PRINCIPAL COMPONENT ANALYSIS OF GENERATIONAL PREFERENCES REGARDING OVER-THE-TOP SERVICES – A HUNGARIAN CASE STUDY

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ABSTRACT

The rise of video streaming services has not only increased the popularity of the platforms available, but has also changed the way households consume content, displacing the options offered by traditional television. The orientation was to apply a specific interdisciplinary scientific approach, combining economics and sociology, due to the research area of the study. The advantages/disadvantages of streaming platforms may play a role in the perceptions of different age groups of users by the service provider they choose. The aim of the research is to focus on the different video streaming consumption habits of the various generations (Generation X, Generation Y, Generation Z) as customers of Netflix, HBO Max, and Disney+, the widely known video streaming providers as reflected in the literature review. A Likert-scale questionnaire survey was considered the most appropriate method to achieve this objective. In order to test the hypothesis on the relationship between generations and video streaming usage a principal component analyses by generation was applied. The separation of variables resulted in the establishment of two groups, namely manipulation (indicating the influence of the traditional way of life) and enjoyment (influencing the choice and customer retention of service providers). The results of the study indicate that the generational characteristics of consumers partly show different patterns of service use, and that the impact of service use on traditional lifeways differs between generations. The analysis highlights the importance of further researches in this area, as the factors explored can be extended to other important issues in the future.

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1. INTRODUCTION

Nowadays, linear, also known as traditional television, is facing stiff competition from emerging streaming services, which have grown into a multi-billion dollar industry (Herman, 2022). The ranking of video streaming providers worldwide and internationally cannot be regarded as permanent. The popularity of the platforms is significantly influenced by the details of the subscription schemes, such as password sharing and the use of multiple devices at the same time (Nathanson, 2022), or by market restructuring, which may lead to changes in subscriber prices and the emergence of new competitors (Maglio, 2022; Martínez-Sánchez, Nicolas-Sans & Díaz, 2021).

In the world of media service providers, the slightest economic or even social change can drastically affect users' value judgements (Aly Tovar, 2021). However, the outcome of the ‚Streaming War', or the war between online media providers, seems to be unrelated to the battle between streaming and traditional television, as regardless of who leads the line, the popularity of linear television seems to be breaking down (Kenworthy, 2020). Meyer (2022a, 2022b, 2022c) identified satellite-based broadcasting as the main explanation for the catch-up and advance of internet-based providers, citing the increase in content delivery speed inherent in the technology. Its findings suggest that the smartphone and tablet usage of previous years has been replaced by smart television, which is becoming more prevalent among video content consumers. The global subscriber numbers of the best-known platforms illustrate the global importance of video streaming service providers. According to Pattison (2022), Netflix is the on first place with around 225 million subscribers, followed by Amazon-owned Prime Video (205 million subscribers), while the third in the group of video-sharing platforms is Disney+ (130 million subscribers), HBO Max is the fourth with 85 million subscribers, and Walt Disney-owned Hulu (45 million subscribers) is the fifth. In terms of market share, Netflix was the most dominant provider in Hungary (87.1%) in 2022, followed by HBO Max (61%), then Apple TV+ (around 124,000 users) and Amazon Prime (around 91,000 users) (GKID Economic Research Co, 2022). In Hungary, 44% of internet users aged 16 and over are digital natives (Generation Y and Genration Z), while 56% belong to three generations of digital immigrants (Veterans, Baby Boomers, Generation X) (National Media and Infocommunications Authory, 2020). Almost 39% of active internet users aged 18 and over (around 2 million users) have a subscription or access to at least one streaming service (GKID Economic Research Co, 2022).

The aim of the research is to focus on the different video streaming consumption habits of the various generations (Generation X, Generation Y, Generation Z) as

customers of Netflix, HBO Max, and Disney+, the widely known video streaming providers as reflected in the literature review. A Likert-scale questionnaire survey was considered the most appropriate method to achieve this objective. In order to achieve this purpose, the research examines the relationships between video streaming service providers and the generational differences associated with them using principal component analysis, as this methodology has been proved to be suitable for identifying and comparing different generational characteristics. For this reason, two perspectives (possible groups of principal components) have been taken into account: indicating the influence of traditional lifestyles, and influencing the provider choice and continuation. The specific interdisciplinary scientific approach could lead to the identification of significant characteristic differences between the examined generations in their use of streaming services, which undoubtedly influences the ways in which they communicate and interact. In conducting the research, the following research hypothesis was determined: Generations have different consumption behaviours and therefore decide to use video streaming services based on diverse experiences/percepcions.

The formulation of our hypothesis was influenced by a number of reasons determined by previous researches that studied the topic in a narrower context. Earlier researches typically only considered age and did not segment respondents by generation (e.g. Katherine Chen, 2019; Nagaraj, Singh & Yasa, 2021; Shin & Park, 2021). In those studies that have conducted a generational analysis, only two generations have generally been compared with each other (e.g. Dabija et al., 2018; Laor & Galily, 2022; Lissitsa & Laor, 2021). It should also be noted that this paper fills a gap in this respect, as most of the papers analyzing over-the-top services have been written in Asia (e.g. Malewar & Bajaj, 2020; Nagaraj, Singh & Yasa, 2021; Shim, Lee, & Oh, 2022; Shin & Park, 2021). Moreover, in most cases the use of streaming platforms has only been studied under the assumption of the same user characteristics (same set of variables with structural model or factor analysis (e.g. Dabija et al., 2018; Malewar & Bajaj, 2020; Nagaraj, Singh & Yasa, 2021; Shim, Lee, & Oh, 2022;). The concept of the present research goes one step further by targeting 2-2 potential principal component groups per generation.

1.1. Factors influencing the choice of service provider

Over-the-top (OTT) platforms are suitable as a substitute (Martínez-Sánchez et al., 2021; Meyer, 2022a, 2022b, 2022c; Silva & Lima, 2022; Simon-Kucher & Partners, 2019) or complement (Kim, Lee, Lee & Kim, 2021) to traditional media (public service, commercial) consumption patterns. Unlike television, they are characterised by lack of advertising and a wide range of programmes.

The differences between the public's perception, the use of the two platforms (television, over-the-top) (e.g. Katherine Chen, 2019; Sahu, Gaur & Singh, 2021) and the reasons for subscribing to OTT providers (e.g. Devadas, 2022; Westcott et al, 2022) have been investigated from several aspects (e.g. economic development), the results of which are summarised in Table 1.

Based on the literature review, certain factors (e.g. price, convenience, availability of programmes, lack of advertising) have been highlighted in several studies. Mulla (2022) categorized and analysed studies on streaming platforms published between 2007 and 2021 in a review article. The results show that the use of OTT platforms is influenced by the following 12 factors: content, price, flexibility, convenience (perceived ease of use), perceived usefulness, perceived enjoyment (hedonic motivation), desire to be freed from any constraint, entertainment value, socialization, culture inclusion, binge-watching, and self-efficacy. Devadas (2022) research on purchase and continuation intention should be also emphasied, which shows that, in addition to price, convenience and a wide range of programmes, the possibility of binge-watching is also a priority for subscribers. With the presence of video streaming platforms, the user base is becoming increasingly aware, so even for the most popular providers (e.g. Netflix, Disney+), understanding the aspects of customer retention related to value for money will be key for the future (Westcott et al, 2022).

Table 1. Factors affecting OTT usage based on literature review

Source	Factors influencing OTT usage (advantages)	Location of the Study
Katherine Chen, 2019	amusement, convenience, ease of use, information content, price, relaxation, social interactions	Taiwan
Nagaraj, Singh & Yasa, 2021	content, convenience, features, price, quality	India
Malewar & Bajaj, 2020	content availability, performance expentancy, price	India
Shim, Lee, & Oh, 2022	foreign content, movies, original content,	South-Korea
Shin & Park, 2021	content diversity, ease of use, enjoyment, price, quality, social interaction	South-Korea
Meyer, 2022a, 2022b, 2022c	availability on multiple devices, ease of use, no contract period, price, time-shifted television, watching television on the go, wide range of content,	Austria, Germany, Switzerland
Wanat, 2022	exclusive content, good recommendation system, high quality, lack of advertising, legal streaming, offering the best movies, offering the best series, offline viewing, price, working smoother	Poland
National Film Institute [NFI], 2020	access to the latest trends, availability on multiple devices, ease of use, exclusive content, faster access to content, flexibility, lack of advertising, original content, wide range of content	Hungary

Source: Authors' editing

Chakraborty et al. (2023) indenified five factors of customer retention: social value (acceptance, perception), functional value (price, quality), emotional value (satisfaction, enjoyment), epistemic value (novelty, curiosity) and conditional value (discounts, offers). It was found that all 5 factors are necessary to build trust in OTT providers, but that social value, unlike the other 4 factors, does not have a significant impact on customer retention, as the importance of belonging to a platform in terms of social perception is decreasing. The formation of divergent opinions among social groups, in line with Buda (2019), is believed to be due to the different acceptance of social norms across generations, as well as historical turning points (e.g. the outbreak of war) and the diffusion of technological innovations (e.g. the internet).

