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TECHNOLOGICAL AND ENVIRONMENTAL DRIVERS OF CHANGES IN BUSINESS MODEL. THE FILM INDUSTRY PERSPECTIVE

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ABSTRACT: This article provides the first research on the importance of technological and environmental factors in the context of innovation and strategic management in the film industry. The study employs semi-structured interviews, a systematic literature review (SLR) and a computer-assisted web interview (CAWI). First, based on the interviews and SLR, it identifies the most important technological and environmental film business model adaption factors, four in each category. Then, the CAWI results indicate that technological factors supported by social and economic changes substantially impact the film business models, while environmental factors are of minor importance, although noticeable. As with any research, ours also has some limitations. The surveys were conducted with a limited number of experts who agreed to participate in the study. At the same time, the findings of SLR depend on the researchers' choice of searched keywords, the language of the scrutinised texts and the selection of databases.

KEYWORDS: film industry, business models, semi-structured interviews, systematic literature review, CAWI

Introduction

We observe the ongoing market changes in the film industry, influenced by the digital revolution and the rapid expansion of streaming platforms (Lazzeretti, 2022). Changing audience habits, economic conditions, and new technological possibilities, combined with environmental threats from rapid climate change, indicate that the current film business model is becoming outdated and does not yield expected revenues (Orankiewicz & Bartosiewicz, 2023). Managers of profit-oriented film enterprises must use innovation to shape strategic approaches and actions in creation, production, and distribution (Parkman et al., 2012). Yet, the strategic management process is more complicated in creative than in traditional industries because the managers in creative organisations must consider additional factors (such as continuous innovations, unique products and processes, hard-to-forecast demand, artistic contents of the product or self-management and self-managing staff) and parallel functions (Bērziņš, 2015; Sassi & Haldma, 2017). At the same time, the innovative character of creative industries induces a high degree of new business initiatives, which should be supported by solid strategic innovation management in an increasingly competitive environment (Kourtit et al., 2009).

The emergence of streaming platforms was one of the most important reasons for the change in the film distribution market, which enabled watching films at home within the chosen payable subscription fee (Colbjørnsen, 2021). At the same time, cinema is no longer the privileged form of distribution, and producers and distributors must become increasingly innovative and flexible to remain competitive. Technological advances have enabled the development of so-called home cinema, and larger cinemas and multiplexes offer increasingly new experiences for audiences such as V.R., interactive cinema seats, surround sound technologies (e.g., Dolby Atmos or DTS:X) or higher resolution and quality cinema screens (Jeong, 2021). Such aspects as growing access to high-speed Internet and data transfer should also be considered. Global companies like Google, Amazon, and Discovery, as well as major US studios and leading streaming platforms like Netflix, have joined the competition to deliver film content over the Internet (Shattuc, 2019). This influenced cinema screening times, shortening distribution windows to 45-75 days by about 50% compared to pre-pandemic (Orankiewicz & Bartosiewicz, 2023).

Even with the revolutionary impact of the Internet and technological advances on the film industry, there are still noticeable drawbacks, particularly in environmental sustainability (Batmunkh, 2022). The film industry generates huge revenues annually. However, it is often overlooked that it also creates significant waste and carbon footprint. Each online activity comes with a cost. For example, high-definition movies from streaming apps are compressed and stored in power-intensive and heat-generating data centres, which move the files along optical fibres to our home devices, thus releasing carbon emissions into the atmosphere. It is estimated that watching an hour series on 4K resolution using a fixed network emits approximately 0,03 kg of CO₂. As for the data centres, on their own, they account for over 2% of the global carbon emissions (Obringer et al., 2021). The importance of the environmental impact of the film industry is even more visible if we consider rapidly occurring climate changes. According to representatives of the United Nations (U.N.), the provisions of the 2016 Paris Agreement are considered outdated. Proposed scenarios for reducing greenhouse gas emissions (GHGs) into the atmosphere are deemed unrealistic. A medium-growth scenario which assumes that the global temperature in 2100 will increase by about 275.8500K now seems realistic (Anagnostopulu, 2024). Thus, global governance and economies must do everything possible to avoid this increase (Paddison & Gretener, 2023). Consequently, environmental awareness and the need to protect the environment should be more widespread among the public, influencing the behaviour of suppliers of goods and services.

