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The Economic and Cultural Impacts of Digitalization on the Film Industry

Research Article

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Article Info	ABSTRACT
Received: 13.03.2025 Accepted: 05.06.2025 Published: 30.06.2025 Keywords: Digitalization in film industry, platform capitalism, streaming services and cinema.	Digitalisation has fundamentally transformed the production, distribution, and consumption processes within the film industry, generating new economic and cultural dynamics. Traditional analogue technologies have largely been replaced by digital encoding, AI-based content recommendation systems, and online streaming platforms, resulting in reduced production costs and significantly enhanced global accessibility to content. International platforms such as Netflix, Amazon Prime, and Disney+ leverage user data analytics and artificial intelligence-driven recommendation systems to personalise content delivery, thereby establishing a new, data-driven business model referred to as 'platform capitalism'. While these developments have created unprecedented opportunities for independent filmmakers to achieve global visibility, they have simultaneously led to increased market consolidation and strengthened the economic dominance of major media corporations, raising concerns related to monopolisation and standardisation of content. Additionally, the preference of digital platforms for data-driven, audience-oriented production tends to amplify the prevalence of popular mainstream content, potentially marginalising independent and alternative cinema. Consequently, smaller and niche productions risk being overshadowed, limiting their accessibility to diverse audiences. Furthermore, digitalisation has introduced significant technological innovations, reshaping not only distribution methods but also the creative dimensions of film production. Integrating artificial intelligence into scriptwriting, casting, and post-production has considerably reduced costs and increased efficiency; however, this algorithmic approach also provokes critical discussions concerning the ethical implications and potential erosion of artistic originality. Moreover, emerging technologies such as virtual reality (VR), augmented reality (AR), and the metaverse hold substantial potential for reshaping cinematic experiences, fundamentally altering audienc

Dijitalleşmenin Sinema Endüstrisi Üzerindeki Ekonomik ve Kültürel Etkileri

Makale Bilgisi	ÖZET
Geliş Tarihi: 13.03.2025 Kabul Tarihi: 05.06.2025 Yayın Tarihi: 30.06.2025 Anahtar Kelimeler: Film endüstrisinde dijitalleşme, platform kapitalizmi, yayın platformları ve sinema.	Dijitalleşme, sinema endüstrisinin üretim, dağıtım ve tüketim süreçlerini köklü biçimde dönüştürerek yeni ekonomik ve kültürel dinamikler yaratmıştır. Geleneksel analog teknolojilerin yerini dijital kodlama, yapay zekâ tabanlı içerik öneri sistemleri ve çevrimiçi platformlar almış; bu dönüşümle birlikte prodüksiyon maliyetleri azalırken içeriklerin küresel ölçekte erişilebilirliği artmıştır. Netflix, Amazon Prime ve Disney+ gibi küresel platformlar, kullanıcıların izleme alışkanlıklarını ve tercihlerini analiz ederek içerik üretimini veri odaklı hale getirip kişiselleştirilmiş öneri sistemleri sunmuş, bu süreç "platform kapitalizmi" olarak adlandırılan yeni bir ekonomik modeli ortaya çıkarmıştır. Bu yeni dijital ekonomi, bağımızı sinema üreticileri için daha önce mümkün olmayan küresel görünürlük firsatları yaratsa da, aynı zamanda büyük medya şirketlerinin ekonomik gücünün pekişmesine ve pazar üzerindeki kontrollerinin artmasına neden olmuş, bu durum tekelleşme eğilimlerini beraberinde getirmiştir. Ayrıca içeriklerin giderek kişiselleştirilmesi ve izleyici taleplerine uygun hâle getirilmesi, film endüstrisinde özgün içeriklerin azalması ve kültürel üretimin standartlaşması riskini artırması, popüler içeriklerin daha çok üretilmesine, bağımsız ve alternatif filmlerin ise arka planda kalmasına yol açabilmektedir. Dijitalleşmenin getirdiği teknolojik yenilikler yalnızca dağıtım ve tüketim süreçleriyle sınırlı olmayıp üretim aşamalarında da kapsamlı değişikliklere yol açmıştır. Yapay zekânın senaryo geliştirme, oyuncu seçimi ve post-prodüksiyon süreçlerine entegre edilmesi, maliyetleri düşürüp üretim süreçlerini hızlandırmış; ancak yaratıcı özgünlüğün algoritmalara indirgenmesi konusunda etik ve sanatsal tartışmalara zemin hazırlamıştır. Öte yandan VR, AR ve metaverse gibi yeni medya teknolojilerinin sinemada kullanımı, izleyicilerin gerçeklik biçimlerinin yaşıması, sanatsal ifade biçimlerleri etişeişmi sağlama potansiyeline sahiptir. Bu yeni gerçeklik biçimlerinin ve sinemat tiketimini radikal biçimde yeniden şek