1.2. Generational differences in video streaming services

Distinguishing between generations and comparing their behaviours is a complex task, thus the theoretical approaches are not consistent. According to Csutorás' (2020) studies, the first modern empirical research on generations was conducted on the basic assumptions of Mannheim's theory, which laid the foundation for the generation concepts still used today. According to the theoretical approaches based on collective consciousness (Howe & Strauss, 1991, as cited in van Eck Duymaer van Twist & Newcombe, 2021) generations can be defined as groups that share a common historical past and space, thus providing a collective identity for the group members. The most commonly used approach distinguishes generations by age, using birth intervals of 10-15 years, linking the cut-off points to major events, as in collective theory (Lyons & Kuron, 2014). Some research studies (e.g. Kertzer, 1983; Twenge, 2000) dispute that approaches using age, age-length and historical effects reflect generally acceptable results. Regarding the labour market, the following generations can be distinguished: Veterans (1930-1949), Baby Boom Generation (1950-1965), Generation X (1966-1989), Generation Y (1985-2000) and Generation Z (born around the second Millennium) (Mannheim, 1952; Kópházi, Pétervári, & Balassa, 2018). Therefore, the term generation can be approached in many different ways: age, birth interval, historical past, and membership of a company/organisation.

In addition to the generational theories already described, the specific topic of this study required the application of a concept that distinguishes between age groups based on differences in Internet use and digital device use. This approach was considered important in present research, as several analyses (e.g. Dabija, Bejan, & Tipi, 2018; Kulcsár, 2008; Raffer, 2020) have shown that the application of the before mentioned framework can show significant differences between generations. The results of several studies (Földvári, 2017;

Komár, 2017) have confirmed that Generation Z (1996-2010) shows significant differences from Generation X (1961-1981) and Baby Boomer (1943-1960) not only in terms of device use, but also in mindset, emotional expression and problem solving. Kulcsár's (2008) and McCrindle's (2018) classifications of generations' attitudes towards the digital world were found to be suitable for the present analysis, namely: Veterans (1925-1945), Baby Boom Generation (1946-1964), Generation X (1965-1979), Generation Y (1980-1994), Generation Z (1995-2009) and Generation Alpha (2010-). In the following, the differences between generations will be outlined.

The generational differences in communication, device use, content consumption and behaviour (e.g. etiquette, netiquette) caused by the digital world have been defined by several scholars (e.g. Carrillo-Durán, Ruano-López, Fernández Falero, & Trabadela Robles, 2022; Dabija et al, 2018; Downes, 2019; Kulcsár, 2008). Table 2 summarises the differences in digital device use by generations.

Table 2. Characteristics of digital device use by generations

Generation	Features of digital device use	Source
Veterans	Challenge Lack of confidence Physical difficulties	Ali & Szikora, 2017 Jiang, 2018
Baby Boomers	Acceptance Replacing traditional media content on an occasional basis Tool for basic communication	Carrillo-Durán et al., 2022 Downes, 2019 Kulcsár, 2008 Towner & Lego Munoz, 2016
Generation X	Awareness of own limitations Consciousness Digital skills acquired at an older age Excellent technical skills Responsibility Supplementing traditional options	Dabija et al., 2018 Downes, 2019 Jung & Melguzo, 2021 Kamber, 2017 Lissitsa & Laor, 2021
Generation Y	Active social media presence Early use Intensive internet use Internet-based networking Keeping track of new technologies Multitasking Online entertainment Use of convenience features	Bolton et al., 2013 Dickey & Lewis, 2010 Kulcsár, 2008 MacKenzie & Scherer, 2019 McAlister, 2010 Savage, 2006 Werenowska & Rzepka, 2020
Generation Z	Access to diverse contents Increased streaming and OTT platform use Price sensitivity Psychopathological symptoms in case of absence Routine use of devices, new technologies Social media-based communication Wide range of device usage	Ahn, 2022 Jung & Melguzo, 2021 Kulcsár, 2008 Laor & Galily, 2022 Reinikainen, Kari, & Luoma-Aho, 2020 Taylor, 2020 Westcott et al., 2022 Yadav & Rai, 2017

Generation	Features of digital device use	Source
Generation Alpha	Addiction Fast information needs Increased use of digital spaces Sharing attention Virtual friendships	Cirilli & Nicolini, 2019 Pálinkás & Purgel, 2019

Source: Authors' edit based on sources cited

The reviewed literature supported the choice of Kulcsár's (2008) and McCrindle's (2018) classification, which allows the comparison of specific generational groups separated by digital device usage patterns, based on their user perceptions and habits.

2. MATERIALS AND METHODS

The aim of the research is to explore the relationships between video streaming service providers and the generational differences associated with them using principal component analysis, as the different sets of variables and factor weights of principal components representing the mindsets of age groups may reveal relevant information in this regard. It is assumed that two principal component groups can be distinguished, namely the manipulative (indicating the influence of traditional lifestyles) and the enjoyment (influencing the provider choice and continuation), which indicate generational differences.

The orientation was to apply a specific interdisciplinary scientific approach, combining economics and sociology, due to the research focus of the study on video streaming consumption behaviour. Therefore, the present study focuses on different video streaming consumption habits of different generations that are customers of Netflix, HBO Max and Disney+, the best known video streaming providers, as reflected in the literature review. In terms of generations, the special classification (based on attitudes towards the digital world) of Kulcsár (2008) and McCrindle's (2018) was applied: Veterans (1925-1945), Baby Boom Generation (1946-1964), Generation X (1965-1979), Generation Y (1980-1994), Generation Z (1995-2009) and Generation Alpha (2010-). In designing the survey, the aim was to reach as many generations as possible, therefore in addition to online surveys on the university's social media site, the snowball method, a non-probability sampling was applied to conduct our primary research, taking advantage of the authors' multi-generational network of contacts. In addition to closed-ended multiple-choice questions related to demographics and video streaming habits, incorporating variables already used/tested in previous research ordinal scales (4-point Likert scale, 48 variables) was also applied in

the questionnaire. A total of 350 responses were received during the completion period (21.10.2022 - 2.11.2022), but only respondents with an OTT subscription were included in our analysis, leaving a sample of 264 respondents after data cleaning (Table 3). Taking the responses to our questionnaire into account, the Baby Boomer and the Alpha Generations were excluded from the analysis due to their low sub-sample. Obviously, the research method was chosen with the limitations of the data collection in mind, so it was a non-representative, cross-sectional analysis (study of data on a sample population at a given point in time). The necessary tests and the principal component analyses were performed using IBM SPSS Statistics 25.

Table 3. Number of OTT users per generation (person)

Generations		OTT usage		Total
Name	Birth interval	No	Yes	
Baby Boomer	1946-1964	18	8	26
Generation X	1965-1979	32	72	104
Generation Y	1980-1994	12	76	88
Generation Z	1995-2009	24	104	128
Generation Alpha	2010-	0	4	4
Total		86	264	350

Source: Authors' edit based on the questionnaire answers

The past decades have shown that principal component analysis has become increasingly accepted for questionnaire surveys, as it is suitable for exploring relationships between variables, identifying the most important variables and facilitating data interpretation (Sajtos & Mitev, 2007). The literature emphasises the minimum sample size, whereby the method is not recommended for sample sizes below 50 respondents, and the item/variable ratio criterion, according to which a principal component analysis requires at least ten times more respondents than the number of variables used in the survey (Csanády, Horváth-Szováti, & Szalay, 2013).

