Some of them agreed, while we did not receive answer for others. The sampling method that we applied was Convenience Sampling which is a nonprobability sampling method. This sampling method was used to reach as our goal was to survey as much film fans, cinema goers and those interested in the film industry as possible. Nevertheless, we are aware that this sampling method might be biased and that it has drawbacks (Etikan, Musa, & Alkassim, 2016). Participation was voluntary, anonymous, and open to everybody; there were no preconditions to participate in the study. After the survey was closed, the statistical analysis was performed using SPSS 25 while the biclustering was done in R package "biclust" (Cran, 2020).

The survey consisted of three parts. The first covered demographic information on the respondents. The questions within this part were related to gender, educational attainment, and residence. The second part encompassed questions regarding film consumption habits. Some questions in this segment were measured on Likert scale ("I see myself as a film fan"), while some were open questions ("How many movies a week do you watch?"). The final part comprised of questions concerning the importance of the specific elements of film marketing mix. All of the questions in the third section were measured on the five-point Likert scale. The elements of the film marketing mix that we focused on have been previously studied in the studies of Gazley, Clark, and Sinha (2011), Ulker-Demirel et al. (2018), and Lee et al. (2016). Most of the questions were formulated as "The X has an impact on my decision to consume a film", where X denotes an element of film marketing mix. The genre preference was measured for each genre separately. This subsection relates to stage 1 of the proposed biclustering market segmentation flowchart.

Sample Characteristics

In our study, we aimed to observe Millennials, a demographic cohort of those born between 1980 and 1996. As the survey was opened to everyone with the link, after closing the survey, the respondents who could not be classified as Millennials were removed from further analysis. So, from 1606 initial respondents, we observed 1148 of them.

In our sample, we had 316 (27.5 %) males and 832 (72.5 %) females. There is a visible gender disproportion in the sample. However, this was not treated as bias, bearing in mind that females are shown to be more prone to participating in online surveys (Smith, 2008). The respondents' average age was 28.69, with a standard deviation of 4.394. Regarding their highest completed level of educational attainment, most of the respondents completed bachelor studies or the equivalent (42.5 %), followed by those who finished master studies (37.4 %). When it comes to the level of personal monthly income, most of the respondents indicated that they have a monthly income between 50,000 and 80,000 RSD (26.0 %), followed by those with an income over 80,000 RSD (24.5 %). Most of the respondents reside in Belgrade (45.6 %), while the remaining are from other cities in Serbia, such as Novi Sad

(10.1%) and others. It can be concluded that in our study we succeeded in covering a segment of the Millennials' population which is highly educated, has an above-average income which is 45,000 RSD, and resides in Belgrade.

Obtained Consumer Segments

Biclustering algorithms search for patterns and the results, in our case, turn to be groups of respondents based on their most and least preferred film genre. In our study we observed 11 genres: science fiction, action, horror, blockbuster, romance, comedy, documentary, animated, mystery, drama, and thriller. As all of the questions used to segment the respondents are on a five point ordinal Likert scale, the algorithm BCQuestord which looks for similar answers in an interval set was employed (Kaiser, 2011).

The chosen algorithm has six parameters (Cran, 2020). In the conducted study, we only did a limited number of different parameter scenarios as the goal of the paper was to create meaningful biclusters and not to conduct an in-depth investigation of the parametrisation effects (de Smet, 2019). Therefore, we carried out parameter tuning as suggested in Kasim et al. (2016). As one criterion of biclustering results, we used the segment size. Namely, Brassington and Pettit (2005) suggest that the minimum number of consumers in a bicluster should be 5% of the sample. In our case, that is 58 consumers $(1148 \cdot 0.05 = 57.4 \approx 58)$ The algorithm was run 50 times until generating biclusters with clear differences between them. This subsection relates to stage 2 of the proposed biclustering market segmentation flowchart.

The statistics on the retained biclusters are given in Table 1. As it can be seen, 89.80 % of the observed sample can be successfully biclustered as only 117 respondents are left unclustered. Also, each retained segment covers more than the proposed 5 % of the sample. Having in mind a small percent of the sample which has not been biclustered and the sizes of the retained biclusters, we can conclude that prior to in-depth analysis, the bicluster segmentation seems meaningful and of good quality.