Given the value of the research presented in this article and its potential applications, there is a significant need for new insights to identify gaps and adequately map areas for future research. This article addresses these needs by systematising the study and identifying the role of innovation and environmental factors in creating new business models in the context of the film industry. To this end, the study employs three research methods: semi-structured interviews, a systematic literature review (SLR) and a computer-assisted web interview (CAWI).

An overview of the literature

Joseph Schumpeter (1883 – 1950) pioneered the economic development theory through innovation. He saw innovation as a distinct internal agent of change, the conversion of existing factors of production into new uses, a purely economic process (Schumpeter, 1939). Innovation in the business model, in turn, can be defined as a process that deliberately changes the essential elements of the enterprise and its business logic (Bucherer et al., 2012) involving a new form of exchange at some point in the value chain (Clinton & Whisnant, 2019). It may be caused by the desire to take advantage of the perceived development opportunity or related to the emerging threat to the current functioning of the company. Therefore, the company must constantly monitor internal and external factors due to the emergence of new conditions or innovations in the market that can quickly destroy its stable market position. It makes it necessary to develop new ways of thinking and offer customers value corresponding to their changing needs (McGrath, 2010). Thus, innovation in the business model can manifest itself in many ways (Li, 2020):

- It can become a value proposition for customers and its adjustment to the appropriate customer segment.
- It can occur in how value is created, captured, and distributed. Business model innovations may also involve activities, such as collaborating with stakeholders that create value for the customer.

Also, a change in the business model within the film industry can lead to a competitive advantage, serving as a form of innovation. Innovation in the film industry is strongly related to technological development (Clement et al., 2020; Oguamanam, 2020; Simon et al., 2015). This is evidenced by the fact that the development of the film industry has been based on several critical technological breakthroughs, such as the introduction of sound or the addition of colour (Pardo, 2013). What is more, the competitive advantage of cinema over other forms of entertainment has traditionally been built on technological advantage. Until the advent of alternative technologies for watching movies at home, the cinema was the primary medium for watching movies on the big screen (Silver & McDonnell, 2007). The digital revolution and globalisation have changed the film and television industry in ways that could never be predicted (Pardo, 2013), and technological advances still drive further changes in the film industry. The main technological forces are a broadband Internet connection, digital file compression, streaming media, and encryption (Daidj & Egert, 2018; Zhu, 2001). Over the last decades, these changes are progressing faster and have a much more comprehensive range. Technological innovation affects the three critical stages of the motion picture value chain, i.e. production, distribution, and exhibition (Eliashberg et al., 2006). Digital technologies not only have the potential to reduce the cost of the film production process but also have a profound impact on the structural changes of the entire industry (Zhu, 2001). Moreover, due to the rapidly changing technological environment today, the relationship between artistic and technological vision is evolving (Simon et al., 2015).

The impact of technological innovations on the development of the audiovisual industry has been the subject of some studies, especially as regards subscription-based video-on-demand (SVOD) service providers (Feigenbaum, 2021; Governo et al., 2017; Souza & Romero, 2021; Voigt et al., 2017). In particular, researchers analysed the impact of new technologies on cinema attendance (Silver & McDonnell, 2007), the disruption of independent film distribution by new digital technologies (Kehoe & Mateer, 2015), the expected progress of digitisation and their consequences for the value chain (Zhu, 2001; Schulz et al., 2021), or the criteria for evaluating the innovativeness of an independent film production company in the European film market (Vitkauskaitė, 2023). Research on the impact of innovation has also been conducted in other creative sector industries. For example, Sandqvist (2015) studied changes in the video game market, concluding that innovations and business models have fundamentally changed how many game companies finance and market their games.

The popularity of green innovations has recently increased, too. Since the end of 2021, European institutions have begun to develop intervention models in favour of the implementation of green practices in work processes along the entire audiovisual supply chain (D'Urso, 2022). Second, green innovations are now recognised as an increasingly important aspect of economics and strategic management aimed at minimising environmental damage and degradation (Lupu et al., 2023). Although it is traditionally assumed that environmentally friendly technology is relatively more expensive, green innovations can be profitable in the long term. Implementing techniques to enhance the quality

of resources can provide numerous benefits, including increased productivity and cost-effectiveness in media production (Shu et al., 2022).