The principal component analysis was run several times for each generation in order to achieve the best model fit with the available sample. The following acceptance criteria were defined during the research:

- Kendall's tau b: >0.3
- Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO): >0.5
- Bartlett's Test sig.: <0.05
- Communalities: >0.25

- Goodness of Fit Test: >0.00
- Total Variance Explained: > 33%
- Factor Weights: > 0.25 (Barna & Székelyi, 2008).

In this paper, only the best-fit version of the model is presented, in which the total set of variables included is as follows (the literature basis for inclusion in the study is also indicated):

1. Manipulation principal component group:
   - v1_1: internet usage habits (Kwon & Wen, 2010; Leung, 2007)
   - v1_2: free time activities (Fekete, 2018; Murtaza, Molnár, & Szakács, 2021)
   - v1_3: social life (Prasad, 2021)
   - v1_4: private life (McDaniel & Coyne, 2016; Negi & Gupta, 2022)
   - v1_5: working/studying (Prasad, 2021; Safar & Alkhezzi, 2016)
2. Enjoyment principal component group:
   - v2_1: rewatchability (Arriaga et al. 2019)
   - v2_2: language learning (NFI, 2020)
   - v2_3: exclusive content (NFI, 2020; Wanat, 2022)
   - v2_4: high video quality (Nagaraj et al. 2021; Yousaf, Mishra, Taheri, & Kesgin, 2021)
   - v2_5: wide range of content (Meyer, 2022a, 2022b, 2022c; NFI, 2020)
   - v2_8: original content (Yousaf et al, 2021; Shim et al. 2022)
   - v2_11: flexibility (Mulla, 2022; Nagaraj et al. 2021)
   - v2_12: season-by-season publication of series (Devadas, 2022)
   - v2_13: convenience (Devadas, 2022; Katherine Chen, 2019; Sahu et al. 2021)

The sets of variables of the principal component groups created by generation are presented in Table 4. Research on the methodology of principal component analysis has emphasized the examination of normality (Fornell & Larcker, 1981; Sajtos & Mitev, 2007). However, in case of the Likert scale questions applied in this analyses, it should be noted that these are not continuous interval scales, and thus typically do not meet the criteria of traditional normality tests (e.g. Kolmogorov-Smirnov test, Shapiro-Wilk test, skewness and kurtosis). The results of several simulation studies (e.g. Muthén & Kaplan, 1985) have shown that other criteria can be used to determine whether normality is fulfilled for ordinal scales (Rózsa et al, 2019). For factor based models (Dash & Paul, 2021), it is proposed to determine the degree of normality violation (Rózsa et al, 2019), for which there are no generally accepted critera. However, in the

case of multivariate analysis (e.g. principal component analysis), a skewness of less than 2 and a kurtosis of less than 7 are considered appropriate (Byrne, 2010; Chou & Bentler, 1995; Curran, West, & Finch, 1996; Muthén & Kaplan, 1985). George & Mallery (2010) suggest in a slightly different approach for psychometric purposes (e.g. attitudes, exploration of personal characteristics) a cut-off between +2 and -2 for questionnaire surveys. The values of the variables used in our model can be accepted (Table 4), since all, except for two (v1_3, v2_11) which are acceptable according to the more permissive literature, meet even the stricter criteria.

Table 4. Skewness and kurtosis values (normality) of variables included in the model

Principal component groups	Generation	Variable	Kurtosis	Skewness
Manipulation	1965-1979	v1_1	0.158	-0.933
		v1_2	-0.178	-0.520
		v1_3	0.228	-2.004
		v1_5	0.183	-0.619
	1980-1994	v1_2	0.340	-0.814
		v1_3	-0.139	-0.017
		v1_4	-0.186	-0.042
		v1_5	0.310	-0.232
	1995-2009	v1_2	0.054	-1.136
		v1_3	0.133	-0.715
		v1_4	0.269	-0.638
		v1_5	0.662	0.404
Enjoyment	1965-1979	v2_1	-0.475	-0.630
		v2_4	-0.696	-0.630
		v2_5	-0.609	-0.566
		v2_13	-0.388	-1.513
	1980-1994	v2_3	-0.848	-0.394
		v2_4	-1.220	-1.064
		v2_11	-1.967	3.693
		v2_12	-0.478	-0.216
		v2_13	-0.593	-0.917
	1995-2009	v2_1	-1.102	0.473
		v2_2	-0.975	-0.718
		v2_4	-1.282	0.772
		v2_8	-0.298	-1.236

Source: Authors'own calculations based on the questionnaire answers

Additionally to the analysis of the deviation from the normal distribution, the evaluation of the Cronbach's alpha is also widely used in the construction of questionnaire scales, indices, factors, where the generated composite indicators

should have an alpha value of at least 0.7 (Cronbach, 1951; Kárász, Nagybányai Nagy, Széll, & Takács, 2022; Peterson, 1994). The Cronbach's-Alpha values of the clustered principal components generated by generations meet this criterion (Table 5).

Table 5. Cronbach's-Alpha values of principal components

Principal component groups	Generation	Cronbach-Alpha values
Manipulation	1965-1979	0.788
	1980-1994	0.740
	1995-2009	0.729
Enjoyment	1965-1979	0.766
	1980-1994	0.819
	1995-2009	0.806

Source: Authors'own calculations based on the questionnaire answers

In addition to the so-called lower threshold value (0.7), it is important to note that values which are too high (above 0.9) are not considered acceptable either, as they may indicate some kind of redundancy between variables (Nagybányai Nagy, 2006). This may be due to the similarity (quasi-duplication) of the questions included in the study and thus the identical information content of the given answers (Ponterotto & Ruckdeschel, 2007). The alpha values of the study are within the appropriate values as formulated in the literature, so the variables included in the questionnaire provided consistent measurement.

Testing for multicollinearity is also an important requirement for multivariate principal component analysis, as it allows to determine the strength of relationships (correlation, significance level) between the variables included. Therefore, in the selection of the variables included in the study, it was aimed to achieve the minimum significant correlation values ($p>0.3$; $sig<0.05$) defined by Barna & Székelyi (2008), thus constructing the principal components for each generation. As a consequence of the Likert scale questions used in the survey, the correlation tests for the ordinal scales were performed with Kendal's tau-b.

Principal component analyses were carried out with the following settings:

- Maximum-likelihood method
- Varimax-rotation (variance maximalization).

The adequacy of the data used for the principal component analysis was verified by Bartlett's tests and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) values (Tables 5-6). The KMO values exceeded 0.7 in all

cases (6 principal components in total for 2 principal component groups) and the explanatory power (total variance explained > 40% in all cases) met the criteria expected from the literature (Table 6).

Table 6. KMO and Total variance explained values of principal components

Principal component groups	Generation	KMO	Bartlett's test	Total variance explained (%)
Manipulation	1965-1979	0.745	sig<0.001	50.334
	1980-1994	0.713	sig<0.001	46.545
	1995-2009	0.735	sig<0.001	41.912
Enjoyment	1965-1979	0.746	sig<0.001	46.636
	1980-1994	0.840	sig<0.001	50.451
	1995-2009	0.779	sig<0.001	51.842

Source: Authors'own calculations based on the questionnaire answers

To test model fit, a Goodness of Fit test was also carried out (Table 7), the results of which supported the feasibility of the principal component analyses with the variable sets already described (Table 4).

Table 7. Goodness of Fit test of principal components

Principal component groups	Generation	Chi-Square	df	sig
Manipulation	1965-1979	3.846	2	0.148
	1980-1994	3.492	2	0.174
	1995-2009	1.376	2	0.503
Enjoyment	1965-1979	4.627	2	0.099
	1980-1994	2.535	5	0.771
	1995-2009	3.643	2	0.162

Source: Authors'own calculations based on the questionnaire answers

A Pearson's correlation test was also conducted between the principal component scores developed for the two principal component groups by generation, as it was considered important to explore possible correlations between the principal components of enjoyment (influencing the provider choice and continuation) and manipulation (indicating influence on traditional lifestyle).