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INTRODUCTION

Over the last thirty years, digitalization has led to profound and extensive transformations in the fields of media and communication. One of the sectors at the core of this transformation is the film industry, which has undergone significant changes from production to distribution, as well as in consumption practices and economic structures (Zengin, 2018; Erdoğan, 2023). The replacement of traditional analog technologies with digital encoding and distribution systems has reduced production costs, diversified production opportunities, and enabled the rapid global dissemination of content (Prince, 2002). In particular, the emergence of Internet-based digital platforms such as Netflix, Amazon Prime, and Disney+ has radically altered audience habits and reshaped the economic dynamics of the film sector (Başer & Söğütlüler, 2023; Zuboff, 2019).

To conceptually interpret the transformation brought about by digitalization, it is useful to draw on Baudrillard's (1981) theory of "simulation and hyperreality," Zuboff's (2019) conceptualization of "platform capitalism," and Hesmondhalgh's (2019) "cultural industries" approach. According to Baudrillard, digital technologies blur the boundaries of reality, transporting the viewing experience into a hyperreal realm (Arda & Akyol, 2020). Zuboff underscores the emergence of a new capitalist model in which digital platforms analyze user data to guide both the production and consumption of content. Within the framework of cultural industries, Hesmondhalgh (2019) asserts that digitalization reinforces economic consolidation and global competition dynamics. Taken together, these three perspectives enable a comprehensive examination—economically, culturally, and technologically—of the digital transformation occurring in the film industry.

In the context of Turkey, the digitalization process has brought about radical transformations in cinema theater operations, film production, and distribution practices (Erkılıç & Duruel-Erkılıç, 2021). Notably, during the COVID-19 pandemic, the closure of movie theaters rendered digital platforms the primary bridge between audiences and film producers, substantially altering the traditional business model dependent on theater revenues (Başer & Söğütlüler, 2023; Yüksel, 2022). Although this situation has created opportunities for independent films and local content to enter global circulation, it has also fueled debates on issues such as monopolization, standardization, and platform dependence in the sector (Hesmondhalgh, 2019; Özen & Çelenk, 2006).

The new competitive conditions brought by digitalization have generated different strategies for independent and major producers. While independent productions have gained the opportunity for global visibility, major studios (e.g., Disney, Netflix) have increased their investments in content and strengthened their brand dominance through global platforms (Erdoğan, 2023; Zengin, 2018). Nevertheless, the transformation of content production processes into algorithmic models under platform capitalism raises concerns about the standardization of cultural and artistic production (Hesmondhalgh, 2019; Horkheimer & Adorno, 2002 [1947]).

This study aims to examine various facets of how digitalization is reflected in the film sector, including economic transformation, cultural production and consumption practices, competition between independent filmmakers and major studios, the position of local platforms in international markets, and the potential effects of future technological developments on the industry. The central research question is to determine what kinds of transformations digital platforms and innovative technologies (artificial intelligence, VR, metaverse) have brought about in the economic and cultural structure of the film industry. Throughout the study, both theoretical frameworks and empirical data will be employed to provide a comprehensive assessment of the current impact of digitalization on the film sector and potential scenarios for the future.

DIGITALIZATION AND THE FILM INDUSTRY

The Definition of Digitalization and Its Relationship with Cultural Economy

Digitalization refers to the transition from analog formats to digital encoding and data processing methods, representing not merely a technological renewal but also prompting profound changes in social, economic, and cultural dynamics (Baudrillard, 1981; Benjamin, 2013). Zuboff (2019) underlines that digitalization, which gained momentum particularly through microelectronic and information revolutions in the late 20th century, has restructured economic and social frameworks. In the film industry, this transformation manifests itself in the conduct of production, distribution, and exhibition processes via digital platforms, as well as in changes to audience content consumption patterns (Erdoğan, 2023; Yüksel, 2022).