Table 1

Statistics of Obtained Consumer Segments after Biclustering

Segment	Size	Proportion of sample	Female proportion (%)	Average age	Highest educational attainment
Realists	250	21.77 %	77.6 %	28.71	Master's degree (42.8 %)
Superheroes	104	9.05 %	50.0 %	28.65	Bachelor's degree (61.5 %)
Inspectors	286	24.91 %	75.2 %	28.43	Bachelor's degree (43.0 %)
Comedians	278	24.21 %	77.0 %	29.09	Master's degree (43.5 %)
Mystics	113	9.84 %	66.4 %	28.27	Bachelor's degree (44.2 %)

Source: Own calculations

To additionally present the obtained segments, we provide the Barchart Plot on genre preference in each of the obtained segments (Figure 2). The Barchart Plot provides insights on which genres were used to create each bicluster and the mean values of the preference of each genre within the bicluster. What is also given on the chart is the population mean for each genre preference.
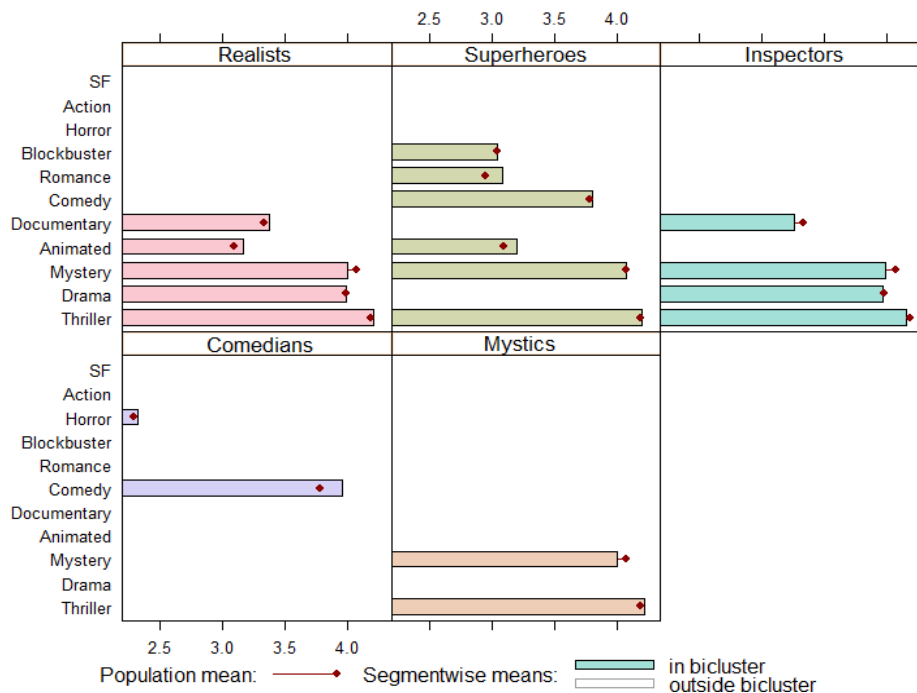
Figure 2. Barchart Plot on Genre Preference in Each of the Obtained Segments

The next step is to more closely observe the retained segments, analyse their structures, and provide names for each of them according to the segment characteristics. Naming each segment makes it easier for decision-makers and practitioners to understand segment characteristics and visualise the types of individuals within them.

The first segment was called *Realists* because, as it can be seen, the respondents in this segment prefer documentaries, animated, mystery, drama, and thriller films. This segment consists of mostly females (77.6 %) and those who have Master's degree (42.8 %). The average age of respondents in the segment is 28.71.

The second segment, *Superheroes,* is the smallest segment which encompasses 104 respondents. What makes this segment stand apart is that its members are fond of blockbusters and animated films. Accordingly, as expected, this is the segment in which half of the segment are males (50.0 %) and those who have a Bachelor's degree (61.5 %).

Inspectors is the third and the largest segment as 24.91 % of the sample is in it. The respondents in this segment prefer Documentaries, Mysteries, Drama, and Thriller more than the average. So, for that, they are characterised as inspectors as they are keen to drama and real-life thematic. Interestingly, 75.2 % of this sample are female and those with Bachelor's degree (43.0 %).

