Unveiling the Drivers of Customer Satisfaction and Loyalty in Cinema Theatres: Integrating Sufficiency and Necessity Perspectives

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Unveiling the drivers of customer satisfaction and loyalty in cinema theatres: integrating sufficiency and necessity perspectives

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Abstract: This study aims to examine the sufficiency and necessity of antecedents for customer satisfaction and loyalty in the context of cinema theatres. A survey-based approach was employed to collect data from 319 customers of three multiplexes located in Brazil. The survey included measures related to various dimensions of cinema theatre services (access, attendants' service, exhibition, promotions, confectionery, tickets, comfort, projection, conservation, information, and responsiveness), customer satisfaction, and loyalty. The data were analysed using a combined approach of partial least squares structural equation modelling (PLS-SEM) and necessary condition analysis (NCA). The results of the PLS-SEM analysis indicate that three dimensions, namely 'promotions', 'projection' and 'comfort' significantly influence customer satisfaction and loyalty in cinema theatres. However, all dimensions, even those that were not found to be significant in the PLS-SEM analysis, were identified by NCA as necessary to maintain customer satisfaction and loyalty.

Keywords: necessary condition analysis; NCA; sufficiency; necessity; customer satisfaction; loyalty; cinema theatres.

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1 Introduction

In the current market dynamics, value delivery and customer satisfaction emerge as central pillars to achieve a competitive advantage. Moreover, customer satisfaction reveals itself not only as a goal but as an influential indicator in loyalty (Nazeri et al., 2020) and business success (Micus et al., 2023; Saadat et al., 2022). At the heart of this discussion, the customer experience emerges as a key element. It is shaped by interactions between customers and suppliers and is deeply influenced by sensory, emotional, and cognitive stimuli (Schmitt, 2011). The concept of sensory perception, coupled with service quality, will contribute to service providers attracting customers and increasing the time spent in the company (Yang et al., 2021). This emphasis highlights the need for continuous and customer-centred evaluation for organisational performance (Garver, 2003). Managers, therefore, have the responsibility to anticipate and meet these needs, enhancing the quality of services (Hamid et al., 2023). To remain competitive, organisations must meet the expectations desired by customers, integrating data from customer perceptions of use. The correct decisions allow companies to direct their budgets towards customer value functions and respond to new competitors and market changes (Micus et al., 2023).

In the film industry, the customer experience plays a prominent role due to the challenges posed by new technologies and the increase in the number of film releases on a global scale. Although streaming platforms have gained popularity, going to the cinema is often motivated by the pursuit of a unique emotional experience (Tefertiller, 2017). Audience satisfaction when watching films on the big screen has been highlighted in previous research, emphasising the importance of aesthetics and entertainment provided by the cinema (Meydiana et al., 2022; Van de Vijver, 2017).

In this context, the cinema experience is considered an engaging encounter that fulfils the need for leisure and entertainment (Meydiana et al., 2022). The motivation to go to

the cinema is predominantly hedonistic, balancing everyday life with the expectation of an extraordinary cinematic event (Soto-Sanfiel et al., 2021). However, a continuous focus on innovation is necessary to enhance the film-watching experience and drive the film industry forward (Lotze, 2018).

Previous research has investigated relevant factors for customer satisfaction and loyalty (CSL) in the cinema industry. In this regard, Suhartanto et al. (2018) utilised partial least squares structural equation modelling (PLS-SEM) in their study on a loyalty model based on creative attraction, which included experience quality, satisfaction, and motivation. Jeong et al. (2021) explored the satisfaction of 4D film viewers using multiple linear regression analysis. Tontini et al. (2022) employed multiple linear regression analysis to identify the influence of cinema service dimensions on customer behavioural intention. Özek et al. (2023) utilised the structural equation modelling approach to evaluate the relationships between latent variables while creating a performance index for cinema services. These studies relied on multiple linear regression analysis to investigate factors associated with the film industry.

Although multivariate analysis has become a common approach for studying predictive relationships in research (Ringle et al., 2012; Khalifa et al., 2022), it is important to note that factors that may not show significant individual effects can still be necessary for achieving a minimum level of performance. These factors, referred to as necessary causes, play a crucial role in determining outcomes. In other words, even if certain variables do not appear to have a strong impact on their own, they are still essential components that cannot be disregarded when aiming to achieve a particular result. Therefore, it is crucial for the necessary condition to be fulfilled, as other factors cannot compensate for it (Dul, 2016; Richter et al., 2020). In this regard, Dul (2016) proposes the use of necessary condition analysis (NCA) within a causal logic of necessity. Dul (2023) indicates that NCA can be employed either as an independent method or as a complementary technique to causal or sufficient analysis through multivariate analysis to investigate predictive relationships. Multimethod studies employing NCA in combination with multiple regressions or structural equation modelling have been used in business management research across various areas such as entrepreneurship, human resource management, international business, marketing, operations, public and non-profit management, strategic management, and tourism (Dul et al., 2023).

Studies have demonstrated the application of NCA and linear regression analysis focused on consumer behaviours. In this regard, Koay et al. (2022) explored how the quality of online food delivery service influences CSL, using PLS-SEM and NCA. Bakir et al. (2022) examined the relationship between airport service attributes and passenger satisfaction, employing a multimethod survey approach that consisted of symmetric methods (multiple regression analysis – MRA) and asymmetric methods (NCA). However, the literature is still limited when it comes to utilising NCA to assess customer satisfaction in general services, including cinema services.

Considering this context, the primary objective of this study is to evaluate the sufficiency and necessity of antecedents for CSL in the cinema industry. Specifically, the study aims to determine the minimum performance levels required by necessary attributes. The practical implications of this research are substantial, as it involves identifying the crucial attributes that have a significant impact on CSL in the cinema sector, based on the perspective of the customers themselves. This understanding

empowers managers to potentially reduce costs and gain a competitive advantage by enhancing the value provided by cinema services.

This approach significantly contributes by combining the sufficiency logic with the necessity logic. NCA can be used in research aiming to identify causal relationships between causes and effects. In NCA, an attribute considered as a necessary cause can impede the desired outcome when it is absent or performs at a lower level. Therefore, this attribute can act as a bottleneck or a mandatory factor for achieving the desired effect. This means that causal relationships can be revisited from the perspective of necessity. It is crucial to identify if necessary attributes are underperforming, as this compromises the overall performance of the product or service in the eyes of customers. Consequently, taking action on attributes other than the bottleneck would not have an impact on customer satisfaction (without the possibility of compensation), resulting in wasted effort (Dul, 2023).

The structure of this article is as follows: In Section 2, we present the theoretical framework, discussing the dimensions that can influence CSL in the cinema industry from the perspective of customers. Next, in Section 3, we provide a detailed explanation of the methodology employed in this study. In Section 4, we present and analy se the obtained results. Moving forward to Section 5, we discuss these results in-depth. Section 6 is dedicated to managerial implications, and finally, in Section 7, we address the limitations of this study.

2 Dimensions that influence CSL in cinema theatres

Through a review of previous studies, we identified 11 dimensions that potentially influence CSL: access, attendants' service, exhibition, promotions, Bonbonniere, tickets, comfort, projection, conservation, information, and responsiveness.