Hesmondhalgh (2019) notes that digitalization has engendered a comprehensive reorganization of media industries, ranging from production processes to market strategies. A comparable shift has been observed in the sports sector. Urganoğlu and Koçyiğit (2023) investigated how digitalizationinvolving vehicle simulators, artificial intelligence, and data analytics-affects strategy development processes in Formula 1. Because physical testing in Formula 1 is both costly and limited, digital simulations have become increasingly crucial, enabling data-driven decision-making in race strategies (Urganoğlu & Koçyiğit, 2023). Similarly, in the film industry, digitalization has introduced transformations such as AI-based content creation and recommendation systems relying on audience data. Accordingly, the digital transformation of the film industry can be examined from technological, cultural, and economic perspectives. Technologically, traditional film equipment has been replaced by digital cameras, computer-based editing systems, and cloud-computing-supported distribution networks (Prince, 2002; Zengin, 2018). Culturally, audiences have shifted from passive consumers to more active participants in content production and distribution through social media and online platforms (Arda & Akyol, 2020; Atmacaoğlu, 2021). Economically, traditional business models dependent on box-office revenues have been supplanted by digital revenue models such as subscriptions, advertising, and videoon-demand (VoD) (Başer & Söğütlüler, 2023).

The concept of "cultural economy" explains how cultural products circulate as commercial commodities shaped by capital dynamics (Horkheimer & Adorno, 2002 [1947]; Hesmondhalgh, 2019). With digitalization, large media corporations' shift toward platform-based business models not only exacerbates tendencies toward monopolization but also influences global competitive structures (Erdoğan, 2023). Zuboff's (2019) concept of "platform capitalism" highlights how digital platforms transform user data into economic value, underscoring the importance of understanding how content production processes are directed within the film industry (Atmacaoğlu, 2021).

While digital platforms enhance the global visibility of independent productions by reducing distribution costs, the economic strategies developed by major media companies consolidate power around certain platforms in the sector (Zengin, 2018; Anadolu, 2020). In Turkey, local platforms such as BluTV, Exxen, and Gain have embraced "glocal" content strategies to compete with global players like Netflix and Disney+ (Yüksel, 2022; Erdoğan, 2023). However, this competitive environment also introduces risks of monopolization and standardization in content production (Başer & Söğütlüler, 2023).

In conclusion, digitalization has transformed the film industry technologically, culturally, and economically, reshaping production, distribution, and consumption practices. Yet, tendencies toward monopolization, data privacy concerns, and the shaping of content production by commercial imperatives remain central to critical debates about the future of the industry (Zuboff, 2019; Erdoğan, 2023).

The Emergence and Proliferation of Digital Platforms

The rise of digital platforms has fundamentally transformed traditional production and distribution systems within the film industry. The development of internet-based broadcasting accelerated notably in the late 2000s with the increase in bandwidth and improvements in data transfer speeds (Erdoğan, 2023). Platforms such as Netflix, Amazon Prime Video, and Disney+ have moved beyond physical media and theater-based distribution models, thereby creating new viewing habits (Zuboff, 2019). In Turkey, local platforms like BluTV, Gain, and Exxen have focused on producing localized content to compete with global players (Yüksel, 2022).

Netflix began operating in 1997 using a DVD rental model and transitioned to online broadcasting in 2007, thus expediting the industry's transformation (Hesmondhalgh, 2019). Its subscription-based business model offers consumers online access to content without purchasing physical copies, thereby altering viewing practices. In traditional distribution models, a film would first screen in theaters and then be released on DVD or television (Başer & Söğütlüler, 2023). However, with the rise of digital platforms, these intervals have significantly shortened, and simultaneous release strategies have become widespread (Erkılıç & Duruel-Erkılıç, 2021).

Digital platforms have enabled not only large-budget productions but also independent films to reach broader audiences (Zengin, 2018). Yet their content recommendation systems can direct users toward specific genres, giving rise to a risk of homogenization in viewing preferences (Atmacaoğlu, 2021).

Competition between movie theaters and digital platforms underwent a major transformation particularly during the pandemic. Throughout the COVID-19 period, many major productions were released directly on digital platforms, threatening the financial sustainability of movie theaters (Erdoğan, 2023). In response, theaters have embraced innovative technologies such as IMAX, 4DX, and VIP auditoriums to remain competitive (Başer & Söğütlüler, 2023).

In conclusion, the rise of digital platforms has reshaped new economic models and audience habits in the film industry. While this development has broadened global access for independent productions, it has also strengthened the market dominance of large media companies (Özen & Çelenk, 2006; Zengin, 2018).