3. RESULTS

The evaluation of the principal component analyses starts with an overview of the generational variable sets and their factor weights. Table 8 shows the factor weights of the principal components created in the manipulation principal

component group, which allows the identification of key differences. Regarding the oldest age group, the most significant factor is the change in leisure activities through the use of video streaming services, which is also important for Generation Z, but plays a less important role for Generation Y. Generation X's perception of digitalisation differs from the other two generations studied (Carrillo-Durán et al, 2022; Dabija et al, 2018), so the effect of streaming on internet use is only significant for them.

Table 8. Factor weights of principal component analysis' variables of the manipulative principal component group

Manipulative principal component group Variables	Generation X (1965-1979)	Generation Y (1980-1994)	Generation Z (1995-2009)
Internet usage habits (v1_1)	0.490	-	-
Free time activities (v1_2)	0.766	0.266	0.540
Social life (v1_3)	0.370	0.641	0.262
Private life (v1_4)	-	0.703	0.294
Work/Study (v1_5)	0.353	0.252	0.581

Source: Authors'own calculations based on the questionnaire answers

In terms of personal and social life, Pea et al. (2012) found that the online presence of young people significantly changes the way they interact and engage with others. According to our survey this correlation may be the most relevant for members of Generation Y in terms of their use of video streaming platforms. Therefore online film and television viewing has changed the social life of those born between 1980 and 1994. For Generation Z, it is of high importance to achieve harmony between personal and business life (Dam, Hack-Polay, Rahman, & Mahmoud, 2023) a unique situation in which they are confronted with a number of impulses and challenges (Tari, 2011). For them, acceptable working conditions require a specific set of skills (Wadhawan & Sinha, 2017), thus it is understandable that online video content consumption, presumably due to the eclipse of work identification, may have the greatest impact on their specific perceptions of work and learning opportunities and leisure activities.

Generational differences can also be detected in terms of service choice and customer retention (Table 9). For each of the age groups studied, the high quality of video available on OTT platforms is (almost the most) important as it also influences platform choice. The literature is divisive in this respect, as some previous analyses (e.g. Cha, 2014) cannot confirm this finding, but the results of some authors (e.g. Yousaf et al. 2021) suggest that this is a fundamental assumption for users' continuous service use. Their results show that high video

quality is the most important factor for Generation X, but that convenience, rewatchability and a wide range of content also appear in the main component with almost equal weight.

Table 9. Factor weights of principal component analysis' variables of the enjojment principal component group

Enjoyment principal group Variables	Generation X (1965-1979)	Generation Y (1980-1994)	Generation Z (1995-2009)
High video quality (v2_4)	0.541	0.585	0.545
Convinience (v2_13)	0.471	0.585	-
Rewatchability (v2_1)	0.453	-	0.389
Wide range of content (v2_5)	0.400	-	-
Exclusive content (v2_3)	-	0.623	-
Flexibility (v2_11)	-	0.444	-
Season-by-season publication of series (v2_12)	-	0.285	-
Language learning (v2_2)	-	-	0.535
Original content (v2_8)	-	-	0.605

Source: Authors'own calculations based on the questionnaire answers

Zemoga (2022) forecasts for OTT platform usage that the choice of users between service providers is significaltly determined by the availability of exclusive and original content. Ahn's (2022) research in Korea suggests that these factors are important for all generations in order to reinforce subscriber intent and maintain satisfaction. Our results partially contradict this, as exclusive content is of high importance for Generation Y and original content for Generation Z. However, these variables are not even part of the main enjoyment driver for Generation X.

The role of binge-watching cannot be ignored either, as several studies (including Flayelle et al, 2020) have already shown that it is a widespread form of behaviour. Two manifestations of this phenomenon have been identified by Flayelle et al. (2020): usage satisfaction (pleasurable experience, conscious) and dysfunctional use of technologies (negative output, impulsivity, addiction). Binge-watching was defined as a characteristic of Generation Z by Ayten, Bulat Demir, & Inceismail (2019), while Matrix (2014) describes it as a characteristic of Generation Y. Therefore, we believe that this type of viewing is not necessarily linked to generational differences, but rather to age. Generation Y is the only group in the present research where it has become part of the main component of enjoyment, therefore it seems to be the least important factor determining service choice.

The Principal Component scores for the generated principal components were also determined in order to investigate the correlations between the manipulation and enjoyment principal components (Table 10).

Table 10. Results of correlation analysis

Correlation Principal Components	Generation X n=72		Generation Y n=76		Generation Z n=104		Full sample n=252	
	Sig.	Pearson	Sig.	Pearson	Sig.	Pearson	Sig.	Pearson
Enjoyment-Manipulation	0.243	0.139	<0.001	0.453	0.588	0.054	<0.001	0.202

Source: Authors'own calculations based on the questionnaire answers

Analyses by generation showed a significant positive correlation of medium strength only for Generation Y. In the other two cases, no significant correlation was found and the possible existence of a relationship was therefore rejected. For the correlation analysis performed on the whole sample, the principal component values generated by generation from the different sets of variables were treated together, as they had the same meaning (enjoyment factor: service choice; manipulation factor: impact on living conditions). For the sample as a whole, a significant correlation with a positive direction and very weak correlation was obtained, suggesting that there may be a relationship between the two principal components, but this is significantly affected by the different sets of variables.

5. CONCLUSIONS

The constructed principle components (2 principal component groups, 3 generations, 6 in total) provided acceptable results based on preliminary tests. In response to the hypothesis (*Generations have different consumption behaviours and therefore decide to use video streaming services based on diverse experiences/ percepcions.*), it can be concluded that generational differences were observed for both the manipulation and enjoyment factors, as the numbers and weights of the included variables - that guaranteed model fit - differed in most cases. Generational differences in the aspects of influencing service choice are the most pronounced, which may be due to the different attitudes of the age groups towards digitalisation.

Using different sets of variables, generational differences (based on the acceptance criteria) were examined in present study, which have provided the basis for our findings. Correlation analysis between the manipulation and enjoyment factor was not able to determine the direction of the relationship, therefore further statistical procedures (e.g. structural model) can be proposed. Due to the lack

of representativeness, present findings should be treated with a certain degree of caution, but may serve as a basis for further research.

Conflict of interests

The authors declare there is no conflict of interest.

REFERENCES

Ahn, J. (2022). Generation Z and Its OTT Usage Patterns: The Case of Netflix in Korea. *International Journal of Contents*, *18*(1), 65-75. https://doi.org/10.5392/IJoC.2022.18.1.065

Ali, B., & Szikora, P. (2017). Az Y generáció és az internet kapcsolata. In Á. Csiszárik-Kocsir (Ed.), *Vállalkozásfejlesztés a XXI. században VII. tanulmánykötet* (pp. 11-23). Óbudai Egyetem, Budapest. http://kgk.uni-obuda.hu/sites/default/files/Vallalkozasfejlesztes-a-XXI-szazadban-VII_5.pdf

Aly Tovar, R.J. (2021). *To Stream or Not to Stream: Impact on the Economics of Content Industries*. [Doctoral dissertation, Université Paris-Nord]. https://theses.hal.science/tel-03716062/document.

Arriaga, P., Alexandre, J., Postolache, O., Fonseca, M. J., Langlois, T., & Chambel, T. (2019). Why Do We Watch? The Role of Emotion Gratifications and Individual Differences in Predicting Rewatchability and Movie Recommendation. *Behavioral Sciences, 10*(1), 8. https://doi.org/10.3390/bs10010008

Ates, S. (2022). A Validity and Reliability Study on Developing a Scale for Assessing Classroom Teachers' Attitudes Towards Illustrated Children's Books. *Educational Policy Analysis and Strategic Research*, *17*(3), 222-237. https://doi.org/10.29329/epasr.2022.461.11

Ayten, A., Bulat Demir, S., & Inceismail, E. (2019). A Study of Generation Z Viewing Habits in Context of Uses and Gratification Theory: The Protector Netflix Series Case. In D. Yengin, & A. Algül (Eds.) *CTC 2019 papers* (pp. 1-11). https://doi.org/10.7456/ctc_2019_01

Barna, I., & Székelyi, M. (2008). *Túlélőkészlet az SPSS-hez - Többváltozós elemzési technikákról társadalomkutatók számára.* Typotex Kiadó, Budapest.