The 'access' dimension is one of the factors that attract customers to cinemas, relating to the ease of accessing the facilities and convenient location (Wen, 2009). This includes aspects such as parking, security, and the presence of leisure and dining options in the vicinity. The demand for multiplexes is largely influenced by ample parking space and urban location, which attract more consumers (Hubbard, 2003). These access-related issues hold significant implications as institutional practices can either attract or discourage cinema-goers based on the ease of accessing cinema sessions and theatres (Weaving et al., 2020). The difficulty of accessing cinemas close to residential areas outside of shopping centre environments and the lack of entertainment options diminish the motivation to go to the cinema (Khaleghipour and Ravadrad, 2021). Additionally, Lotze (2018) highlights that cinemas have become highly appealing due to a wide range of film offerings and cinema halls, coupled with easy access facilitated by their favourable proximity to a broad array of public transportation services.

The dimension of 'attendants' service' refers to the service provided by the cinema staff. Wen (2009) identifies customer service as an essential component of cinema quality. Studies by Awasthi and Shrivastava (2014) and Kim and Choi (2013) highlight the significant impact of attentive front-line staff on customer satisfaction and the overall customer experience. Weaving et al. (2020) emphasise the role of institutional practices in attracting or discouraging viewers, specifically mentioning the friendliness of cinema staff as a relevant factor. Understanding that a superior cinema visit experience in terms of social aspects such as helpfulness (Perlman, 2022), Lotze (2018) emphasises the

importance of continuous innovation in offering customers quick transactions, friendly interactions, and comfortable cinema environments.

The dimension of 'exhibition', which encompasses both the variety of films and the availability of showtimes in cinemas, is a determining factor in the venue choice by consumers. In this light, a scarcity of film releases can diminish the public's desire to attend these venues (Khaleghipour and Ravadrad, 2021). The novelty of films is a compelling factor for viewers to purchase cinema tickets (Batlle-Beltrán and Mateo, 2022). Additionally, greater flexibility in film scheduling contributes to reducing the risks of box office failures (Lotze, 2018).

The 'promotions' dimension refers to the discount strategies and special offers used by cinemas to attract and encourage audience attendance. Tintel and Raats (2022) highlight that ticket price plays an essential role in the decision to go to the cinema, suggesting that pricing evaluation and promotional strategies should consider the options customers have to watch films on other platforms. One common practice is reducing ticket prices during weekdays, when the audience is smaller, aiming to increase theatre occupancy (De Roos and McKenzie, 2014). Furthermore, special discounts for loyalty programmes are associated with cinema user satisfaction and, consequently, the intention to return (Lee et al., 2013). According to Weaving et al. (2020), effective institutional practices can either attract or dissuade the audience, and this can include special pricing offers.

The 'Bonbonniere' dimension, as pointed out by Tontini et al. (2022), is evaluated based on the quality of services provided in the sale of products, as well as the variety and quality of products offered to customers. In addition to the visual pleasures of cinema, Hubbard (2003) highlights the advantage of attracting customers by offering the opportunity to enjoy popcorn, soft drinks, and sweets without having to wait in queues. Batlle-Beltrán and Mateo (2022) add that audiences, interested in watching films in cinemas, also show interest in purchasing soft drinks and popcorn. Thus, the provision of snack and beverage services is part of the cinema-going experience and is a criterion that companies should pay attention to (Wen, 2009; Chiu et al., 2013).

The ease of 'ticket' acquisition can be provided through ticket counters, online platforms, or self-service terminals (Tontini et al., 2022). However, Batlle-Beltrán and Mateo (2022) note that older audiences tend to primarily purchase tickets at the counter, while those who prefer online purchasing do not see the cinema as the preferred option. Therefore, it is important to cater to this audience with efficiency. As the young audience grows over time, it is necessary to develop the operational capacity of this service digitally (Momeni et al., 2023). Hubbard (2003) notes that anxiety can arise when waiting in a queue to buy tickets, especially due to the closeness of unfamiliar people. This experience highlights how the ticketing method and the speed of the process are significant, as they directly influence the convenience of the cinema service and, consequently, customer satisfaction.

The dimension of 'comfort' refers to the audience's pursuit of convenience and well-being when watching a film. Aspects such as seat comfort, ease of movement, and the appropriate arrangement of seats for viewing are often mentioned by viewers when assessing screening rooms. The quality of the auditorium, especially in terms of comfort, is important for those who choose to watch films in traditional cinema halls (Batlle-Beltrán and Mateo, 2022). Facility comfort is the most impactful factor on user satisfaction, according to Awasthi and Shrivastava (2014). Cuong (2020) states that

cinema facilities, including comfort have an indirect impact on customer behavioural intention. The convenience of watching a film without disruptions and the ability to share reactions with other viewers contribute to viewer satisfaction (Meydiana et al., 2022). Furthermore, the concept of comfort in the cinema is intrinsically linked to the trust of the viewers. They perceive the cinema as a reliable venue that ensures comfort and safety from entry to exit, representing a leisure space free from risks and concerns (Van de Vijver, 2017). Cinema comfort is highly valued by participants (Tintel and Raats, 2022), and for the modern customer, it is important to enjoy a comfortable seat during leisure time, as otherwise, they may prefer to stay in their own living room (Lotze, 2018).

The 'projection' dimension is related to the quality of film projection in cinemas and has a significant impact on the viewers' experience. Soto-Sanfiel et al. (2021) state that projection quality is a crucial factor in adding value to the cinema-going experience, along with other elements such as storyline, actors, and soundtrack. Batlle-Beltrán and Mateo (2022) emphasise the relevance of the auditorium, which encompasses image and sound variables, for viewers who choose to watch films in cinemas instead of other viewing options. Sound also plays a crucial role in the overall quality of the cinematic experience, as pointed out by Tintel and Raats (2022). The research by Khaleghipour and Ravadrad (2021) reveals that poor projection and audio quality have a negative impact on people's willingness to go to the cinema. The immersion provided by these aspects, along with the film's storyline itself, contributes to higher viewer satisfaction during the event (Fornerino et al., 2008).

The 'conservation' dimension refers to the proper maintenance of cinemas and its implications for customer satisfaction. According to Tintel and Raats (2022), customers highly value the conservation of cinemas, highlighting it as an important aspect. Lotze (2018) emphasises the importance of ensuring proper maintenance of cinemas to minimise the effects of alternative film viewing options. The perception of a well-maintained environment can influence customers' decisions to choose, stay, or return to an establishment (Barber and Scarcelli, 2010). Adequate maintenance of cinemas, including cleanliness, the good condition of seats, and functionality of equipment, is essential to provide a satisfactory experience to viewers.

The dimension referred to as 'information' is characterised by the dissemination and provision of data about films through various communication channels. This dimension assumes critical relevance by enabling cinematic establishments to effectively meet the expectations and needs of their audience. The methodology of dissemination and the quality of communication of this information are determinants in the viewers' decisions to attend cinemas. In a study conducted by Yang et al. (2021), it is emphasised that the integrated use of digital technologies in communicative strategies has the potential to direct information more precisely to specific target segments, optimising the likelihood of these viewers attending cinemas. This assertion is corroborated by Soto-Sanfiel et al. (2021), whose results indicate that the cinematic preferences of European youth are significantly influenced by elements such as television advertisements, digital media, interpersonal advice, and printed media. Complementing this view, Tintel and Raats (2022) underline that viewers' decisions are often based on an amalgam of informational sources, reinforcing the primacy of the accessibility and transparency of this information. From a more demographic perspective, Palomba (2020) identifies a youth inclination towards specific film categories, such as comedies, animations, and superhero themes. From an operational standpoint, Weaving et al. (2020) highlight that institutional

practices, particularly those focused on the provision of promotional materials and trailers, play a pivotal role in attracting or repelling viewers. This confluence of sources and strategic approaches emphasises the imperative for transparent and easily accessible information in the informed decision-making of viewers regarding their cinema attendance.