The second largest segment *Comedians* covers 24.21 % of the sample. The segment is named *Comedians* as these respondents are big fans of comedy and visibly dislike horror films. The respondents in this segment are clearly oriented to joyful films full of laughter. As expected, most of the segment are female (77.0 %). The respondents within this segment are somewhat older than within other segment with the mean age of 29.09. This segment is in line with the research of Fischoff (2005) who found that females found positive emotions more important to a film than did males.

The final segment, *Mystics,* covers those who prefer the genres of mystery and thriller. What makes them stand apart from *Inspectors*, who are also fans of these two genres, is that the *Mystics* do not have any affection towards real-life drama and prefer pure mystery. In this segment, the male population is somewhat more represented, with 33.6 %. Looking at the average age in the segment, this is the "youngest" segment and accordingly, most of the respondents in it have Bachelor's degree (44.2 %)

Beside analysing the obtained segments, we analysed the genre preferences which were used to define the five segments. Namely, out of 11 initially observed genres, only two have not been used: preference of action films and science fiction.

We additionally wanted to statistically explore the external validity of the segments and see whether there are significant differences in the socio-demographic variables.

Firstly, the segments differ in gender ratio, as shown by the Chi-square test (35.788, df=4, p<0.001). The segment with the highest percentage of male respondents is *Superheroes* (50.0 %), followed by *Mystics* (33.6 %). It may be relevant that for both segments, the respondents prefer mystery and thriller related films. Analogously, the segment which encapsulates the smallest percentage of males is *Comedians* whose respondents are women looking for easy to watch, relaxing, anti-stress films.

Previous research showed that there are differences in behaviour among young and old Millennials (Lucia-Palacios *et al.,* 2021; Debevec *et al.,* 2013). Therefore, we aimed to explore whether there are age differences between the formed segments. The segments do not differ by the age of the respondents within them (ANOVA, 1.118, df=4, p>0.05). This indicates no differences between "younger" and "older" Millennials in terms of segments based on their genre preference.

The Chi-square test showed differences between segments by educational attainment (32.896, df=4, p<0.001). The two segments with a higher percentage of male respondents, *Superheroes* and *Mystics* are also the segments in which the most make respondents with a Bachelor's degree.

The conducted analysis corresponds to stage 3 of the proposed biclustering market segmentation flowchart. The results of the biclustering and the additional exploration of the effects of socio-demographic variables clearly indicate that the consumers can be successfully segmented based on their genre preference using biclustering approach. This confirms the first hypothesis of the research.
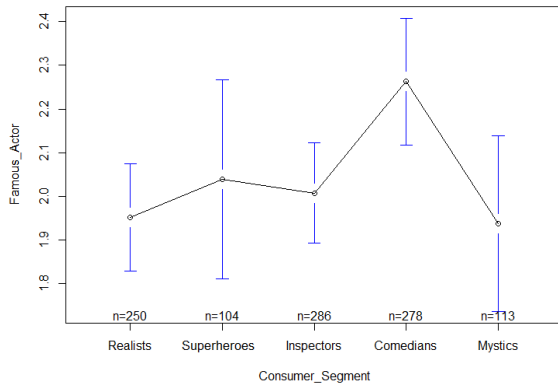
Exploring Similarities and Differences among Obtained Consumer Segments

After creating five market segments, we strived to explore the similarities and differences among them. The analysis of differences went in four directions: regarding the product, WOM, number of films watched and promotion. Marketing mix has four elements (product, place, price, and promotion), while the film marketing mix has additional elements (creative team, actors, script/genre, age classification and release strategy (Kerrigan, 2010)). Having in mind that the film marketing mix encapsulates numerous aspects of the film, we decided to cover certain elements of product and promotion. As the WOM in the film industry plays a significant role (Kim, Park & Park, 2013), we included it in the analysis. Also, recent research in the field placed focus on frequency of film consumption (Soto-Sanfiel et al., 2021). This was our rationale for choosing the aspects of the film whose preferences will be compared between the segments.