The Impact of Digitalization on Film Production and Distribution Processes: Industrial Transformation and New Dynamics

Digitalization has led to profound changes in the production and distribution processes of the film industry, creating both new opportunities and challenges for major studios and independent filmmakers alike. Digital filmmaking techniques have replaced analog processes, reducing production costs while increasing global accessibility (Zengin, 2018; Anadolu, 2020).

In the production phase, digital cameras and computer-assisted editing systems have accelerated filmmaking processes and reduced costs. High-resolution digital sensors, which have replaced traditional analog cameras, provide greater flexibility in post-production and eliminate the need for physical film stock (Prince, 2002). Digital effects technologies such as Computer-Generated Imagery (CGI) and Visual Effects (VFX) are no longer exclusive to big-budget productions; they have also become accessible to independent filmmakers, thereby expanding visual storytelling possibilities (Özen & Çelenk, 2006). Additionally, green screen and motion capture technologies, which were once monopolized by major studios, have become widespread, enabling broader access to advanced visual effects (Hesmondhalgh, 2019).

The impact of digitalization extends beyond production processes and has also led to major

transformations in film distribution. Traditionally, films were first released in movie theaters before being distributed via DVD, Blu-ray, or television broadcasts (Başer & Söğütlüler, 2023). However, with the rise of digital platforms, this windowing system has undergone a radical shift (Erdoğan, 2023). Today, many films are released simultaneously in cinemas and on digital platforms or become available online shortly after their theatrical release (Erkılıç & Duruel-Erkılıç, 2021).

Online platforms have now become the dominant actors in film distribution, creating both new opportunities and competitive pressures for major studios and independent producers. Streaming services such as Netflix, Amazon Prime, Disney+, and BluTV now directly compete with movie theaters and, in many cases, have begun to acquire exclusive rights to premieres, effectively bypassing traditional theatrical distribution (Başer & Söğütlüler, 2023). The COVID-19 pandemic further accelerated this process, increasing the prevalence of simultaneous release models and significantly impacting cinema revenues (Erdoğan, 2023).

Digitalization has not only transformed the distribution of major productions but has also provided global visibility for independent cinema. In traditional distribution models, independent films were often limited to screenings in select theaters, whereas digital platforms have allowed them to reach audiences worldwide (Zengin, 2018). Online film festivals and digital film markets have created new mechanisms that enhance the international visibility of independent productions (Anadolu, 2020). However, this shift has also strengthened the position of major digital platforms as gatekeepers in content distribution, raising concerns about the influence of algorithms in shaping audience preferences (Atmacaoğlu, 2021).

The impact of digitalization on the film industry is not limited to technical and economic transformations. When evaluated within Walter Benjamin's (2013) concept of the "mechanical reproduction of art," digital film production introduces new dynamics that challenge the notion of artistic authenticity. Although the ability to reproduce films infinitely in digital formats has facilitated their global circulation, commercial considerations have increased the risk of content standardization (Horkheimer & Adorno, 2002 [1947]).

In conclusion, digitalization has introduced a new paradigm in the film industry by offering speed, cost advantages, and global accessibility (Benjamin, 2013; Erdoğan, 2023). However, this transformation has also given rise to monopolization, platform dependency, and the homogenization of content production (Zuboff, 2019). The opportunities and challenges presented by digitalization remain critical factors shaping the future of the film industry.

THEORETICAL FRAMEWORK

To comprehensively analyze the impact of digitalization on the film industry, multiple theoretical approaches must be considered together. Cinema is not only an artistic and cultural domain of production but also a sector shaped by industrial and economic dynamics. Therefore, examining the changes brought by digitalization—ranging from film production to distribution, audience habits, and transformations in economic structures—requires a multidimensional theoretical framework (Hesmondhalgh, 2019; Özen & Çelenk, 2006; Zengin, 2018).

Three fundamental theoretical approaches emerge in this context. The first is the cultural industries perspective, which conceptualizes cinema not merely as an artistic endeavor but also within the framework of capital dynamics, media ownership structures, and global market conditions (Hesmondhalgh, 2019). The second is the platform capitalism and digital economy framework, which examines the economic structure of digital platforms, data-driven content production processes, and new business models that challenge traditional distribution channels (Zuboff, 2019). The third is the consumer culture and hyperreality perspective, which evaluates the impact of digitalization on cinematic

aesthetics and audience experience, particularly through concepts such as virtual reality (VR), augmented reality (AR), and simulation (Baudrillard, 1981).