The 'responsiveness' dimension is pointed out by Hubbard (2003) as relevant not only as a way to address user dissatisfaction with waiting lines but also as a competitive advantage by providing quick entry to the cinema. This perspective is reinforced by Tontini et al. (2022), who define responsiveness as the ability to provide a fast and efficient service. This includes, but is not limited to, agility in ticket purchasing, readiness in acquiring products such as snacks and beverages, and speed and organisation in accessing the screening rooms. The need to meet customer expectations in this context becomes even more pressing when considering the observations of Hubbard (2003), Wen (2009), Johnston (1995), and Tontini et al. (2022), as they emphasise the importance of avoiding the loss of customers due to unsatisfactory performance in this dimension. This urgency is accentuated by the fact, mentioned by Perlman (2022), that customers now have convenient alternatives, such as streaming platforms that offer quick and practical options for viewing films.

3 Methodology

3.1 Data collection and sample

This research employed a survey method to achieve our research objective. A non-probability convenience sampling technique was utilised to select participants who were readily available for the study (Hair et al., 2014), resulting in a total of 319 valid responses. The survey was conducted at three multiplex cinemas in the city of Blumenau, Brazil, following film screenings on both weekdays and weekends. As of 2022, Blumenau had a population of approximately 361,000 inhabitants, with a metropolitan region population of 809,000. Most respondents were women (51.60%), with an average age of 27.60 years. Marital status varied, with 30.52% being single or living alone, 37.99% in a dating relationship, and 31.49% married. Regarding the frequency of cinema visits, 50.63% of the respondents reported watching movies at least once a month, while 33.96% indicated they watch movies twice a month. The regularity of service usage contributes to the quality of the obtained responses.

3.2 Measures

In this study, we selected 11 dimensions from the construct proposed by Tontini et al. (2022): access (four items), attendants' service (five items), exhibition (four items), promotions (three items), Bonbonniere (three items), tickets (three items), comfort (three items), projection (three items), conservation (three items), information (three items), and responsiveness (four items). The dimensions with their respective statements are described in Appendix. The satisfaction with each item was assessed using an illustrative scale, ranging from 'very dissatisfied' (1) to 'very satisfied – delighted' (5).

The dependent variable, defined as CSL in cinemas, was measured through six reflective statements, with three related to satisfaction and three to the intention to reuse cinema services. The statements are as follows:

a I am satisfied with the cinema where I watched this film.

b This cinema has quality for film screening.

c I enjoy watching films in this cinema.

d I will return to this cinema as long as it is operating.

e I recommend this cinema to friends and family.

f I prefer this cinema over others.

Responses to these statements were collected on an agreement scale, ranging from 'strongly disagree (1)' to 'strongly agree (5)'.

4 Analysis of results

To deepen our understanding of the relationships among the studied dimensions, we adopted a combined analysis using PLS-SEM and NCA. Through PLS-SEM, we investigated how the different dimensions influence CSL in cinemas, while NCA allowed us to establish the necessary conditions for this performance. This sequence was adopted because the PLS-SEM model defines the latent dimensions that will later be used in NCA (Dul, 2023). Both analyses were conducted with the support of SmartPLS 4.0 software (Ringle et al., 2022).

PLS-SEM, a widely employed multivariate method, allowed for the identification of dimensions that maximise CSL in cinemas (Ringle et al., 2022). In addition, NCA, as described by Dul (2016), focuses on identifying the necessary conditions that must be met before CSL in cinemas can be maximised. Therefore, NCA aims to predict the impact of the absence of each dimension rather than estimating the improvement in CSL in cinemas, offering a complementary analytical perspective.

4.1 Common method variance (CMV) bias

To address the potential presence of CMV bias, we employed Harman's single-factor test (Mackenzie and Podsakoff, 2012; Podsakoff et al., 2003) and conducted a full collinearity of latent variables analysis (Kock, 2021). The results of Harman's test indicate that a single factor explains 34.110% of the total variance, which is below the 50% threshold established in the literature. Additionally, we performed a full collinearity analysis of the latent dimensions. According to Kock (2021), if the variance inflation factor (VIF) is below 3.3 (as shown in Table 3), the model can be considered free from common method bias. Therefore, these results indicate that CMV bias is not a concern in this study.

4.2 Measurement model

We conducted a confirmatory factor analysis (Table 1) for the dimensions influencing CSL in cinemas. In this analysis, we assessed convergent validity, composite reliability, and discriminant validity.

Table 1 Model validation: convergent validity and composite reliability

Dimensions		*Loading min.*	*Loading max.*	*CR*	*AVE*
1	Access	0.834	0.913	0.898	0.749
2	Attendants' service	0.784	0.88	0.919	0.721
3	Exhibition	0.858	0.915	0.914	0.771
4	Promotions	0.905	0.909	0.895	0.823
5	Bonbonniere	0.939	0.965	0.954	0.904
6	Tickets	0.948	0.957	0.957	0.909
7	Comfort	0.772	0.878	0.787	0.703
8	Projection	0.903	0.922	0.903	0.828
9	Conservation	0.866	0.92	0.902	0.808
10	Information	0.893	0.900	0.897	0.806
11	Responsiveness	0.604	0.878	0.854	0.538
Customer satisfaction and loyalty (CSL)		0.752	0.884	0.926	0.717

Source: Table by authors

Table 2 Model validation: discriminant validity

Dimensions		*Heterotrait-monotrait ratio (HTMT)*									
		(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
1	Access										
2	Attendants' service	0.590									
3	Exhibition	0.616	0.556								
4	Promotions	0.391	0.337	0.488							
5	Bonbonniere	0.435	0.566	0.668	0.480						
6	Tickets	0.380	0.442	0.668	0.510	0.716					
7	Comfort	0.113	0.110	0.063	0.052	0.098	0.256				
8	Projection	0.350	0.303	0.370	0.393	0.319	0.344	0.518			
9	Conservation	0.247	0.288	0.227	0.339	0.231	0.283	0.453	0.677		
10	Information	0.611	0.521	0.687	0.554	0.509	0.598	0.177	0.272	0.238	
11	Responsiveness	0.533	0.636	0.300	0.168	0.238	0.222	0.360	0.207	0.161	0.317
Customer satisfaction and loyalty (CSL)		-	-	-	-	-	-	-	-	-	-

Source: Table by authors

The composite reliabilities (CR) displayed values above 0.70, and the average variance extracted (AVE) for each construct exceeded 0.5 (Bagozzi and Yi, 1988). We chose to retain the item from the 'responsiveness' dimension, which had a factor loading of 0.604, due to its significant content and AVE value exceeding 0.5. Regarding discriminant validity (Table 2), the HTMT indicators showed values below 0.900, thus reinforcing the presence of discriminant validity, as suggested by Henseler et al. (2015).