Product

To assess the respondents' opinion on the film as a product we observed their importance on the fact a famous actor plays in it, a famous director worked on it, on the budget, on the script being based on a true story, and that the film won a prestigious prize (Oscar, Golden Palm, Golden Lion, BAFTA). The statements used to observe the product were: *Hiring famous actors / actresses in a film influences my decision on whether to watch that film, The fact that there is a recognized director behind the film influences my decision on whether to watch that film, The information on the film budget influences my decision on whether to watch that film, If the film is based on true events, it will affect my decision to watch that film,* and *If a film has won prestigious film awards (e.g. an Oscar) it will influence my decision to watch that film.*

Statistically significant differences between segments can be observed regarding the importance of the famous actor playing in a film (KW=11.253, p<0.05). When it comes to the presence of the famous actor, the *Comedians* are the ones who place the most attention to this element of the product. The Mann-Whitney test showed a statistically significant difference between them and every other segment (p<0.05 in all comparisons). No difference was found in case of the presence of a famous producer (KW=6.502, p>0.05), information on budget (KW=4.517, p>0.05), and the script being based on a true story

(KW=1.126, p>0.05). Finally, statistically significant differences between segments can be observed regarding the importance of the fact that the film won a prestigious prize (KW=18.027, p<0.05). The Mann-Whitney test showed that the *Mystics* are significantly less interested in this aspect of the film compared to *Realists, Superheroes*, and *Comedians* and that the *Comedians* pay more attention to prizes the move won than the *Inspectors*. The means plot per segment for the two elements for which statistically significant differences were found are given in Figures 3a and 3b.

Figure 3a. Plots of Mean Importance of Famous Actor per Consumer Segment

Figure 3b Plots of Mean Importance of Winning a Prestigious Prize per Consumer Segment
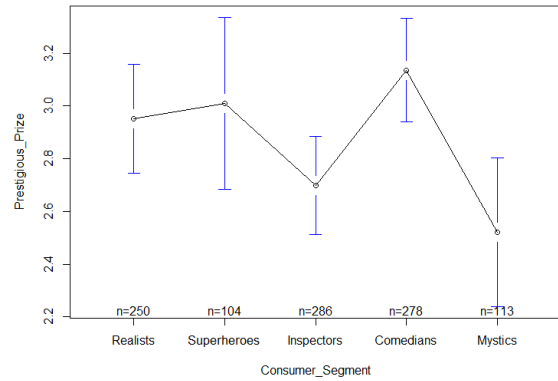
WOM

To assess the respondents' opinion on the importance of WOM, we observed the following six aspects. The statements used to observe the WOM were: *Indicate how much the WOM on the actors, on the director, producer, script, channel of distribution, and IMDB rating affects your decision on whether to watch that film.*

No difference was found in the importance of WOM on actors (KW=2.412, p>0.05), WOM on the script (KW=7.517, p>0.05), and the IMDB rating (KW=6.171, p>0.05). We can conclude that the importance of WOM on these aspects does not differ between segments and that all respondents react the same on these suggestions and recommendations. Statistically significant differences between segments can be observed regarding the importance of the WOM on the director (KW=16.405, p<0.01). *Mystics* and *Comedians* pay

less attention to this WOM than *Realists* and *Superheroes*. The difference between *Mystics* and *Inspectors* was also noted. Also, differences have been detected in the importance of WOM on the producer (KW=13.300, p<0.01). The *Realists* pay significantly more attention to this WOM than *Inspectors, Comedians* and *Mystics*. The same accounts for *Superheroes* related to *Mystics*. Finally, statistically significant differences between segments can be observed regarding the importance of WOM on the channel of distribution (KW=10.265, p<0.05). The Mann-Whitney test showed that the *Mystics* and *Inspectors* are significantly less interested in this WOM compared to *Comedians*. The means plot per segment for the three aspects of WOM for which statistically significant differences were found are given in Figure 4a-c.