These theoretical frameworks provide a comprehensive lens through which to interpret the transformations in the film industry, encompassing the rise of digital platforms, shifts in film production processes, competition between independent productions and major studios, and the influence of artificial intelligence and emerging technologies on the sector.

Cultural Industries and Media Economy (David Hesmondhalgh)

Within the contemporary media ecosystem, where cultural production is deeply intertwined with economic and industrial dynamics, the film industry is regarded as a key component of the cultural industries (Hesmondhalgh, 2019). Cinema operates as both an artistic and commercial domain, shaped by the power relations between major media corporations and independent producers (Özen & Çelenk, 2006).

The impact of digitalization on the film industry has triggered a broad transformation spanning production and distribution processes. In particular, the rise of digital platforms has disrupted the traditional theater-based exhibition model, leading to the emergence of new business structures (Erdoğan, 2023; Zengin, 2018). Platforms such as Netflix, Amazon Prime, and Disney+ have reshaped content production and consumption through digital infrastructures, effectively aligning the film industry with the principles of platform capitalism (Zuboff, 2019).

Hesmondhalgh (2019) highlights the increasing capital concentration in cultural industries, analyzing how the growing market power of major media conglomerates influences competitive dynamics. For example, the Disney-Fox merger fostered both vertical and horizontal integration in media ownership structures, further constraining independent producers (Horkheimer & Adorno, 2002 [1947]).

On the other hand, digitalization has also created new opportunities for independent productions. Digital platforms provide alternative distribution channels for independent cinema, which traditionally struggled to access the distribution networks controlled by major studios (Zengin, 2018). However, these opportunities come with challenges, as algorithmic recommendation systems on digital platforms may prioritize certain genres while marginalizing others, thereby influencing audience preferences (Hesmondhalgh, 2019).

In conclusion, the cultural industries perspective offers a critical framework for evaluating the effects of digitalization on the economic structure and production processes of the film industry.

Platform Capitalism and Digital Economy (Shoshana Zuboff)

Digitalization has largely replaced traditional economic models with a new structure known as platform capitalism. Digital platforms are no longer merely content providers; they have evolved into entities that analyze user data and convert it into economic power (Zuboff, 2019).

Platforms such as Netflix, Amazon Prime, and Disney+ utilize artificial intelligence-based recommendation systems to analyze audience preferences, transforming content production into a datadriven process (Atmacaoğlu, 2021). For instance, Netflix's House of Cards was developed based on large-scale user data analysis, identifying elements that would attract specific audience segments (Lobato, 2019).

Platform capitalism has intensified monopolization trends within the film industry, positioning major digital platforms as dominant forces in content production (Erdoğan, 2023). This trend became particularly evident during the COVID-19 pandemic, when the closure of theaters led major studios such

as Warner Bros, Universal, and Disney to release their films directly on their own digital platforms, further weakening the traditional box office model (Erkılıç & Duruel-Erkılıç, 2021).

In conclusion, the platform capitalism model has transformed the film industry into an increasingly algorithm-driven economic system, shaping both production strategies and audience engagement.

Consumer Culture and Digitalization (Jean Baudrillard)

Baudrillard's concepts of simulation and hyperreality provide a crucial framework for understanding how reality is constructed in the era of digital cinema (Baudrillard, 1981). Today, CGI (Computer-Generated Imagery) and virtual production techniques have largely replaced physical reality in filmmaking, leading to the creation of fully digital cinematic worlds (Prince, 2002).

Major productions, such as those in the Marvel Cinematic Universe and Avatar, construct hyperreal cinematic universes, reshaping audience perception by blurring the distinction between the real and the artificial (Baudrillard, 1981). In this context, the growing prevalence of binge-watching, or continuous content consumption, is directly linked to Baudrillard's concept of consumer culture (Baudrillard, 1998).

Furthermore, digitalization has transformed cinema from a collective experience into an individualized mode of consumption. The emergence of metaverse-based and VR (Virtual Reality) cinema experiences is shifting traditional movie theaters into virtual spaces, redefining the relationship between the audience and the film (Yüksel, 2022).

In conclusion, Baudrillard's hyperreality framework serves as a critical lens through which to analyze the transformation of aesthetics and consumption practices within the digitalized film industry.