4.3 Results of the PLS-SEM

Table 3 presents the results of the PLS-SEM analysis, along with the R^2 and R^2_adj (coefficient of determination) values. The coefficient of determination for the research model is R^2 = 0.419, and R^2_adj = 0.399. The second-order constructs showed satisfactory VIF values, with a maximum value of 2.677. The 'Blindfolding' function was used to calculate the Q^2 values in the SmartPLS software. In the structural model, Q^2 values greater than zero indicate the predictive relevance of the endogenous variables in the model (Geisser, 1974; Stone, 1974).

Three dimensions showed significant influence based on the results generated from a bootstrapping procedure with 10,000 resamples. The dimensions 'promotions' (β = 0.257), 'comfort' (β = 0.145), and 'projection' (β = 0.252) were found to be significant, considering a p-value ≤ 0.05. The remaining dimensions – 'access', 'attendants' service', 'exhibition', 'bonbonniere', 'tickets', 'conservation', 'information' and 'responsiveness' – were not significant.

Table 3 Results of PLS-SEM

Dimensions		*VIF*	*Path coefficient*	*p-value*	*Confidence intervals bias corrected*	
					2.5%	*97.5%*
1	Access	1.899	0.009	0.884	–0.109	0.125
2	Attendants' service	2.075	0.070	0.235	–0.046	0.186
3	Exhibition	2.425	0.045	0.509	–0.090	0.176
4	Promotions	1.550	0.259	0.000	0.157	0.361
5	Bonbonniere	2.328	–0.003	0.968	–0.152	0.142
6	Tickets	2.677	0.058	0.437	–0.083	0.209
7	Comfort	1.689	0.145	0.008	0.037	0.252
8	Projection	2.057	0.252	0.000	0.117	0.375
9	Conservation	1.741	0.064	0.276	–0.049	0.183
10	Information	2.175	0.101	0.097	–0.022	0.219
11	Responsiveness	1.639	–0.020	0.686	–0.110	0.088

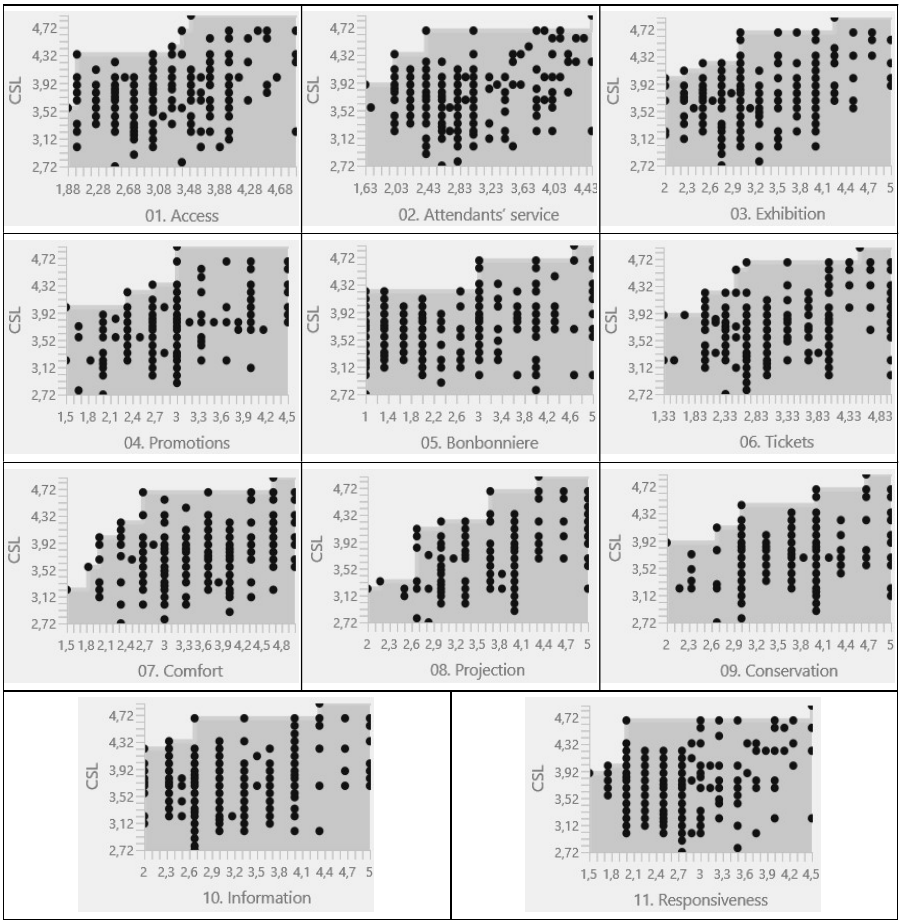
Note: R^2: 0.419, R^2a: 0.399; Q^2 = 0.370; *Significant: p-value ≤ 0.05.

Source: Table by authors

4.4 Results of the NCA

Next, we conducted the NCA to determine the dimensions that are indispensable for customer satisfaction in the cinema (Dul, 2016). NCA establishes the ceiling line, which separates the area with observations from the area without observations, and we used the ceiling envelopment-free disposal hull (CE-FDH) line (Figure 1) (Richter et al., 2020). Since NCA is fundamentally a bivariate analysis method, only one dimension is analysed at a time (Dul, 2023).

Figure 1 Ceiling envelopment technique with free disposal hull (CE-FDH)



Source: Table by authors

The x and y axes represent the agreement levels for each dimension measured using a Likert scale ranging from 1 to 7. The significance calculation of the effect size using the ceiling line effect size (CE-FDH) technique was performed through 10,000 permutations

(Table 4), and it was found that all effect sizes (d), defined as the empty space to the left of the ceiling line, were considered significant (permutation p-value ≤ 0.050).

Table 4 Ceiling line effect size overview

Independent variables		*Effect size (d) (CE-FDH)*	*Permutation p-value*
1	Access	0.145	0.010
2	Attendants' service	0.170	0.012
3	Exhibition	0.158	0.001
4	Promotions	0.177	0.018
5	Bonbonniere	0.197	0.000
6	Tickets	0.184	0.040
7	Comfort	0.229	0.004
8	Projection	0.294	0.000
9	Conservation	0.234	0.009
10	Information	0.119	0.030
11	Responsiveness	0.157	0.018

Note: 0 < d < 0.1 = small effect size; 0.1 ≤ d < 0.3 = medium effect size;
0.3 ≤ d < 0.5 = large effect size; d ≥ 0.5 5 very large effect size.

Source: Table by authors

The results indicate that all dimensions presented a medium effect size ($0.1 \leq d < 0.3$) and statistical significance ($p < 0.05$) for CSL in cinemas.