As indicated by SLR, some authors have addressed the issue of business models in the film industry. Most of them analysed changes in film distribution models caused by streaming platforms. Governo et al. (2017) provided a new market overview of how distinctive media platforms are leveraging each other features as part of their business model. Clement et al. (2020), in turn, focused on the fundamental shift in traditional distributors' business models threatened by the market entry of global SVOD services. Other authors specifically used the example of Netflix. Voigt et al. (2017) described Netflix as a business model pioneer presenting its founders, market demand, business model and perspectives. Daidj and Egert (2018) discussed the evolution of Netflix's business models in the French online streaming video services market. They concluded that Netflix's cooperative practices in France have developed despite fierce competition. More recently, Souza and Romero (2021) analysed strategic approaches by Netflix to explain its business success and demonstrate its technology and business development. Their article emphasised the main aspects of the company's strategy for innovation based on the development of purpose-made algorithms working to map the streaming user's preference. Another group of researchers discussed the issue of business models in the context of specific film markets. Goritsas and Tiwary (2019) analysed the situation in the Australian market using the example of Matchbox Pictures. Oguamanam (2020) described the Nollywood phenomenon, while Feigenbaum (2021) concentrated on Hollywood's changing business model and the future of cultural diversity. The dilemma of current business models in the Japanese film market was discussed by Kim and Yamashita (2022). Finally, D'Urso (2022) focused on the green transition of the audiovisual industry and its potential impact on new film business models. However, SLR indicates no current studies on the factors influencing the change in film business models. This confirms that our article complements the existing research gap in this area.

Research methods

Semi-structured interviews

First, we used semi-structured interviews with experts representing three sectors of the film industry: production, distribution, and exhibition (Kim & Yamashita, 2022). Like any Delphi study, our approach employed a purposive sampling technique that selects respondents based on objective profession-related criteria, considering experts' job positions, years of experience in the field, etc. (Bolger & Wright, 2017). Each interview lasted about an hour and consisted of open-ended questions.

Systematic literature review

Then, we additionally applied a systematic literature review (SLR) (Carrera-Rivera, 2022; Snyder, 2019). Considering its results with answers obtained during semi-structured interviews, we identified the main adaption factors of current film business models. Studies for SLR were collected by searching various databases from December 2022 to December 2023: Scopus, Web of Science (WoS), and additionally Google Scholar. The search within titles, abstracts and keywords employed the following search of terms: (film OR movie OR motion picture) AND (business model) AND (factor OR determinant). We included peer-reviewed articles, book chapters and conference proceedings in English, excluding low-quality and non-English studies. For this purpose, only works by recognised publishers were considered: Elsevier, Taylor & Francis, Emerald Group Publishing, Springer Nature, Wiley, Oxford Univ Press and Cambridge Univ Press. Since 2017, there has been a noticeable increase in interest in this topic. Thus, works from the last seven years were considered. The search was narrowed to Business, Management and Accounting; Economics, Econometrics and Finance; Social Sciences (Scopus) and Business Economics (WoS). Finally, the titles of journals and conferences were reviewed, and any duplicates in the different searches in the selected databases were identified. Thanks to this, it was possible to narrow the research sample to 487 documents.

Then, we filtered studies in two stages. The first consisted of reading the title and abstract while applying inclusion criteria. Thus, 464 papers that did not directly refer to the selected keywords were

excluded from the sample. The second stage included full-text reading while applying both inclusion and exclusion criteria. Only these nine studies that were relevant to our subject and entailed scientific rigour were included. After using the snowball technique, this number was increased to 16 documents. However, it is essential to note that none of these are strictly related to the factors influencing the adaption of film business models. Based on the scattered subject literature, it was only possible to identify selected factors shaping film business models. SLR shows that our article is the first up-to-date study focusing on identifying factors influencing the change of business models in the film industry.