Figure 4a. Plots of Mean Importance of WOM on Director per Consumer Segment
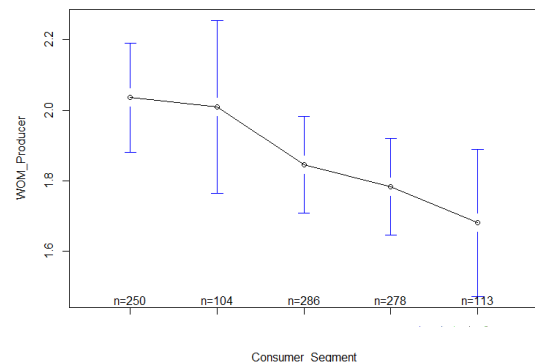
**Figure 4b.** Plots of Mean Importance of WOM on Producer per Consumer Segment
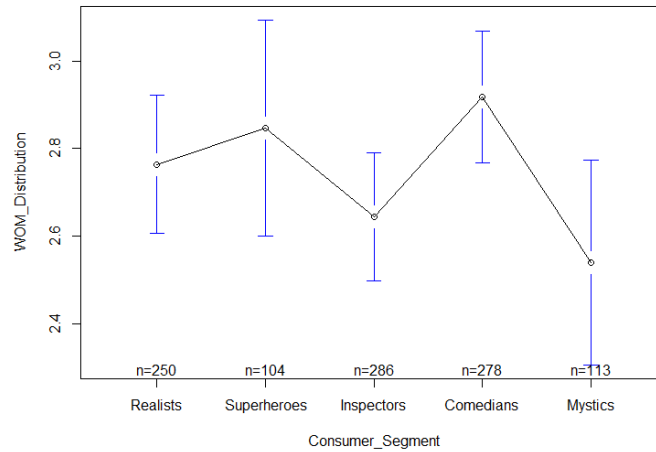
Figure 4c. Plots of Mean Importance of WOM Distribution Channel per Consumer Segment

Frequency of Film Consumption

As a measure of film consumption frequency, we asked the respondents to indicate how many films a week do they watch on TV or in the cinema. Interestingly, statistically significant differences in film consumption frequency were detected (KW=20.339, p<0.01). The segment with the highest mean of number of films watched per week is *Mystics,* 3.080 with a standard deviation of 1.604. They are followed by *Realists* and *Inspectors* which have almost the same mean, 2.888 and 2.876, with standard deviations of 1.512 and 1.546. The segment which has the lowest mean frequency of consumption is *Comedians,* only 2.44, with the standard deviation of 1.479. The Mann-Whitney test indicated that *Realists, Inspectors* and *Mystics* watch significantly more films than *Comedians* and that *Mystics* watch more films than *Superheroes.* The means plot of number of films watched per segment is given in Figure 5.
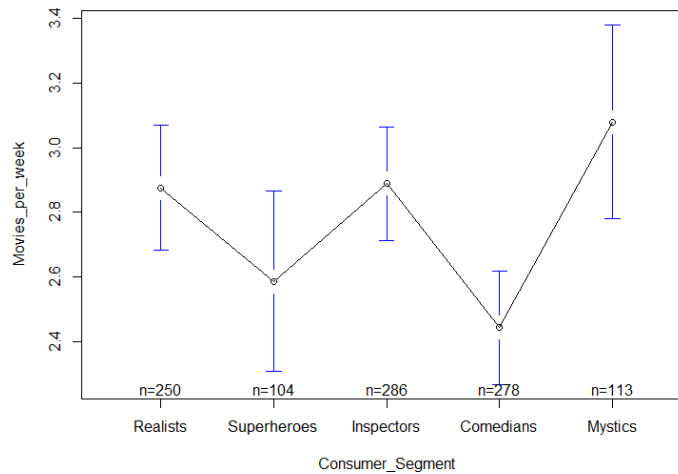