Table 5 Bottleneck table – CE – FDH values

Customer satisfaction and loyalty		*Access*	*Attendants' service*	*Exhibition*	*Promotions*	*Bonbonniere*	*Tickets*	*Comfort*	*Projection*	*Conservation*	*Information*	*Responsiveness*
		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
0%	2.720	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN
10%	2.937	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN
20%	3.154	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN
30%	3.371	NN	NN	NN	NN	NN	NN	1.830	2.670	NN	NN	NN
40%	3.588	2.000	NN	NN	NN	NN	NN	2.000	2.670	NN	NN	NN
50%	3.805	2.000	NN	NN	NN	NN	NN	2.000	2.670	NN	NN	NN
60%	4.022	2.000	2.000	2.250	2.330	NN	2.000	2.330	2.670	2.670	NN	2.000
70%	4.239	2.000	2.000	3.000	2.670	3.000	2.500	2.670	3.670	3.000	2.330	2.000
80%	4.456	3.380	2.400	3.000	3.000	3.000	2.500	2.670	3.670	4.000	2.670	2.000
90%	4.673	3.500	4.500	4.250	3.000	4.670	4.500	4.670	4.330	4.670	4.330	4.500
100%	4.890	3.500	4.500	4.250	3.000	4.670	4.500	4.670	4.330	4.670	4.330	4.500

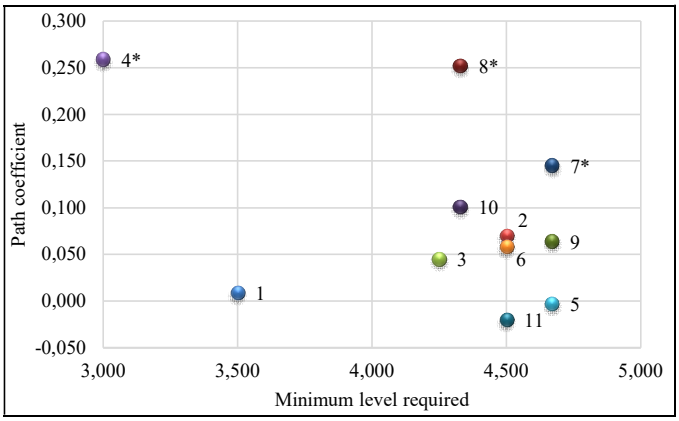
Source: Table by authors

The bottleneck table (Table 5) allows for the evaluation of each necessary condition, providing additional insights into the level of each dimension required to achieve CSL in cinemas (Dul, 2023). The values in the table are based on the Likert scale.

To achieve a 50% level of CSL in cinemas, three conditions are necessary, requiring a minimum performance of 2.000 for 'access', 2.000 for 'comfort', and 2.670 for 'projection'. However, to reach 100% CSL in the cinema industry, all service dimensions must attain a minimum level of performance, as described in the table.

Once these minimum thresholds are reached, considering the results from the PLS-SEM, as presented in Table 3, it will be possible to advance the improvement of CSL in the cinema industry.

Figure 2 Integration matrix of the results from PLS-SEM and NCA (see online version for colours)



Notes: Dimensions:

1. Access
2. Attendants' service
3. Exhibition
4. Promotions
5. Bonbonniere
6. Tickets
7. Comfort
8. Projection
9. Conservation
10. Information
11. Responsiveness.

*Significant in the structural model of partial least squares (PLS-SEM): p-value ≤ 0.05.

Source: Table by authors

4.5 The integration of the results from the PLS-SEM and the NCA

This study makes a valuable contribution to the literature by examining the influence of cinema service dimensions on CSL, integrating the sufficiency and necessary condition logics. To facilitate the integration of information, we have developed Figure 2, referred to as the integration matrix of the results from the PLS-SEM and the NCA. The cinema

service dimensions are presented in a two-dimensional graph, with the NCA results represented on the x-axis through the minimum required level from the bottleneck table (Table 5) for achieving 100% CSL in cinemas. On the y-axis, the results from the PLS-SEM model are represented through the sufficiency indicator extracted from the path coefficient results (Table 2).

The matrix illustrates the contribution of each service dimension to CSL in cinemas. Observing the results from PLS-SEM, the dimensions 'promotions (4)', 'projection (8)', and 'comfort (7)' have a significant influence (p-value < 0.050), and it is recommended to maximise their performance to enhance the customer experience.

When considering the NCA approach, the emphasis is placed on predicting the impact of the absence of each dimension rather than estimating the improvement of each dimension. In this sense, the lack of minimum performance in any of the dimensions, even those considered non-significant, can compromise the maximisation of CSL in cinemas. Thus, the other service dimensions cannot be ignored. Observing the matrix, a group of dimensions with distinct minimum levels can be noticed. The dimensions 'conservation (9)' and 'Bonbonniere (5)' have been defined with higher minimum required levels, making the management of their performance crucial. However, all 11 dimensions need to meet their minimum performance; otherwise, they will represent bottlenecks in maximising CSL in cinemas through the improvement of the significant dimensions addressed in the PLS-SEM.

5 Discussion

Based on the results of the PLS-SEM model, it was found that the dimensions of 'promotions', 'projection', and 'comfort' have a significant influence on CSL in cinemas. However, it is worth noting that these dimensions are also identified as necessary conditions. As they can be used to maximise CSL in cinemas, they should be maintained at levels above the minimum required level identified by the NCA.

The 'promotions' dimension refers to the strategies of discounts, special offers, and loyalty programmes used by cinemas to attract and incentivise audience attendance. They play a critical role in customer satisfaction and intention to return, as supported by studies by Lee et al. (2013), De Roos and McKenzie (2014), Weaving et al. (2020), and Tintel and Raats (2022).

The 'projection' dimension is related to the quality of the film projection, including brightness, contrast, image focus, sound in the cinema, and the positioning of seats in relation to the screen. It has been shown to be a determining factor in the viewer's experience, as highlighted by Soto-Sanfiel et al. (2021), Khaleghipour and Ravadrad (2021), Tintel and Raats (2022), and Batlle-Beltrán and Mateo (2022).

Lastly, the 'comfort' dimension refers to the level of comfort provided to viewers during the film screening, including seat comfort, space between seats, and temperature in the theatre. This dimension, as supported by studies by Awasthi and Shrivastava (2014), Van de Vijver (2017), Lotze (2018), Cuong (2020), Meydiana et al. (2022), Batlle-Beltrán and Mateo (2022), has been shown to be relevant in maximising CSL in cinemas.

The remaining dimensions studied did not show significant influence on CSL in cinemas based on the results of the PLS-SEM model. However, according to the results of the NCA, it is necessary to manage these dimensions at a minimum level of

performance. It is crucial to manage them properly to prevent them from becoming bottlenecks. Otherwise, they may compromise the impact on CSL in cinemas, even with investments in the mentioned dimensions.

In this regard, when observing the dimensions of cinema services plotted in the 'matrix of integration of results' (Figure 2), the dimensions of 'conservation' and 'bonbonniere' were identified with the 'highest' minimum level required according to the NCA. On the other hand, the dimensions of 'responsiveness', 'attendants' service', 'tickets', 'information', 'exhibition' and 'access' require a 'lower' minimum level of performance. Therefore, the fact that these dimensions do not influence CSL in cinemas, as indicated by the results of the PLS-SEM model, does not contradict the findings of the literature that highlight the relevance of these respective dimensions in theory.

The dimension of 'conservation' involves the proper maintenance of cinema facilities, including the cleanliness of lavatories, common areas, and projection rooms. Lotze (2018) and Barber and Scarcelli (2010) emphasise the importance of maintenance and the perception of a well-maintained environment for the customer experience. As for the dimension of 'bonbonniere', it encompasses the quality of service provided at the concession stand, including the variety and quality of products offered to customers. As highlighted by Hubbard (2003) and Batlle-Beltrán and Mateo (2022), the availability of snacks and beverages is an integral part of the cinema experience. Wen (2009) and Chiu et al. (2013) also suggest that cinema companies should pay attention to these criteria.