Computer-assisted web interview

Finally, we constructed a survey questionnaire targeting a further group of experts. On this basis, we conducted the CAWI survey (Kagerbauer et al., 2013) with 11 respondents who agreed to participate in the study. The study questionnaire was prepared using Microsoft Forms®, and the appropriate link was available to all study participants. In selecting participants for the study, we followed the “professionalism” method (Schulz et al., 2021). The expert group included representatives from distributors, production managers, producers, trade journalists, directors, and academics (Mauksch et al., 2020) who studied the film sector associated with the Polish film school. First, respondents were asked to rate the relevance of five groups of factors: social, technological, economic, environmental, and political. Then, they had to rate the relevance of pre-defined factors from each group separately on a scale from 0 (no effect) to 5 (strong effect). Finally, they had to identify the likelihood of each group of factors influencing the changes in the film business models in the coming years on a scale from 0 (very unlikely) to 10 (very likely). Such an approach enabled us to create a ranking of factors divided by strength (most significant and most minor influence) and thus identify the relationship between the film business model and the factors that influence or may influence its shape in the foreseeable future.

Results of the research

With the scope of this study in mind, we will now focus on providing a more detailed description of only two groups of adaption factors for film business models in the following section of this article. Wanting to determine the role of technological and environmental factors in shaping ongoing business model adaption changes, we asked experts from the film industry about these factors’ role and importance. They emphasised the importance of technological aspects, including the emergence of streaming platforms and comprehensive access to the Internet. They highlighted that the development of technology that allows watching films to stream has caused a partial outflow of viewers from the cinema.

“The large American studios (majors), which produced and focused mainly on cinema, started building and popularising their streaming platforms”. At the same time, “platforms could make a wide range of offers for viewers because they store large amounts of data on high-capacity servers, disks, and databases”.

Experts also discussed the importance of home cinema and cinema projection technology, which can impact the cinema industry.

“Currently, practically everyone in the comfort of their home can achieve a technical level comparable to the smallest rooms in niche cinemas”. Still, “the large theatres offer various experiences using the latest technology”.

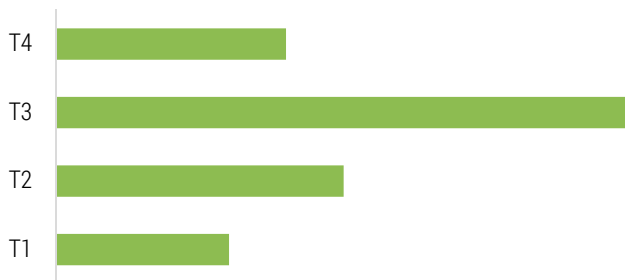
Experts were much more reserved in their statements regarding environmental aspects that may contribute to changes in the film industry. They mainly pointed to the role of film in promoting ecological awareness or transmitting values through film stories. However, they did not indicate the unambiguous impact of environmental factors on choosing and shaping the film distribution process.

As noted earlier, the relevant subject literature is scattered. SLR revealed no up-to-date studies on the adaption factors of business models in the film industry. Moreover, most publications concentrate on the technological aspects of film industry development, ignoring environmental ones. Thus, semi-structured interviews and SLR gave us only a basis to identify four technological and four environmental factors (Table 1). The CAWI survey enabled us to specify their importance further.

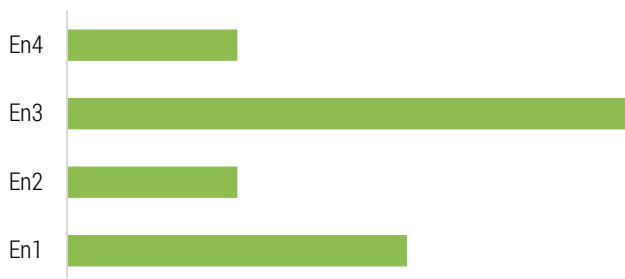
Table 1. Technological and environmental factors considered in this study

Factor	Symbol	Description
Technological	T1	home cinema technology
	T2	the technology used for cinema screening
	T3	Internet access
	T4	capacity and availability of servers, disks, and databases in use
Environmental	En1	the carbon footprint of post-production and cinema broadcasting
	En2	the carbon footprint of streaming distribution
	En3	social ecology
	En4	green certificates for streaming platforms

Our research reveals that of the five groups of factors analysed, experts considered technological factors to be of medium importance (third place after social and economic factors) and environmental factors to be the least significant (fifth place in the ranking). Considering only technological factors, 82% of respondents pointed to Internet access as the most essential technological aspect influencing changes in film business models. According to the experts who participated in our research, the other three analysed factors were much less significant (Figure 1).