DIGITAL PLATFORM ECONOMY AND TRANSFORMATION IN THE FILM INDUSTRY

Digitalization has not only transformed the production and consumption practices of the film industry but has also restructured its economic models and business structures. Traditionally, the film industry generated revenue through theater-based distribution models, but the rise of digital platforms has radically altered this approach (Erdoğan, 2023; Hesmondhalgh, 2019). The expansion of platforms such as Netflix, Amazon Prime, and Disney+ has placed economic pressure on cinema theaters, forcing the industry to adapt to a new operational framework.

Digital platforms offer an alternative to the collective viewing experience of traditional cinemas by promoting individualized, flexible, and personalized content consumption models (Zengin, 2018). With Industry 4.0, technological advancements such as smart automation, big data, and artificial intelligence have not only contributed to economic growth but also disrupted traditional employment structures by eliminating certain roles (Karakaya, 2021). The increasing digitalization of production processes has fundamentally altered traditional business models, shaping the core dynamics of the new economic order. Algorithmic content recommendation systems and global accessibility strategies have positioned digital platforms as key actors in the film industry, rather than mere content providers (Zuboff, 2019). Thus, the structural differences between traditional cinemas and digital platforms have become one of the most critical forces driving transformation in the sector.

Transformation of Business Models and Economic Structures

For many years, movie theaters operated under an economic model based on ticket sales, concession revenue (e.g., food and beverages), and special screenings (Prince, 2002; Özen & Çelenk,

2006). However, digital platforms have introduced new business models, including subscription-based (SVOD), transactional video-on-demand (TVOD), and ad-supported (AVOD) models, fundamentally reshaping the revenue structures of the film industry (Başer & Söğütlüler, 2023).

Traditional movie theaters rely heavily on box office revenue, following revenue-sharing agreements with major studios (Prince, 2002). However, during the COVID-19 pandemic, many studios adopted a simultaneous release strategy, offering their films both in theaters and on digital platforms, significantly threatening the economic viability of movie theaters (Erdoğan, 2023). One of the most notable examples of this shift was Warner Bros' decision in 2021 to release all its major films on HBO Max simultaneously with their theatrical premieres (Hesmondhalgh, 2019).

Additionally, the windowing strategy, which refers to the traditional staggered release cycle of films (starting in theaters before moving to home entertainment and TV), has been disrupted. Previously, films were available only in theaters for a specific period before transitioning to physical media and television broadcasts. Today, this exclusivity period has significantly shortened, with some productions being released directly on digital platforms (Başer & Söğütlüler, 2023). These changes have significantly altered the distribution of revenue and audience habits within the film industry.

The Impact of Digital Platforms on Independent and Major Film Producers

Digital platforms have created both opportunities and challenges for independent filmmakers and major studios, generating new industry dynamics (Zengin, 2018). While independent productions often face limited access to theatrical distribution, digital platforms have provided them with a global audience reach (Hesmondhalgh, 2019). Platforms such as Netflix, Amazon Prime, and Mubi have enhanced the visibility of independent films through algorithmic discovery systems and broad distribution networks (Zuboff, 2019).

However, alongside these opportunities, certain limitations persist. Large digital platforms prioritize commercialized, high-demand content, often favoring productions with mass appeal over niche or experimental films. This content standardization poses a challenge for independent filmmakers, who may struggle to gain visibility (Horkheimer & Adorno, 2002 [1947]). For example, platforms such as BluTV and Netflix tend to exclude certain types of content that do not align with dominant audience preferences (Özen & Çelenk, 2006).

From the perspective of major studios, digital platforms reduce dependency on traditional box office performance by enabling direct-to-consumer distribution. Studios such as Disney, Warner Bros, and Universal have developed their own streaming services (e.g., Disney+, HBO Max) to retain greater control over distribution and maximize profitability (Yüksel, 2022). However, this shift has also intensified market concentration, reinforcing the dominance of large studios while increasing risks of monopolization and content homogenization within the industry (Erdoğan, 2023).

New Competitive Dynamics in the Global Film Market Brought by Digitalization

The impact of digitalization is not limited to local film markets; it has also fundamentally altered the nature of competition on a global scale. Traditionally, film screenings were restricted to specific geographical regions and time constraints due to the physical limitations of cinema theaters. However, digital platforms have eliminated these barriers, enabling films to be released simultaneously worldwide through flexible access models (Hesmondhalgh, 2019; Erdoğan, 2023).