In the dimension of 'Responsiveness', prompt service, including efficient ticket purchasing queues and organised entry into screening rooms, is essential (Hubbard, 2003; Wen, 2009). The research results reveal the need for this dimension among cinema-goers, confirming the relevance of the insights provided by Tontini et al. (2022) regarding the speed and efficiency of service. The dimension of 'Attendants' service', as emphasised by Wen (2009), Weaving et al. (2020), and Perlman (2022), demonstrates its importance in the perception of cinema service quality, which aligns with the results of our analysis, highlighting the significance of courteous and available attendants to address inquiries and directly reflect customer satisfaction (Awasthi and Shrivastava, 2014).

The dimension of 'Tickets', as indicated by Tontini et al. (2022), highlights the importance of ease and convenience in ticket purchasing, whether through online platforms, box offices, or self-service terminals. According to the data from this research, a minimum level of performance is necessary, considering the differences among audience segments, as pointed out by Batlle-Beltrán and Mateo (2022) and Momeni et al. (2023), where older audiences tend to prefer box office purchases whilst younger audiences prefer online purchases.

Regarding the dimension of 'Information', the research findings are consistent with the discoveries of Soto-Sanfiel et al. (2021), Weaving et al. (2020), and Yang et al. (2021), stating that clear and readily available information about films currently playing, whether at the cinema, online, or through other means, is crucial for the customer experience. The quality and accessibility of information can significantly influence the viewer's decision to watch a film.

The dimension of 'exhibition' encompasses the variety of films available at the cinema and the screening schedules offered to viewers. The analysis of the data confirms that customers value film diversity and schedule availability (Lotze, 2018). However, a lack of film releases can negatively affect cinema attendance, making it crucial to provide a continuous and updated selection of films to attract and retain audiences (Khaleghipour

and Ravadrad, 2021). Variety and flexibility in programming are key factors in cinema choice for viewers (Batlle-Beltrán and Mateo, 2022).

Lastly, the 'access' dimension, understood as the accessibility, convenience, and ease of access to the cinema, both before and within the cinema premises, needs to meet customers' expectations regarding convenient access to cinemas in shopping centres. The literature supports this statement, as highlighted by Wen (2009), emphasising the importance of easy access and convenient location to attract customers to cinemas. Similarly, Lotze (2018) and Hubbard (2003) underscore the significance of parking, security, and the availability of nearby entertainment and dining options.

6 Conclusions

In conclusion, this study examined the influence of cinema service dimensions on CSL. By integrating the PLS-SEM and NCA, a more comprehensive perspective of the problem was obtained.

The dimensions of 'promotions', 'projection', and 'comfort' were identified as the most influential factors in CSL, emphasising the need to prioritise efforts to improve these areas within the cinema. However, it is important to note that all other dimensions, even those not considered significant in the PLS-SEM, are necessary to maintain CSL. This finding underscores the importance of maintaining a minimum level of performance in all dimensions, as any shortcomings in these areas could compromise CSL.

Therefore, the management of cinema service performance should consider both the factors that directly influence CSL, (e.g., 'promotions', 'projection', and 'comfort') and those that are necessary to avoid dissatisfaction (e.g., 'conservation' and 'bonbonniere'). Adequate management of these dimensions is crucial in ensuring a positive customer experience and, consequently, their loyalty to the cinema.

This study contributes to the existing literature by offering a distinct approach to understanding cinema service dimensions and their influence on CSL. It provides valuable insights for cinema managers, offering clear directions for service improvement. By prioritising the identified dimensions and maintaining minimum performance levels, cinemas can enhance the overall customer experience, leading to increased satisfaction and loyalty.

7 Managerial implications

To maximise CSL in cinemas, we recommend focusing on 'promotions', 'projection', and 'comfort.' Promotional strategies, such as discounts and special offers, attract the audience, while high-quality projection is essential for a superior viewing experience. Comfort is valued by cinema-goers, implying an investment in high-quality facilities.

Furthermore, it is crucial to meet the minimum required level of performance in aspects such as 'conservation' and 'bonbonniere.' Proper maintenance of the cinema provides a pleasant experience, encouraging customers to return. The concession stand should offer a variety of high-quality snacks and beverages, with efficient service.

Lastly, the dimensions with a lower minimum required level but still essential include 'responsiveness', 'attendants' service', 'information', 'tickets', 'exhibition', and 'access'. Responding promptly to customer needs and providing excellent service are vital for

satisfaction. Clear and up-to-date film information and an efficient ticket purchase experience contribute to a seamless cinema visit. Monitoring and adjusting the film schedule cater to different customer segments. Location and ease of access, both internally and externally, are crucial for attracting customers.

8 Research limitations

This study has some limitations that should be considered when interpreting its results. The sample used was selected through convenience sampling, which may limit the generalisability of the findings beyond the specific three multiplexes in Blumenau. Additionally, the sample size could have been larger to increase the robustness of the results. The responses are based on participants' self-perception, which can introduce response bias. Furthermore, the restricted geographical location and subjective nature of the measures used may also influence the results.

9 Future studies

The paper demonstrates that necessary and sufficient aspects should be taken into consideration to evaluate how to manage a service. Further studies should be carried out to evaluate the differences in findings between the joint use of PLS-SEM and NCA, and penalty-reward contrast analysis (Tontini et al., 2022), methods that approach the nonlinear relation between the performance of service's attributes and CSL.

References

Awasthi, A.K. and Shrivastava, A. (2014) 'Servicescape elements in leisure service settings: a study of movie theatres and restaurants', *International Journal of Hospitality and Tourism Systems*, Vol. 7, No. 1, pp.69–73 [online] https://www.publishingindia.com/ijhts (accessed 7 July 2023).

Bagozzi, R.P. and Yi, Y. (1988) 'On the evaluation of structural equation models', *Journal of the Academy of Marketing Science*, Vol. 16, pp.74–94 [online] https://doi.org/10.1007/BF02723327.

Bakır, M., Akan, Ş., Özdemir, E., Nguyen, P.H., Tsai, J.F. and Pham, H.A. (2022) 'How to achieve passenger satisfaction in the airport? Findings from regression analysis and necessary condition analysis approaches through online airport reviews', *Sustainability*, Vol. 14, No. 4, p.2151 [online] https://doi.org/10.3390/su14042151.

Barber, N. and Scarcelli, J.M. (2010) 'Enhancing the assessment of tangible service quality through the creation of a cleanliness measurement scale', *Managing Service Quality: An International Journal*, Vol. 20, No. 1, pp.70–88 [online] https://doi.org/10.1108/09604521011011630.

Batlle-Beltrán, M. and Mateo, M. (2022) 'Analysis of the factors that determine cinema attendance', *International Journal of Entertainment Technology and Management*, Vol. 1, No. 3, pp.201–221 [online] https://doi.org/10.1504/IJENTTM.2022.124897.

Chiu, H.W., Nathania, M., Lin, Y.T. and Huang, X.X. (2013) 'Designing services for happy times in a movie theater', in *2013 Fifth International Conference on Service Science and Innovation*, pp.234–236 [online] https://doi.org/10.1109/ICSSI.2013.49.

Cuong, D.T. (2020) 'The effect of physical environment and perceived value on customer satisfaction and behavioral intention at the cinema in Vietnam', *TEST Engineering and Management*, Vol. 82, pp.1665–1674 [online] https://www.testmagzine.biz (accessed 10 August 2023).

De Roos, N. and McKenzie, J. (2014) 'Cheap tuesdays and the demand for cinema', *International Journal of Industrial Organization*, Vol. 33, pp.93–109 [online] https://doi.org/10.1016/j.ijindorg.2014.02.004.