**Figure 5.** Plot of the Mean Number of Films Watched per Consumer Segment

Promotion

To assess the importance of promotional messages on different channels on the consumers' decision to watch a film, we observed promotion in four channels: print media, on TV, billboards, and social media. The questions were formulated as: *Indicate how much does the promotion of the film in print media, on TV, billboards, and social media affect your decision on whether to watch that film.* No difference was found in the importance of promotion in print media (KW=3.322, p>0.05) and social media (KW=7.733, p>0.05). We can conclude that the promotion on these channels is equally important to Millennials, no matter their genre preference; they all pay the same level of attention and importance. Statistically significant differences were found in case of promotion on TV (KW=30.351, p<0.01) and on billboards (KW=24.325, p<0.01). According to the Mann-Whitney test, the *Comedians* are the ones who pay significantly more attention to these promotion channels compared to all other segments. The means plot of the importance of TV and billboard promotion per segment are given in Figure 6.
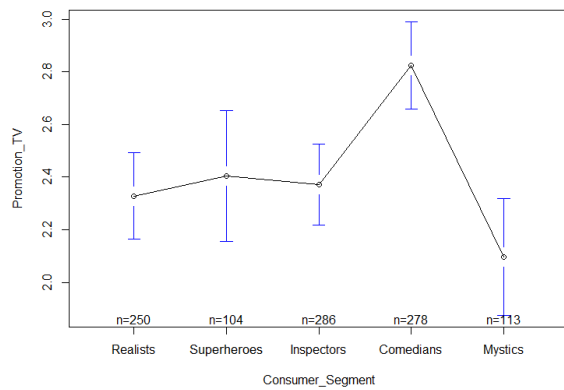
Figure 6a. Plots of Mean importance of Promotion on TV per Consumer Segment
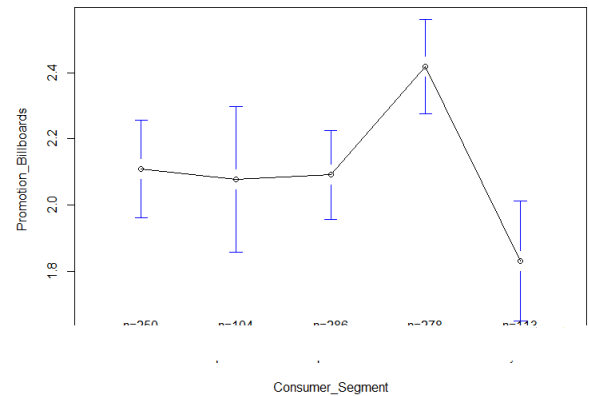
Figure 6b. Plots of Mean Importance of Promotion on Billboards per Consumer Segment

All of the presented results indicate that the hypothesis two is confirmed as we have detected statistically significant differences between the consumers' attitudes on the importance of elements of film marketing mix.

Discussion and Managerial Implications

Based on the results of consumer segmentation and observation of differences among them, specific communication strategies can be defined for each of them. The following proposed communication strategies correspond to stage 4 of the proposed biclustering market segmentation flowchart.

Realists are the consumers who consider the recommendation on the director and producer and consume films on a regular basis. They are not positively or negatively impacted by promotion and on actors playing in the film. They do pay attention to these aspects, but not particularly much. Considering the above, communication with these consumers should primarily be based on recommendations about film directors and producers. Communication channels are not strictly limited, but highlighting the given characteristics of the film during communication can be helpful for animating realists, especially since they are the ones who often watch films.

Superheroes segment encompasses more males and those who prefer animated films, blockbusters, and mystery. This segment is in line with the research of Fischoff (2005) who found that males prefer seeing negative emotions as anger, anxiety, outrage, violence, and terror in their favourite films. *Superheroes* are the ones who do not consume films very often, but do pay attention to WOM on the director, producer, and distribution. They are also interested in viewing films in which famous actors have rolls. These consumers are very meticulous, they do not watch films just to spend time, they do invest in choosing the film that suits their preferences. They are ready to watch less films, but only watch those they believe are going to enjoy. Knowing this, it is assumed that the accentuation of famous actors in the film, in addition to highlighting both producers and directors, can gain the attention of this group during communication, as well as careful selection of distribution channels. Giving importance to these elements in a communication strategy will attract their attention.

Inspectors are, in a way, reserved when choosing a film. Compared to other segments, they were always in the middle; not influenced negatively, nor positively by the explored factors. As the name of the segment, they are solitudes, who inspect by themselves in search for a good film. Accordingly, it is assumed that the strategy should not be convincing, but it would be desirable during the communication to leave room for them to conclude on the basis of the basic characteristics of the film whether the film is exactly what they would watch.

Comedians segment encompasses those who prefer comedies and clearly dislike horror films. This segment is in line with the research of Fischoff (2005) who found that females found positive emotions more important to a film than did males. *Comedians* are attracted to watch a film with famous actors and which won prizes. They also pay attention to TV and billboard promotion and are influenced on the recommendation on the distribution channel. Regarding the frequency of consumption, they are the ones who watch the least films per week among segments. Similarly, as *Superheroes,* the *Comedians* are ready to watch fewer films, but their choice of viewing can be influenced. This information certainly helps to facilitate communication. Highlighting famous actors and film awards, through TV promotions and billboard promotions, can be very helpful in order to attract *Comedians*. Also, it is not out of place to focus communication on recommendations for the distribution channel.