**Figure 1.** The most significant technological factors influencing changes in the film business models

Among environmental factors, in turn, respondents considered social ecology (73% of responses) and the carbon footprint of post-production and cinema broadcasting (27% of responses) as the most critical determinants of the ongoing changes in the film models (Figure 2).

**Figure 2.** The most important environmental factors influencing changes in the film business models

At the same time, the respondents rated the strength of the impact of each of the analysed factors on the problem in question on a scale from 0 to 5, where 0 means no effect and 5 means a strong impact. On average, the strength of the factors earlier regarded as the most important (T3 and En3) was once again rated as the greatest. Figure 3 shows the average rating of the impact of each analysed factor on the change of the film business model against the weighted average rating of the strength of

the effect of these factors for both groups analysed. The experts in part one of the survey determined the importance of the analysed factors, and the weighted average was calculated based on this relevance. The highest and lowest weights were assigned to the most and least important factors.

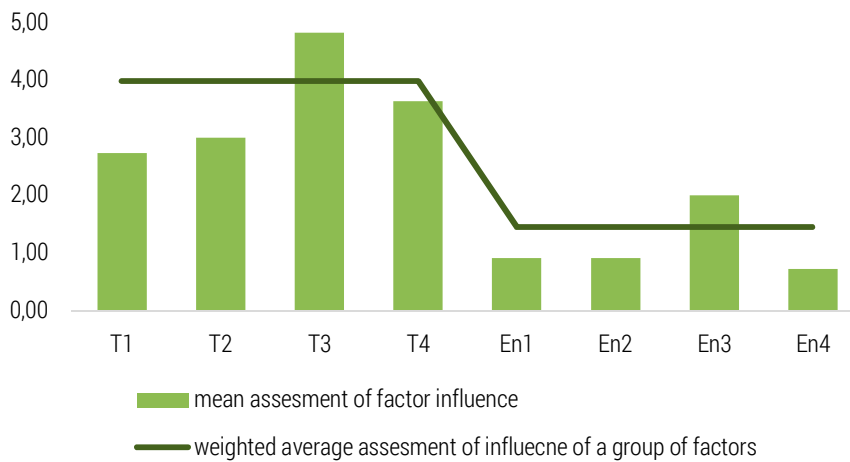


Figure 3. The strength of the influence of individual adaption factors on the change of the film business model in Poland by group

Finally, experts assessed the likelihood that in the coming years, the film business models will further change because of changes in technological or environmental factors. Considering five groups of factors, including social, economic, and political factors, the probability for technological factors was medium, and for environmental factors, it was low.

Discussion

The film industry has traditionally been regarded as something other than a high-tech business. However, recent advances in digital technology, especially the Internet, are transforming the film industry (Zhu, 2001). The development of media technology has had a significant impact on the film sector, giving us an idea of how consumer behaviours have changed the entire market, where the new streaming platforms, such as Netflix, Amazon Prime, or Disney+, have become both distributors and producers (Lazzeretti, 2022). Disruptive innovations do not completely anticipate and replace the traditional way of doing business, but they involve redefining how content is delivered to customers. This means that the cinema industry will not disappear but must reinvent itself (Salvador et al., 2019).

Online streaming services are challenging long-standing decision-making processes in the traditional motion picture industry, so even significant studios must rebuild their business models and seriously rethink strategic decisions on which films to produce and how to distribute them. Compared with traditional cinemas, digital platforms are more efficient in aggregating and matching demand and supply (Bhargava & Choudhary, 2004). Near-limitless online storage capabilities of streaming data centres allow for large film catalogues that consumers can access at their convenience at any time and on any device (Aguilar & Waldfogel, 2018). Thus, cinemas and streaming services should closely monitor new technological developments since their success is based mainly on changing consumer habits due to technology. The latter are especially vulnerable to newer technologies and potential competitors or substitutes than traditional studios (Hadida et al., 2021). As the results of our research show, the film community is aware of the importance of technological factors in shaping new film business models. Our respondents pointed at Internet access as the critical factor that may affect the film industry soon, confirming the validity of the above arguments.