Dul, J. (2016) 'Necessary condition analysis (NCA): logic and methodology of 'necessary but not sufficient' causality', *Organizational Research Methods*, Vol. 19, pp.10–52 [online] https://doi.org/10.1177/1094428115584005.

Dul, J. (2023) *Advances in Necessary Condition Analysis*, Version 1.5 [online] https://bookdown.org/ncabook/advanced_nca2/ (accessed 20 July 2023).

Dul, J., Hauff, S. and Bouncken, R.B. (2023) 'Necessary condition analysis (NCA): review of research topics and guidelines for good practice', *Review of Managerial Science*, Vol. 17, No. 2, pp.683–714 [online] https://doi.org/10.1007/s11846-023-00628-x.

Fornerino, M., Helme-Guizon, A. and Gotteland, D. (2008) 'Movie consumption experience and immersion: Impact on satisfaction', *Recherche et Applications en Marketing*, Vol. 23, No. 3, pp.93–110 [online] https://doi.org/10.1177/205157070802300306.

Garver, M.S. (2003) 'Best practices in identifying customer-driven improvement opportunities', *Industrial Marketing Management*, Vol. 32, No. 6, pp.455–466 [online] https://doi.org/10.1016/S0019-8501(02)00238-9.

Geisser, S. (1974) 'A predictive approach to the random effect model', *Biometrika*, Vol. 61, No. 1, pp.101–107 [online] https://doi.org/10.1093/biomet/61.1.101.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2014) *Multivariate Data Analysis*, 7th ed., Pearson Education, Harlow.

Hamid, M., Ghasemi, S., Ghasemkhani, A. and Ramezantabar, R. (2023) 'Improving the performance of customer relationship management regarding trust factors by a unique mathematical programming approach', *International Journal of Services and Operations Management*, Vol. 45, No. 3, pp.401–425 [online] https://doi.org/10.1504/IJSOM.2023.132463.

Henseler, J., Ringle, C.M. and Sarstedt, M. (2015) 'A new criterion for assessing discriminant validity in variance-based structural equation modeling', *Journal of the Academy of Marketing Science*, Vol. 43, pp.115–135 [online] https://doi.org/10.1007/s11747-014-0403-8.

Hubbard, P. (2003) 'A good night out? Multiplex cinemas as sites of embodied leisure', *Leisure Studies*, Vol. 22, No. 3, pp.255–272 [online] https://doi.org/10.1080/026143603200075461.

Jeong, D.Y., Han, S.H., Choi, S., Jeong, D. and Kwon, K. (2021) 'Investigating perceived emotions and affects of a scene, and the user satisfaction with motion effects in 4D movies', *International Journal of Industrial Ergonomics*, Article 103173, Vol. 85 [online] https://doi.org/10.1016/j.ergon.2021.103173.

Johnston, R. (1995) 'The determinants of service quality: satisfiers and dissatisfiers', *International Journal of Service Industry Management*, Vol. 6, No. 5, p.53 [online] https://doi.org/10.1108/09564239510101536.

Khaleghipour, M. and Ravadrad, A. (2021) 'Why we don't go to the cinema: a qualitative study in Iran', *Avanca Cinema*, pp.834–838 [online] https://doi.org/10.37390/avancacinema.2021.a314.

Khalifa, G.S., Trung, N.V.H. and Hossain, M.S. (2022) 'Predicting customer engagement behaviour: the mediating role of hotel functional quality in the Vietnamese hotel industry', *International Journal of Services and Operations Management*, Vol. 43, No. 3, pp.312–337, [online] https://doi.org/10.1504/IJSOM.2022.126979.

Kim, H. and Choi, B. (2013) 'The influence of customer experience quality on customers' behavioral intentions', *Services Marketing Quarterly*, Vol. 34, No. 4, pp.322–338 [online] https://doi.org/10.1080/15332969.2013.827068.

Koay, K.Y., Cheah, C.W. and Chang, Y.X. (2022) 'A model of online food delivery service quality, customer satisfaction and customer loyalty: a combination of PLS-SEM and NCA approaches', *British Food Journal*, Vol. 124, No. 12, pp.4516–4532 [online] https://doi.org/10.1108/BFJ-10-2021-1169.

Kock, N. (2021) 'Harman's single factor test in PLS-SEM: checking for common method bias', *Data Analysis Perspectives Journal*, Vol. 2, No. 2, pp.1–6 [online] https://scriptwarp.com/dapj (accessed 5 June 2023).

Lee, J.H., Kim, J.H. and Jung, J.S. (2013) 'Study on customer satisfaction influenced by the quality of service, physical environment, and brand recognition of a multiplex cinema', *Korean Research Academy of Distribution and Management*, Vol. 16, No. 4, pp.61–72 [online] https://doi.org/10.17961/jdmr.16.4.201309.61.

Lotze, K. (2018) 'Bringing the multiplex to antwerp: a battle of two giants', *TMG Journal for Media History*, Vol. 21, No. 1 [online] https://doi.org/10.18146/2213-7653.2018.339.

MacKenzie, S.B. and Podsakoff, P.M. (2012) 'Common method bias in marketing: causes, mechanisms, and procedural remedies', *Journal of Retailing*, Vol. 88, No. 4, pp.542–555 [online] https://doi.org/10.1016/j.jretai.2012.08.001.

Meydiana, K., Rifqa, M. and Raharjo, T.S. (2022) 'Factors affecting customers' intention to return to the movie after reopening during the Covid-19 pandemic', *Devotion Journal of Community Service*, Vol. 3, No. 13, pp.2388–2405 [online] https://doi.org/10.36418/dev.v3i13.284.

Micus, C., Schramm, S., Boehm, M. and Krcmar, H. (2023) 'Methods to analyze customer usage data in a product decision process: a systematic literature review', *Operations Research Perspectives*, Vol. 10, No. 100277, pp.1–11 [online] https://doi.org/10.1016/j.orp.2023.100277.

Momeni, K., Raddats, C. and Martinsuo, M. (2023) 'Mechanisms for developing operational capabilities in digital servitization', *International Journal of Operations & Production Management*, Vol. 43, No. 13, pp.101–127 [online] https://doi.org/10.1108/IJOPM-04-2022-0259.

Nazeri, A., Ebrahimi, M. and Soofifard, R. (2020) 'Identification and ranking of factors affecting customer loyalty – a case study: Mehre-e-Eghtesad bank customers', *International Journal of Services and Operations Management*, Vol. 35, No. 3, pp.289–306 [online] https://doi.org/10.1504/IJSOM.2020.105372.

Özek, K.İ., Aktepe, A. and Ersöz, S. (2023) 'A model proposal for movie theater service performance index (MTSPI) calculation with structural equation modeling and application', *Politeknik Dergisi*, p.1 [online] https://doi.org/10.2339/politeknik.1154751.

Palomba, A. (2020) 'Consumer personality and lifestyles at the box office and beyond: how demographics, lifestyles and personalities predict movie consumption', *Journal of Retailing and Consumer Services*, Vol. 55, No. 102083, pp.1–11 [online] https://doi.org/10.1016/j.jretconser.2020.102083.