Mystics are those consumers who consume films quite often and their choice of the film is made solely by themselves. They are the least affected by recommendations on any aspect of the film, actors playing in the film, or the prizes won. They are also not influenced by the promotion on TV and billboards. These consumers have their unique philosophy of choosing films to watch. Knowing that this group is not influenced by the promotion through TV and billboards, it is very important to highlight that communication with *Mystics* should not be based on these types of promotions, but on social media and print.

Besides observing differences among segments, there are habits and attitudes which do not differ among segments which should be noted. Firstly, the information on the director, budget, and the fact the script is based on a true story equally draws all respondents to consuming a film. Next, they are all equally influenced by the WOM on actor,

script, and IMDB. Finally, regarding the promotion, they all pay attention to print and social media communication. With this in mind, communication for all groups should contain activities that include the above elements, without fear that they may have a negative impact on the film viewing decision-making process.

Hall & Pasquini (2020) raised an interesting question: Can there be a fairy-tale ending for Hollywood after Covid-19? The authors highlighted the fact that Covid-19 has upended the global movie industry, halting movie production and closing cinemas, as well as that the pandemic is accelerating the ongoing transformation in movie production, distribution and consumption. They are pointing out that this change reflects consumer preferences for content consumption, which increasingly favours streaming video on-demand. We hope that the results of our study can provide some insights and ideas for possible solutions within the film industry.

Conclusion

Our findings should be of practical value to managers and executives alike who are seeking effective communication with their business partners and distributers. More specifically, our study suggests genre preference as predictor of a movie's future economic performance. Thus, movie executives and managers need to recognize the Covid business challenges connected the genre preference and help studios and distributors evaluate and tailor their future product and communication strategies.

In this paper, we proposed a segmentation model for the film industry based on the genre preference. Namely, we hypothesised that the consumers could be segmented based on their genre preference. Using advanced machine learning algorithm for biclustering, we segmented 1031 respondents who we questioned during the Covid-19 lockdown. Five segments which statistically significant differ were retained. Based on the detected differences in the attitude towards different aspects of film marketing mix, specific communication strategies for each segment have been proposed. Both research hypotheses have been confirmed.

The presented study provides useful insights which might be useful for developing new business practices, but it is not without drawbacks. Firstly, the sample size can be observed as a limitation of the study. Although we have had almost 1200 respondents after closing the survey, as we

were exploring film consumption, a product of mass consumption, a larger sample could have been expected. Another possible limitation might be the sample structure which is biased towards highly educated females, individuals who have Facebook accounts, and Millennials mostly from Belgrade who are highly educated. In future studies, different approach to sampling which would encompass diversified respondents could be taken. Also, the study was conducted in one country and cultural differences should be taken into account. Also, other elements of film marketing mix such as price and distribution channel should be taken into account when defining communication strategy per segment.

What also needs mentioning is the fact that we conducted the survey on which the market segmentation model was tested during pandemics. We are aware that the period when the survey was conducted has an impact on the obtained results. However, although the case study was done during the start of the Covid-19 pandemics, the market segmentation model can be easily implemented again in the post-Covid era or any other period. The application of the segmentation model is not strictly related to the pandemics period which makes the market segmentation model universally applicable to different periods, as well as countries and regions. We need to stress out that the segments, results, and communication strategies will differ depending on when and where the input data for the market segmentation model was collected.

Finally, this study offers advancements in the field of market segmentation models in the film industry in several ways. Firstly, it was done during Covid-19 pandemics, and possibly captures the changed behaviour of consumers. Second, most studies related to market segmentation in the film industry, to our knowledge, have been related to segmentation film festival visitors according to their motivators (Baez & Devesa, 2014) and segmentation of potential film tourists (Kim & Kim, 2018). However, in the presented study, we segmented consumers based on their preferences and proposed a communication approach to each of them. Our findings also go in hand with previous research on consumers' attitudes towards film consumption. Finally, we provide evidence that genre preference is an important if not detrimental characteristic of the film which differentiates consumers and which should be taken into account when defining communication strategy.

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