Bolton, R., Parasuraman, A.P., Hoefnagels, A., Migchels, N., Kabadayi, S., Gruber, T., Komarova, Y., & Solnet, D. (2013). Understanding Gen Y and their use of social media: A review and research agenda. *Journal of Service Management*, *24*(3), 245-267. https://doi.org/10.1108/09564231311326987

Buda, A. (2019). Generations, Social Groups in the 21st Century. *Magyar Tudomány*, *180*(1), 120–129. https://doi. org/10.1556/2065.180.2019.1.12

Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming.* Routledge, New York.

Carrillo-Durán, M.V., Ruano-López, S., Fernández Falero, M. R., & Trabadela Robles, J. (2022). Understanding How Baby Boomers Use the Internet and Social Media to

Improve the Engagement with Brands. *Comunicação e Sociedade*, *41*, 261–284. https://doi. org/10.17231/comsoc.41(2022).3516

Čerepinko, D., Bagarić, Z., & Dujić, L. (2019). Digital Video Generation and Their Viewing Habits: The Death of Television News? *Collegicum Antropologicum, 43*(4), 1-9. https://www.researchgate.net/publication/341579994_Digital_Video_Generation_and_Their_Viewing_Habits_The_Death_of_Television_News

Cha, J. (2014). Usage of video sharing websites: Drivers and barriers. *Telematics and Informatics, 31*(1), 16–26. https://doi.org/10.1016/j.tele.2012.01.003

Chakraborty, D., Siddiqui, M., Siddiqui, A., Paul, J., Dash, G., & Mas, F.D. (2023). Watching is valuable: Consumer views – Content consumption on OTT platforms. *Journal of Retailing and Consumer Services*, *70*, 103148. https://doi.org/10.1016/j.jretconser.2022.103148.

Chou, C., & Bentler, P.M. (1995). Estimates and tests in structural equation modeling. In Hoyle, R.H. (Ed.), *Structural equation modeling: Concepts, issues, and applications (pp.* 37-55*).* Sage Publication, Thousand Oaks, CA.

Cirilli, E., & Nicolini, P. (2019). Digital Skills and Profile of Each Generation: A Review. *International Journal of Developmental and Educational Psychology INFAD Revista de Psicología*, *1*(2), 487-496. https://doi.org/10.17060/ijodaep.2019.n1.v3.1525

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297–334. https://doi.org/10.1007/BF02310555

Csáki, Gy. (2013). Globalizáció és gazdasági szuverenitás. *Magyar Tudomány*, *174*(4), 392-400. https://epa.oszk.hu/00600/00691/00115/pdf/EPA00691_mtud_2013_04_392-400.pdf

Csanády, V., Horváth-Szováti, E., & Szalay, L. (2013). *Alkalmazott statisztika.* Nyugat-magyarországi Egyetem. Sopron.

Csutorás, G.Á. (2020). *Az Y generációs munkatársak magatartási lehetőségei a közigazgatási szerveknél.* [Doctoral dissertation, Nemzeti Közszolgálati Egyetem]. https://antk.uni-nke.hu/document/akk-copy-uni-nke-hu/Disszertációtervezet%20-%20Csutorás%20Gábor.pdf

Culp-Roche, A., Hampton, D., Hensley, A., Wilson, J., Thaxton-Wiggins, A., Otts, J. A., Fruh, S. M., & Moser, D. K. (2020). Generational Differences in Faculty and Student Comfort with Technology Use. *Sage Open Nursing*, *6*(1), 1-6. https://doi.org/10.1177/2377960820941394

Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, *1*(1), 16–29. https://doi.org/10.1037/1082-989X.1.1.16

Dabija, D. C., Băbuț, R., & Lugojan, M. I. (2016). Information Search Behaviour Based on Social Media. A Generational Perspective in Romania. In I. Plăiaș, & R. Ciornea (Eds.), *Marketing from Information to Decision. 9th Edition Conference Proceedings* (pp. 63-64).

Dabija, D. C., Bejan, B. M., & Tipi, N. (2018). Generation X versus Millennials communication behaviour on social media when purchasing food versus tourist

services. *E+M Ekonomie a Management, 21*(1), 191–205. https://www.doi.org/10.15240/tul/001/2018-1-013

Dam, N., Hack-Polay, D., Rahman, M., & Mahmoud, A.B. (2023). Psychological Contract and Young Talent Retention in Vietnam: Development and Validation of a Hierarchical Reflective Structural Model. *Businesses*, *3*(1), 36–51. https://doi.org/10.3390/businesses3010003

Dash, G., & Paul, J. (2021). CB-SEM vs PLS-SEM methods for research in social sciences and technology forecasting. *Technological Forecasting & Social Change, 173*(1). 1-11. https://doi.org/10.1016/j.techfore.2021.121092

Devadas, M. (2022). Purchase and continuation intentions of over-the-top (OTT) video streaming platform subscriptions: a uses and gratification theory perspective. *Telematics and Informatics Reports*, *5*. 100006. https://doi.org/10.1016/j.teler.2022.100006

Diamantopoulos, A. & Sigaw, J.A. (2000). *Introducing LISREL: A Guide for the Uninitiated*. Sage Publications, London.

Dickey, I. J., & Lewis, W. F. (2010). Social Media Perceptions and Usage by Generation Y and Relevant Marketing Implications. *Management and Marketing Faculty Publications*, *33*, 191-195. o. http://ecommons.udayton.edu/mgt_fac_pub/33

Downes, L. (2019, November 29). *For Streaming Services, Navigating Generational Differences Is Key.* Harvard Business Review. https://hbr.org/2019/11/for-streaming-services-navigating-generational-differences-is-key?fbclid=IwAR3jsFhzSdNN9nqlQIUGqA15dgZXAlEuGmrW1qwNMud_MwcHEAoTRdWwA9w

Falk, R.F., & Miller, N.B. (1992). *A Primer for Soft Modeling.* University of Akron Press, Akron OH.

Fekete, M. (2018). *E-idő, avagy a szabadidő behálózása – Digitális kultúrafogyasztás a digitális korban.* Belvedere Meridionale, Szeged. https://publicatio.bibl.u-szeged.hu/16212/1/FM_eIdo_Belvedere.pdf

Flayelle, M., Maurage, P., Riddell Di Lorenzo, K., Vögele, C., Gainsbury, S. M., & Billieux, J. (2020). Binge-Watching: What Do we Know So Far? A First Systematic Review of the Evidence. *Current Addiction Reports, 7*. 44-60. https://doi.org/10.1007/s40429-020-00299-8

Földvári, I. (2017). DQ projekt – Felkészült gyermeke a digitális jövőre? *Új Köznevelés, 73*(8–9), 18–27. https://folyoiratok.oh.gov.hu/uj-kozneveles/dq-projekt

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research, 18*(3), 382–388. https://doi.org/10.2307/3150980

Gale, W. H., Gelfond, H., Fichtner, J., & Harris, B. H. (2020). *The wealth of generations, with special attention to the millennials.* Brookings, Washington.

George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update* (10th ed.). Pearson, Boston.

GKID Economic Research Co (2022). *Streaming körkép 2022*. https://gkid.hu/2022/06/09/streaming-korkep-2022/

Glass, A. (2007). Understanding Generational Differences for Competitive Success. *Industrial and Commercial Training*, *39*(2), 98-103. https://doi.org/10.1108/00197850710732424

Győri, Á., & Balogh, K (2020). How Does Social Integration Correlate with Intergenerational Differences in Educational Attainment? *Social Science Review*, *10*(1), 1-24. https://doi.org/10.18030/socio.hu.2020.1.1

Haenlein, M., & Kaplan, A. M. (2004). A Beginner's Guide to Partial Least Squares Analysis. *Understanding Statistics*, *3*(4), 283–297. https://doi.org/10.1207/s15328031us0304_4

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate Data Analysis*, (7th Ed.). Prentice Hall, Upper Saddle River.

Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Sage, New York.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, *46*(1-2), 1-12. https://doi.org/10.1016/j.lrp.2013.01.001

Hair, J. F., Ringle, C. M., & Sartedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*, *19*(2), 139–151. https://doi.org/10.2753/MTP1069-6679190202

Hair, J. F., Sarstedt, M., Ringle, C.M., & Mena, J.A. (2012). An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research. *Journal of the Academy of Marketing Science*, *40*(3), 414–433. https://doi.org/10.1007/s11747-011-0261-6

Henseler, J., & Sarstedt, M. (2013). Goodness-of-Fit Indices for Partial Least Squares Path Modeling. *Computational Statistics*, *28*(2), 565–580. https://doi.org/10.1007/s00180-012-0317-1

Henseler, J., Christian, M. R., & Sinkovics, R. R. (2009). The Use of Partial Least Squares Path Modeling in International Marketing. *Advances in International Marketing*, *20*, 277–319. https://doi.org/10.1108/S1474-7979(2009)0000020014

Herman, M. (2022, September 9). *Worldwide Streaming Market Achieves Double-digit Growth In Q2 2022; smart TVs and Roku Dominate Global Viewing According to Conviva.* Businesswire. https://www.businesswire.com/news/home/20220909005099/en/Worldwide-Streaming-Market-Achieves-Double-digit-Growth-in-Q2-2022-Smart-TVs-and-Roku-Dominate-Global-Viewing-According-to-Conviva

Hernaus, T., & Pološki Vokic, N. (2014). Work Design for Different Generational Cohorts. *Journal of Organizational Change Management*, *27*(4), 615-641. https://doi.org/10.1108/jocm-05-2014-0104

Howe, N., & Strauss, W. (1991). *Generations: The History of America's Future, 1584 to 2069.* William Morrow & Company, New York.

HULU (2021). *Generation stream – Unpacking the streaming experience.* https://insights.disneyadvertising.com/wp-content/uploads/2021/09/Generation-Stream-Unpacking-the-Streaming-Experience.pdf

Jiang, J. (2018). *Millennials stand out for their technology use, but older generations also embrace digital life*. Pew Internet Research. http://www.pewresearch.org/fact-tank/2018/05/02/millennials-stand-out-for-their-technology-use-but-older-generations-also-embrace-digital-life/

Jung, J., & Melguizo, Á. (2021, November 1). *Is Your Netflix a Substitute for Your Telefunken? Evidence on the Dynamics of Traditional Pay TV and OTT in Latin America*. SSRN. http://dx.doi.org/10.2139/ssrn.3959317

Kamber, T. (2017). Gen X: The Cro-Magnon of digital natives. *Generations*, 41, 48-54.

Karasz, T. J., Nagybányai Nagy, O., Széll, K., & Takács, S. (2022). Cronbach-alfa: vele vagy nélküle? *Magyar Pszichológiai Szemle*, *77*(1), 81-98. https://doi.org/10.1556/0016.2022.00004

Katherine Chen, Y.-N. (2019). Competitions between OTT TV platforms and traditional television in Taiwan: A Niche analysis. *Telecommunications Policy*, *43*(9), 101793. https://doi.org/10.1016/j.telpol.2018.10.006

Kazár, K. (2014). A PLS-útelemzés és alkalmazása egy márkaközösség pszichológiai érzetének vizsgálatára. *Statisztikai Szemle*, *92*(1), 33-52. https://www.ksh.hu/statszemle_archive/2014/2014_01/2014_01_033.pdf

Kenworthy, A. (2020). *The streaming wars: The future of entertainment* [Thesis, Claremont McKenna College]. https://scholarship.claremont.edu/cgi/viewcontent.cgi?article=3366&context=cmc_theses

Kertzer, D. I. (1983). Generation as a sociological problem. *Annual Review of Sociology*, *9*, 125-149. https://doi.org/10.1146/annurev.so.09.080183.001013

Kim, S., Lee, C., Lee, J., & Kim, J. (2021). Over-the-top bundled services in the Korean broadcasting and telecommunications market: Consumer preference analysis using a mixed logit model. *Telematics and Informatics*, *61*, 101599. https://doi.org/10.1016/j.tele.2021.101599

Koltai, J. (2013). A strukturális egyenletek modellezésének bemutatása egy komplex dizájnú kutatás (ISPJ) adatain keresztül. *Szociológiai Szemle, 23*(2), 31–51. https://szociologia.hu/dynamic/szociologia_szemle_2013_2_koltai_julia.PDF

Komár, Z. (2017). Generációelméletek. *Új Köznevelés, 73*(8–9), 14-16. https://folyoiratok.oh.gov.hu/sites/default/files/journals/uj_kozneveles_2017_8-9_online.pdf

Kópházi, A., Pétervári, Zs., & Balassa, É. (2018). Az X, Y és Z generációk kihívásai a 21. század munkaerőpiacán. *Munkaügyi Szemle*, *6*, 49-55. https://drive.google.com/file/d/1Xt0PIp2zwHyIRFCmBdcgwU714VS_JXPX/view

Kovács, A. (2015). Strukturális egyenletek modelljének alkalmazása a Közös Agrárpolitika 2013-as reformjának elemzésére. *Statisztikai Szemle, 93*(8-9) 801-822. https://www.ksh.hu/statszemle_archive/2015/2015_08-09/2015_08-09_801.pdf

Kulcsár, Zs. (2008): *Az integratív e-learning felé.* https://mek.oszk.hu/06600/06695/06695.pdf

Kwon, O., & Wen, Y. (2010). An empirical study of the factors affecting social network service use. *Computers in Human Behavior, 26*(2), 254–263. https://doi.org/10.1016/j.chb.2009.04.011

Laor, T., & Galily, Y. (2022). Who'S clicking on on-demand? media consumption patterns of generations Y & Z. *Technology in Society*, *70*, 102016. https://doi.org/10.1016/j.techsoc.2022.102016

Leung, L. (2007). Stressful Life Events, Motives for Internet Use, and Social Support among Digital Kids. *Cyber Psychology & Behavior*, *10*(2), 204–214. https://doi.org/10.1089/cpb.2006.9967

Lissitsa, S., & Laor, T. (2021). Baby Boomers, Generation X and Generation Y: Identifying generational differences in effects of personality traits in on-demand radio use. *Technology in Society*, *64*, 101526. https://doi.org/10.1016/j.techsoc.2021.101526

Lyons, S., & Kuron, L. (2014). Generational differences in the workplace: a review of the evidence and directions for future research. *Journal of Organizational Behavior*, *35*(1), 139-157. https://doi.org/10.1002/job.1913

MacKenzie, W. I., & Scherer, R. F. (2019). Millennial research on fleek: Suggestions for improving generational research design. *The Journal of Social Psychology*, *159*(2), 119-124. https://doi.org/10.1080/00224545.2019.1572967

Maglio, T. (2022, August 11). *Disney+ Soars, Netflix Sinks: Here's How Many Subscribers 10 Key Streamers Have Now.* Indiewire. https://www.indiewire.com/2022/08/how-many-subscribers-netflix-hbo-max-disney-plus-1234744445/

Malewar, S., & Bajaj, S. (2020). Acceptance of OTT video streaming platforms in India during COVID-19: extending utaut2 with content availability. *Journal of Content, Community & Communication*, *12*(6), 89-106. https://doi.org/10.31620/JCCC.12.20/09

Mannheim, K. (1952). The Sociological Problems of Generations. In Kecskeméti, P. (Ed.), *Essays on the Sociology of Knowledge* (pp. 163-195). Oxford University Press, New York.

Martínez-Sánchez, M. E., Nicolas-Sans, R., & Díaz, J. B. (2021). Analysis of the social media strategy of audio-visual OTTs in Spain: The case study of Netflix, HBO and Amazon Prime during the implementation of Disney +. *Technological Forecasting and Social Change, 173*, 121178. https://doi.org/10.1016/j.techfore.2021.121178

Matrix, S. (2014). The Netflix Effect: Teens, Binge Watching, and On-Demand Digital Media Trends. *Jeunesse Young People Texts Cultures*, *6*(1), 119-138. https://doi.org/10.1353/jeu.2014.0002

McAlister, A. (2010). *Teaching the Millennial Generation*. American Music Teacher. March, 13-15.