Perlman, Y. (2022) 'Pricing decisions of online and offline retailers, each offering a competing benefit', *Operations Research Perspectives*, Vol. 9, No. 100231, pp.1–14 [online] https://doi.org/10.1016/j.orp.2022.100231.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003) 'Common method biases in behavioral research: a critical review of the literature and recommended remedies', *Journal of Applied Psychology*, Vol. 88, No. 5, p.879 [online] https://doi.org/10.1037/0021-9010.88.5.879.

Richter, N.F., Schubring, S., Hauff, S., Ringle, C.M. and Sarstedt, M. (2020) 'When predictors of outcomes are necessary: guidelines for the combined use of PLS-SEM and NCA', *Industrial Management & Data Systems*, Vol. 120, No. 12, pp.2243–2267 [online] https://doi.org/10.1108/IMDS-11-2019-0638.

Ringle, C.M., Sarstedt, M. and Straub, D.W. (2012) 'Editor's comments: a critical look at the use of PLS-SEM in MIS Quarterly, *MIS Quarterly (MISQ)*, Vol. 36, No. 1, pp.iii-xiv [online] https://ssrn.com/abstract=2176426 (accessed 10 July 2023).

Ringle, C.M., Wende, S. and Becker, J.M. (2022) *SmartPLS 4*, SmartPLS, Oststeinbek [online] https://www.smartpls.com (accessed 7 July 2023).

Saadat, N., Shadnoush, N. and Nameghi, E.N.M. (2022) 'Effect of customer satisfaction, costs, knowledge and awareness, infrastructure and service quality on e-commerce success', *International Journal of Services and Operations Management*, Vol. 42, No. 1, pp.32–51 [online] https://doi.org/10.1504/IJSOM.2022.123094.

Schmitt, T.A. (2011) 'Current methodological considerations in exploratory and confirmatory factor analysis', *Journal of Psychoeducational Assessment*, Vol. 29, No. 4, pp.304–321 [online] https://doi.org/10.1177/0734282911406653.

Soto-Sanfiel, M.T., Villegas-Simón, I. and Angulo-Brunet, A. (2021) 'Uses and consumption of cinema by European adolescents: a cross-cultural study', *Studies in European Cinema*, Vol. 18, No. 2, pp.119–140 [online] https://doi.org/10.1080/17411548.2019.1613044.

Stone, M. (1974) 'Cross-validatory choice and assessment of statistical predictions', *Journal of the Royal Statistical Society. Series B (Methodological)*, Vol. 36, No. 2, pp.111–147 [online] https://doi.org/10.1111/j.2517-6161.1974.tb00994.x.

Suhartanto, D., Brien, A., Sumarjan, N. and Wibisono, N. (2018) 'Examining attraction loyalty formation in creative tourism', *International Journal of Quality and Service Sciences*, Vol. 10, No. 2, pp.163–175 [online] https://doi.org/10.1108/IJQSS-08-2017-0068.

Tefertiller, A. (2017) 'Moviegoing in the Netflix age: Gratifications, planned behavior, and theatrical attendance', *Comunicación y Sociedad*, Vol. 30, No. 4, pp.27–44 [online] https://hdl.handle.net/10171/54608 (accessed 5 June 2023).

Tintel, S. and Raats, T. (2022) 'Young Flemish audiences' cinema-going intentions and VOD streamed viewing practices during COVID-19', *Journal of Audience & Reception Studies*, Vol. 19, No. 1, pp.124–148 [online] https://www.participations.org (accessed 7 July 2023).

Tontini, G., Krause, V.M., da Silva, L.F., Vieira, F.R., Santos, T. and Andrade, J. (2022) 'What influences the behavior intention of movie theater customers? Comparing linear and nonlinear points of view', *International Journal of Quality and Service Sciences*, Vol. 14, No. 4, pp.652–670 [online] https://doi.org/10.1108/IJQSS-09-2021-0132.

Van de Vijver, L. (2017) 'The cinema is dead, long live the cinema! Understanding the social experience of cinema-going today', *Participations*, Vol. 14, No. 1, pp.129–144 [online] https://www.participations.org (accessed 10 July 2023).

Weaving, S., Hight, C., Nobes, K. and Pasvolsky, C. (2020) 'Working with the Australian cinema industry to understand the movie-going experience', *Studies in Australasian Cinema*, Vol. 14, No. 2, pp.80–94 [online] https://doi.org/10.1080/17503175.2020.1810459.

Wen, T. (2009) 'Customer experiential influencing factors and their model construction of the cinema', in *2009 6th International Conference on Service Systems and Service Management*, Xiamen, China, pp.15–18 [online] https://doi.org/10.1109/ICSSSM.2009.5174847.

Yang, J., Jin, X., Le, W. and Sheng, F. (2021) 'Exploring service quality model from the perspective of sensory perception', *Total Quality Management & Business Excellence*, Vol. 32, Nos. 13–14, pp.1548–1568 [online] https://doi.org/10.1080/14783363.2020.1747425.

Appendix

Dimension		*Item*	*Loading*
1	Access	Ease and convenience of access to the cinema (within the mall)	0.832
		Accessibility of the cinema for people with physical disabilities	0.841
		Ease and convenience of access in the cinema lobby	0.869
		Ease and convenience of access inside the cinema auditorium	0.913
2	Attendants' service	Number of attendants in the cinema	0.851
		Willingness of attendants to assist	0.871
		Courtesy of attendants	0.782
		Responsiveness of attendants to questions or inquiries	0.879
		Meeting specific customer demands/needs	0.858
3	Exhibition	Variety of movies in the cinema	0.878
		Movie screening schedules	0.860
		Movies being shown in this cinema	0.916
		Duration of movies available for viewing in this cinema	0.860
4	Promotions	Discounts available through partnerships (e.g., loyalty programs)	0.904
		Cinema offers and promotions (e.g., special screenings, discounts)	0.909
		Loyalty program offered by the cinema	0.908
5	Bonbonniere	Quality of service provided in the concession stand	0.949
		Variety of products in the concession stand	0.965
		Quality of products in the concession stand	0.940
6	Tickets	Ease of purchasing tickets at the box office	0.947
		Ease and convenience of purchasing tickets online	0.957
		Ease and convenience of purchasing tickets via self-service terminals	0.957
7	Comfort	Comfort of the seats	0.859
		Space between the seats	0.879
		Temperature inside the auditorium	0.777
8	Projection	Projection quality (brightness, contrast, and focus of the image)	0.926
		Sound quality in the cinema	0.904
		Proper alignment of seats with the screen	0.906
9	Conservation	Maintenance of restrooms and common areas	0.863
		Cleanliness of the cinema facilities	0.907
		Maintenance of the auditorium facilities	0.918

Appendix (continued)

Dimension		*Item*	*Loading*
10	Information	Information about available or upcoming movies (posters and other details)	0.901
		Clarity of information on movie boards and operations	0.901
		Information provided by the cinema on the internet regarding movies in showtimes, schedules, etc.	0.888
11	Responsiveness	Overall speed of service	0.902
		Speed of the ticket purchasing queue	0.656
		Speed and organisation during entry into the auditorium (during high attendance)	0.762
Customer satisfaction and loyalty		I am satisfied with the cinema where I watched this movie	0.889
		This cinema has the quality to watch movies	0.861
		I enjoy watching movies in this cinema	0.762
		I will return to this cinema as long as it is in operation	0.869
		I recommend this cinema to my friends and family	0.852
		I prefer this cinema over other cinemas	0.877