At the same time, creative industries in the world still need to adapt to changing business models to achieve climate change goals designed to minimise further environmental deterioration (Guo et al.,

2022). The pollution figures for which the film industry is responsible speak for themselves. The movie industry is reported as one of the most significant contributors to the carbon footprint (Meilani, 2021). An average blockbuster with a budget of over US\$70m generates 2,840 kg of CO₂ per production, the equivalent amount absorbed by 15,010 square meters of forest in a year (Arup, 2020). At the same time, tentpole productions have an average carbon footprint of about 33,000 kg per shooting day, which equates to more than one person's annual carbon footprint. About half of emissions are estimated to be linked to transport and fuel consumption, with 30% of that accounted for by air travel. The rest is due to energy consumption, with 34% of the average blockbuster's CO₂ emissions going on mains electricity and gas and 15% on diesel generators (Arup, 2020). Yet, the negative environmental impacts of film production are not limited to fuel and energy consumption or air transport. They also include such aspects as set waste management or usage of makeup, textile, and plastic disposables (Noor, 2023). These data are restricted solely to film production and do not account for later stages in a film's life cycle, such as distribution. They also exclude additional post-production and streaming emissions.

The presented study shows that technological change is an enabling factor for changes in the film industry. The question is how and for what purpose these technological innovations will be used. The experts interviewed did not indicate that the use of new technologies is driven by a desire to protect the environment. At the same time, survey respondents stated that the factors implying the development of streaming platforms, i.e., broad access to the Internet and the ability to store digital data, are significant for changing the film market situation. Still, green certificates for streaming platforms are irrelevant from the perspective of further changes in the industry's business model from their point of view. It shows that the motives for popularising streaming platforms are other than ecological.

Recently, some studios, production houses and suppliers have considered being more resource-efficient by employing eco-consultants, recycling waste, or using electric vehicles, LED lighting and battery-powered generators (Lee & Choeh, 2020). However, although we may notice a gradual shift towards reducing the negative environmental impact of the film industry (KZN Film Commission, 2017), our research suggests that environmental factors are not yet significant enough to be a sufficient reason to change the business model. One of the reasons for such a situation is that sustainable film production and distribution still needs to be a clear-cut concept. In contrast, the social responsibility for emissive film emissions is blurred. The screen sector also has to cope with the difficult task of balancing environmental responsibility with market-based logic and the cultural rationales for national cinema.

Moreover, the environmental impacts of film components such as equipment have yet to be thoroughly investigated, and there are no shared systems for auditing and reporting. At the same time, few formal policies are widely recognised or adopted (Sørensen & Noonan, 2022). Consequently, one of the biggest obstacles to the greener film industry is the lack of proper tools. New certification schemes and green production guide toolkits are indispensable, as you can't manage what you don't measure.

Regarding film production and distribution, environmental actions should be concentrated on reducing the carbon footprint, limiting waste, or minimising transport and energy consumption. In 2022, the first Green Distribution Workshop was organised by Europa Distribution – the international association of independent film publishers and distributors, created in 2006. During this workshop, participants contributed to creating a set of good practices to make business strategies, office work, and travel organisations more environmentally friendly. On the one hand, there are efficient and everyday practices that distribution companies can implement: encouraging smart working, setting clear green standards in offices, and pushing for more eco-friendly travel whenever possible. In addition, it was pointed out that cooperation with exhibitors can also help design conscious marketing campaigns and reach audiences interested in the topic. The third aspect is related to the industry's specificity, as the media's role is of fundamental importance for environmental protection. As curators, distributors can significantly impact the public debate by selecting films that address environmental issues (Abbatascianni, 2022). In this context, there seems to be a need to attract the audience's attention to demand a green policy for the audiovisual industry (Jiménez-Morales & Lopera-Mármol, 2022). Distributors aware of the growing environmental awareness may also increase their interest in green certificates or social ecology, as they are concerned with the meanings generated by films and the circuits in which this takes place: from festivals to blogs. The first good practices are emerging, and progress is being observed in climate protection activities in the film industry, but

the pace of these changes still seems unsatisfactory. If the film industry is to become more eco-friendly, more research must be done to inspire innovations that bridge the gap between art and environmental healing.

The presented article provides the first research on the importance of technological and environmental factors in the context of innovation and strategic management in the film industry. Yet, as with any research, our study also has limitations. First, our surveys were conducted with a limited number of experts who agreed to participate in the study. Moreover, Delphi's methods are based on the opinions and beliefs of individual people and thus are subjective (Barrett & Heale, 2020). Then, the findings of SLR depend on the researchers' choice of, for example, searched keywords, the language of the scrutinised texts, and the selection of databases. All these, in turn, affect the quality of the study. In our case, it impacted the number and type of factors identified for the conducted analysis. Consequently, in the CAWI survey, we analyse only a limited, pre-defined number of adaption factors of film business models, thus limiting some of our conclusions to these specific factors only (Orankiewicz & Bartosiewicz, 2023).