McCrindle, M. (2018, October 17). *The ABC of XYZ: Understanding the Global Generations.* McCrindle Publication. https://www.researchgate.net/publication/328347222_The_ABC_of_XYZ_Understanding_the_Global_Generations

McDaniel, B. T., & Coyne, S. M. (2016). "Technoference": The interference of technology in couple relationships and implications for women's personal and relational well-being. *Psychology of Popular Media Culture*, *5*(1), 85–98. https://doi.org/10.1037/ppm0000065

Meyer, J. (2022a). *TV Streaming Report 2022, Austria.* ZATTOO https://zattoo.com/at/en/tv-streaming-report-2022-at

Meyer, J. (2022b). *TV Streaming Report 2022, Germany.* ZATTOO https://zattoo.com/de/en/company/press/zattoo-tv-streaming-report-2022-de

Meyer, J. (2022c). *TV Streaming Report 2022, Switzerland.* ZATTOO https://zattoo.com/ch/en/tv-streaming-report-2022-ch

Miskolczi, M., Munkácsy, A., & Földes, D. (2022). Autonomous Vehicles (Avs) in Tourism – Technology Acceptance from the Tourists' Perspective. *Turizmus Bulletin*, *22*(4), 4-15. https://doi.org/10.14267/TURBULL.2022v22n4.1

Mulaik, S. A., James, L. R., Van Alstine, J., Bennett, N., Lind, S., & Stilwell, C.D. (1989). Evaluation of goodness-of-fit indices for structural equation models. *Psychological Bulletin*, *105*(3), 430–445. https://doi.org/10.1037//0033-2909.105.3.430.

Mulla, T. (2022). Assessing the factors influencing the adoption of over-the-top streaming platforms: A literature review from 2007 to 2021. *Telematics and Informatics*, *69*, 101797. https://doi.org/10.1016/j.tele.2022.101797

Münnich, Á., & Hidegkuti, I. (2012). Strukturális egyenletek modelljei: Oksági viszonyok és komplex elméletek vizsgálata pszichológiai kutatásokban. *Alkalmazott Pszichológia, 2012/1,* 77–102. http://ap.elte.hu/wp-content/uploads/2013/07/AP_2012_1_Munnich_Hidegkuti.pdf

Murtaza, S. A., Molnár, E., & Szakács A. (2021). Digital Heroin – The Impact of Digital Gadgets on Developing Minds An Empirical Study on Growing Children of Lahore. *Controller Info*, *9*(1), 55–58. https://doi.org/10.24387/CI.2021.1.10

Muthén, B. O., & Kaplan, D. (1985). A comparison of some methodologies for the factor analysis of nonnormal Likert variables. *British Journal of Mathematical and Statistical Psychology*, *38*(2), 171–189. https://doi.org/10.1111/j.2044-8317.1985.tb00832.x

Nagaraj, S., Singh, S., & Yasa, V. R. (2021). Factors affecting consumers' willingness to subscribe to over-the-top (OTT) video streaming services in India. *Technology in Society*, *65*, 101534. https://doi.org/10.1016/j.techsoc.2021.101534

Nagy, Á. A., Kemény, I., Szűcs, K., & Simon, J. (2017). Az ügyfélértékelési modellek szájreklámmal történő bővítésének irányai, eredményei. *Marketing & Menedzsment, 51*(EMOK), 14-27. https://journals.lib.pte.hu/index.php/mm/article/view/790

Nagybányai Nagy, O. (2006). A pszichológiai tesztek reliabilitása. In S. Rózsa, O. Nagybányai Nagy, & A. Oláh (Eds.), *A pszichológiai mérés alapjai: Elmélet, módszer és gyakorlati alkalmazás* (pp. 103-116). Bölcsész Konzorcium. http://mek.niif.hu/05500/05536/05536.pdf

Nathanson, M. (2022, September 14). *How the Streaming Wars Alter the Media Landscape.* Yale Insights. https://insights.som.yale.edu/insights/how-the-streaming-wars-will-alter-the-media-landscape

National Media and Infocommunications Authority. (2020). *Az elektronikus hírközlési piac fogyasztóinak vizsgálata. Internetes felmérés 2020*. Nemzeti Média és Hírközlési Hatóság. https://nmhh.hu/dokumentum/218531/internetes_felmeres_2020.pdf

Negi, V., & Gupta, S. (2022). Impact of Over-the-Top (OTT) platform on the changing lifestyle of youth residing in Uttarakhand during Covid-19 pandemic lockdown.

Journal of Positive School Psychology, *6*(4), 3992-4014. https://journalppw.com/index.php/jpsp/article/view/4000/2638

Nagy, T. J., & Bernschütz, M. (2017). Nemek közötti különbségek a technológia elfogadásában –a PLS-MGA alkalmazása. *Statisztikai Szemle, 95*(1), 51-77. https://core.ac.uk/download/pdf/78477607.pdf

NFI (2020, November 6). *Kutatás: Egyre inkább a hétköznapok részévé válnak a streaming szolgáltatások, az online videótárak*. https://nfi.hu/a-filmintezetrol/hirek/kutatas-egyre-inkabb-a-hetkoznapok-reszeve-valnak-a-streaming-szolgaltatasok-az-online-videotarak.html

Nunnally, J. C. (1978). *Psychometric testing.* Mc Graw-Hill, New York.

Pálinkás-Purgel, Zs. (2019). Alfa generáció – a "digitális bébik" kora. *Új Köznevelés, 75*(1–2), 14-16. https://folyoiratok.oh.gov.hu/uj-kozneveles/alfa-generacio-a-digitalis-bebik-kora

Pattinson, S. (2022). *35 Streaming services statistics for 2022: Deep Dive Into Video & Music Streaming, Streaming Article.* https://www.cloudwards.net/streaming-services-statistics/

Pea, R., Nass, C., Meheula, L., Rance, M., Kumar, A., Bamford, H., Nass, M., Simha, A., Stillerman, B., Yang, S., & Zhou, M. (2012). Media use, face-to-face communication, media multitasking, and social well-being among 8- to 12-year-old girls. *Developmental Psychology*, *48*, 327–336. https://doi.org/10.1037/a0027030

Peterson, R. A. (1994). A Meta-Analysis of Cronbach's Coefficient Alpha. *Journal of Consumer Research*, *21*(2), 381–391. https://doi.org/10.1086/209405

Pintér, R. & Hack-Handa, J. (2017). Kell-e Netflix a magyaroknak? A Netflix belépése a magyar piacra fogyasztói szemszögből. *Médiakutató*, *17*(3-4), 69-81. http://epa.oszk.hu/03000/03056/00064/pdf/EPA03056_mediakutato_2016_ősz-tél_069-081.pdf

Ponterotto, J. G., & Ruckdeschel, D. E. (2007). An Overview of Coeffi cient Alpha and a Reliability Matrix for Estimating Adequacy of Internal Consistency Coeffi cients with Psychological Research Measures. *Perceptual and Motor Skills*, *105*(3), 997–1014. https://doi. org/10.2466/pms.105.3.997-1014

Prasad, S. S. (2021). Impact of OTT media on the society: insights from path analysis. *Asia-Pacific Journal of Business Administration*, *14*(2), 185-198. https://doi.org/10.1108/APJBA-06-2021-0261

Raffer, A. (2020, June 14). *Streamelni vagy nem streamelni, ez itt a kérdés.* Hajdú-Bihar Vármegyei Hírportál, https://www.haon.hu/helyi-eletstilus/2020/06/streamelni-vagy-nem-streamelni-ez-itt-a-kerdes

Reddy, L. S., & Kulshrestha, P. (2019). Performing the KMO and Bartlett's Test for Factors Estimating the Warehouse Efficiency, Inventory and Customer Contentment for E-retail Supply Chain. *International Journal for Research in Engineering Application & Management (IJREAM), 5*(9), 1-13. http://ijream.org/papers/IJREAMV05I0957001.pdf

Reinikainen, H., Kari, J. T., & Luoma-Aho, V. (2020). Generation Z and organizational listening on social media. *Media Communication*, *8*(2), 185-196. https://doi.org/10.17645/mac.v8i2.2772

Rodé, M. (2018). *Virtuális rabszolgaság.* Kolor Optika Bt., Budapest. https://mek.oszk.hu/22300/22385/22385.pdf

Rózsa, S., Hupuczi, E., Martoni, L., Birkás, B., Hartung, I., Hargitai, R., Varga, J., Láng, A., Tiringer, I., & Kállai, J. (2019). A Tellegen Abszorpciós Skála részletes pszichometriai elemzése. *Mentálhigiéné és Pszichoszomatika, 20*(1), 35–77. http://real.mtak.hu/94101/1/0406.20.2019.003.pdf

Gubik, S. A., Farkas, Sz., & Kása, R. (2018). A tervezett magatartás elméletének alkalmazása a vállalkozói hajlandóság alakulásának magyarázatára. *Közgazdasági Szemle*, *65*(1), 74-101. https://doi.org/10.18414/KSZ.2018.1.74

Safar, A., & Alkhezzi, F. (2016). Students' Perspectives of the Impact of Online Streaming Media on Teaching and Learning at the College of Education at Kuwait University. *Eurasia Journal of Mathematics, Science & Technology Education*, *12*(12), 2975-2989. https://doi.org/10.12973/eurasia.2016.02317a

Sahu, G., Gaur, L., & Singh, G. (2021). Applying niche and gratification theory approach to examine the users' indulgence towards over-the-top platforms and conventional TV. *Telematics and Informatics*, *65*, 101713. https://doi.org/10.1016/j.tele.2021.101713

Sajtos, L. & Mitev, A. (2007). *SPSS kutatási és adatelemzési kézikönyv*. Alinea Kiadó, Budapest.