Conclusions

The changes in the audiovisual sector determine the shaping of pro-ecological values in society, which impact the development of the entire economy. It takes place both in the product dimension, i.e., the values conveyed through the film's content, and in the process dimension, defining a new approach to film production and distribution business models.

The article aimed to examine the role of technological and environmental factors in current changes in film business models. The intended goal was achieved by defining technological and environmental factors that may impact the development of film business models and then determining their strength of influence on decisions regarding model changes. This approach eliminates the existing research gap, especially as SLR revealed that there are no up-to-date studies on the adaption factors of business models in the film industry, while most publications concentrate on the technological aspects of film industry development, still ignoring environmental ones.

There are different types of innovation in the audiovisual sector, but not all align with environmental considerations. Our research indicates that technological factors have a more significant impact on changes in the film industry model than environmental factors. Moreover, while technological factors supported by social and economic changes substantially affect the model, environmental factors are of minor importance, although noticeable.

It should be emphasised that technological innovations only sometimes support changes aimed at protecting the environment. Although, as in the case of streaming, at first glance, they promote ecological activities, on closer inspection, they also negatively impact the environment. The lack of clarity about the carbon costs associated with audiovisual production and distribution and the hidden environmental costs spread over different locations makes environmental issues not appear to be an "industry issue" (Orankiewicz & Bartosiewicz, 2023).

To conclude, technological (Chapain & Stryjakiewicz, 2017) and environmental (Hu et al., 2022) factors may be the main drivers of the ongoing and already visible innovation changes in the film industry, but only if innovation is implemented in a business model will it go together with a broader look at its environmental impact context. Therefore, these factors must be equally noticed in reconstructing the business model. In this way, they can influence the strategic management of film distribution companies in an increasingly competitive market (Genis-Gruber & Ögüt, 2014) and promote the industry's sustainable development.

The contribution of the authors

Establishing the concept, A.O. and A.B.; establishing research methods, A.O. and A.B.; creating text, A.O. and A.B.; analytical description of the phenomenon, A.B.; implementation of the research idea, A.O.; critical assessment, A.O.; data collection, A.O. and A.B.; data analysis and interpretation, A.B.; development of research results, A.B.; review of the literature, A.O. and A.B.

The authors have read and agreed to the published version of the manuscript.

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TECHNOLOGICZNE I ŚRODOWISKOWE CZYNNIKI ZMIAN W MODELU BIZNESOWYM. PERSPEKTYWA PRZEMYSŁU FILMOWEGO

STRESZCZENIE: Artykuł jest pierwszym opracowaniem poświęconym badaniom znaczenia czynników technologicznych i środowiskowych w kontekście innowacji i zarządzania strategicznego w branży filmowej. W badaniu wykorzystano wywiady częściowo ustrukturyzowane, systematyczny przegląd literatury oraz wywiad internetowy wspomagany komputerowo (CAWI). Po pierwsze, na podstawie wywiadów i systematycznego przeglądu literatury, zidentyfikowano po cztery najważniejsze technologiczne i środowiskowe czynniki adaptacyjne filmowych modeli biznesowych. Następnie, na podstawie wyników badania CAWI, wskazano, że czynniki technologiczne wspierane zmianami społeczno-gospodarczymi w istotny sposób wpływają na modele biznesowe dystrybucji filmów, podczas gdy czynniki środowiskowe mają zauważalne, jednak mniejsze znaczenie. Jak każde badanie, również i to ma ograniczenia. Badania ankietowe przeprowadzono z ograniczoną liczbą ekspertów, którzy zgodzili się wziąć udział w badaniu, a wyniki systematycznego przeglądu literatury zależą od wyboru przez badaczy wyszukiwanych słów kluczowych, języka analizowanych tekstów oraz doboru baz danych.

SŁOWA KLUCZOWE: branża filmowa, modele biznesowe, częściowo ustrukturyzowane wywiady, systematyczny przegląd literatury, CAWI