Sajtos, L., & Fache, M. (2005). A strukturális egyenlőségek módszere és alkalmazása a marketingkutatásban. *Marketing & Menedzsment, 39*(4–5), 99–111. https://journals.lib.pte.hu/index.php/mm/article/view/1396

Saris, W. E., & Stronkhorst, H. (1984). *Causal modelling in nonexperimental research.* Sociometric Research Foundation, Amsterdam.

Savage, S. B. (2006). *Making Sense of Generation Y: The World View of 15- to 25-Year-Olds* (pp. 17-22). Church House, London.

Schreiber, J.B., Stage, F.K., King, J., Nora, A., & Barlow, E.A. (2006). Modeling and Confirmatory Factor Analysis Results: A Review. *The Journal of Educational Research*, *99*(6), 323–338. https://doi.org/10.3200/joer.99.6.323-338

Shim, D., Lee, C., & Oh, I. (2022). Analysis of OTT Users' Watching Behavior for Identifying a Profitable Niche: Latent Class Regression Approach. *Journal of Theoretical and Applied. Electronic Commerce Research*, *17*(4), 1564-1580. https://doi.org/10.3390/jtaer17040079

Shin, S., & Park, J. (2021). Factors affecting users' satisfaction and dissatisfaction of OTT services in South Korea. *Telecommunications Policy*, *45*(9), 102203. https://doi.org/10.1016/j.telpol.2021.102203

Silva, J.M.S.D., & Lima, R.C.D.A. (2022). Is Netflix a threat to the cable TV industry? Evidence from Brazil. *Telecommunications Policy*, *46*(3), 102274. https://doi.org/10.1016/j.telpol.2021.102274

Simon-Kucher & Partners (2019, May 2). *New Study: Streaming services rapidly replacing traditional TV.* Businesswire. https://www.businesswire.com/news/home/20190502005718/en/

Tabachnick, B.G., & Fidell, L.S. (2007). *Using multivariate statistics* (5th ed.). Allyn and Bacon, Boston MA.

Tari, A. (2011). *Z generáció*. Tericum Kiadó Kft., Budapest.

Taylor, R. (2020, January 16). *How Gen Z and Millennials Watch Video Content & What That Means for Production Teams.* Rev. Captions, Media & Entertainment. https://www.rev.com/blog/caption-blog/how-gen-z-and-millennials-consume-video-content-what-that-means-for-production-teams?fbclid=IwAR10bJRDLoLqvLqHaR5l_couF0WUhqICWjAqBoI3-d1aNvs1-yACB55sZ10

Towner, T., & Lego Munoz, C. (2016). Boomers versus Millennials: Online Media Influence on Media Performance and Candidate Evaluations. Social Sciences, 5(4), 56. https://doi.org/10.3390/socsci5040056

Twenge, J. M. (2000). The age of anxiety? The birth cohort change in anxiety and neuroticism, 1952-1993. *Journal of Personality and Social Psychology*, *79*(6), 1007-1021. https://doi.org/10.1037/0022-3514.79.6.1007

van Eck Duymaer van Twist, A., & Newcombe, S. (2021). Strauss-Howe Generational Theory. In *J. Crossley, & A. Lockhart* (Eds.) *Critical Dictionary of Apocalyptic and Millenarian Movements*. https://www.cdamm.org/assets/articlePDFs/13346-strauss-howe-generational-theory.pdf

Wadhawan, S., & Sinha, S. (2017). A Study of Employer Branding on Employee Attitude. *International Journal of Applied Business and Economic Research, 15*(1), 363–371. https://serialsjournals.com/abstract/30073_28.pdf

Wanat, G. (2022, December 2). *Reasons for using paid VOD services in Poland 2020.* Statista. https://www.statista.com/statistics/1033249/poland-reasons-for-using-paid-vod-services/

Werenowska, A., & Rzepka, M. (2020). The Role of Social Media in Generation Y Travel Decision-Making Process (Case Study in Poland). *Information*, *11*(8), 396. https://doi.org/10.3390/info11080396

Westcott, K., Arbanas, J., Arkenberg, C., Auxier, B., Loucks, J., & Downs, K. (2022, March 28). *Digital media trends, 16th edition: Toward the metaverse.* https://www2.deloitte.com/us/en/insights/industry/technology/digital-media-trends-consumption-habits-survey/summary.html

Wheaton, B., Muthen, B., Alwin, D.F., & Summers, G.F. (1977). Assessing reliability and stability in panel models. *Sociological Methodology*, *8*, 84–136. https://doi.org/10.2307/270754

Yadav, G., & Rai, J. (2017). The Generation Z and their Social Media Usage: A Review and a Research Outline. *Global Journal of Enterprise Information System*, *9*, 110-116. https://doi. org/10.18311/gjeis/2017/15748

Yousaf, A., Mishra, A., Taheri, B., & Kesgin, M. (2021). A cross-country analysis of the determinants of customer recommendation intentions for over-the-top (OTT) platforms. *Information & Management*, *58*(8), 103543. https://doi.org/10.1016/j.im.2021.103543

Zemoga (n.d.). *OTT trends and future predictions.* https://marketing.zemoga.com/ott-trends

АНАЛИЗА ГЛАВНИХ КОМПОНЕНТИ ГЕНЕРАЦИЈСКИХ ПРЕФЕРЕНЦИЈА У ПОГЛЕДУ НАЈВИШИХ УСЛУГА – СТУДИЈА СЛУЧАЈА У МАЂАРСКОЈ

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САЖЕТАК

Пораст услуга видеостримовања не само да је повећао популарност доступних платформи, већ је промијенио и начин на који домаћинства конзумирају садржај, замијењујући опције које нуди традиционална телевизија. Оријентација је била примјена специфичног интердисциплинарног научног приступа, комбинујући економију и социологију, због истраживачке области студије. Предности, односно недостаци платформи за стриминг могу играти улогу у перцепцији различитих старосних група корисника од стране провајдера услуга којег одаберу. Циљ истраживања јесте да се фокусира на различите навике потрошње видеостриминга различитих генерација (генерација икс, генерација ипсилон, генерација З) као потрошача садржаја Нетфликса, ХБО Макса и Дизнија+, нашироко познатим провајдерима видеостримовања, како је показано у прегледу литературе. Истраживање засновано на анкетирању по Ликертовој скали се сматрала најприкладнијим методом за постизање овог циља. Да би се тестирала хипотеза о односу између генерација и коришћења видеостриминга, примијењена је анализа главне компоненте по генерацијама. Раздвајање варијабли резултирало је успостављањем двије групе, и то: манипулација (што указује на утицај традиционалног начина живота) и уживање (утицај на избор и задржавање корисника услуга провајдера). Резултати студије указују да генерацијске карактеристике потрошача дјелимично показују различите обрасце коришћења услуга, те да се утицај коришћења услуга на традиционалне стилове живота разликује међу генерацијама. Анализа наглашава важност даљих истраживања у овој области, јер се истражени фактори могу проширити на друга важна питања у будућности.

Кључне ријечи: *највише услуге, анализа главних компоненти, генерацијске разлике, перцепција, манипулација, уживање.*