Netflix, in particular, has leveraged an aggressive global expansion strategy, utilizing localized content production and algorithmic recommendation systems to attract large audiences across different regions (Zuboff, 2019). Similarly, Amazon Prime Video and Disney+ have diversified their content

strategies by targeting regional markets, thereby gaining a competitive edge in global distribution (Başer & Söğütlüler, 2023).

This transformation has had varied effects on local film industries. In countries like Turkey, platforms such as BluTV, Exxen, and Gain have sought to compete against global streaming giants by producing content tailored to national audiences (Yüksel, 2022). The strategy of "glocalization" has allowed these platforms to adapt global market trends while maintaining a localized production focus, thereby strengthening their position in international competition (Anadolu, 2020).

In conclusion, digitalization has reshaped the production and distribution strategies of the film industry, creating new economic dynamics that challenge traditional models. While digital platforms offer new opportunities for major studios and independent filmmakers, they also raise concerns regarding monopolization, content standardization, and economic sustainability (Hesmondhalgh, 2019; Zengin, 2018). As global competition continues to intensify, these dynamics will remain one of the most defining factors shaping the future of the film industry.

DIGITAL PLATFORM TECHNOLOGIES AND THE FUTURE OF CINEMA

The rapid advancement of digitalization and new media technologies is transforming the film industry in both production processes and audience consumption patterns. Traditional cinema models, which have long been structured around specific narrative technologies and physical viewing experiences, are now undergoing a paradigm shift due to innovative technologies such as artificial intelligence (AI), virtual reality (VR), and the metaverse (Zuboff, 2019; Erdoğan, 2023). This transformation is not limited to technical advancements alone but also redefines the cultural, economic, and aesthetic dimensions of cinema (Hesmondhalgh, 2019).

With the rise of digital platforms, content production has become increasingly data-driven, with filmmaking processes optimized through algorithms and automation systems (Zengin, 2018; Atmacaoğlu, 2021). In parallel, VR and metaverse-based cinema experiences are shifting audience engagement away from traditional viewing practices toward more interactive and immersive experiences. However, the long-term impact of these technologies on artistic creativity remains a subject of debate, particularly regarding concerns about the mechanization of content production and the preservation of aesthetic originality (Horkheimer & Adorno, 2002 [1947]).

This section will explore the impact of digital platform technologies on film production, covering a broad perspective that includes AI-assisted content creation and metaverse-based cinema experiences.

Artificial Intelligence and Film Production

Artificial intelligence (AI) is playing an increasingly significant role in the film industry, fundamentally transforming content production processes. AI-powered systems are now being used in various stages, including screenwriting, post-production, distribution, and audience data analysis, leading to reduced production costs and accelerated workflows (Atmacaoğlu, 2021; Zuboff, 2019).

One of the most common applications of AI in the film industry is screenwriting and content analysis. Algorithms trained on large datasets analyze past box office performances, audience reviews, and narrative trends to provide data-driven recommendations for screenwriters (Başer & Söğütlüler, 2023). AI-assisted text generation systems can learn storytelling patterns across different genres, create draft screenplays, and collaborate with human creativity to develop unique narratives (Arda & Akyol, 2020). However, this process also increases the risk of narrative standardization and over-reliance on formulaic storytelling structures (Horkheimer & Adorno, 2002 [1947]).

Another major area of AI-driven transformation in filmmaking is visual and audio effects

development. AI-powered computer-generated imagery (CGI) and visual effects (VFX) technologies enable faster and more cost-effective production, leveraging object recognition and facial tracking systems (Prince, 2002). Motion capture technology, supported by AI, enhances realistic character movements in action sequences and facilitates the restoration and digital adaptation of older films (Zengin, 2018).

AI is also reshaping audience data analysis and content recommendation systems. Subscriptionbased digital platforms collect large-scale user data, which AI algorithms analyze to personalize content recommendations (Zuboff, 2019; Erdoğan, 2023). In the film industry, AI-powered systems optimize content production similarly to talent management systems in other creative fields (Ahat, 2023). Filmmakers and producers use AI-driven audience insights to predict which genres and themes will perform best, directing their investment strategies accordingly. However, this data-centric decisionmaking approach raises concerns about the commercialization of artistic creativity and the dominance of market-driven storytelling (Baudrillard, 1981).

Moreover, AI-powered content production brings ethical and legal challenges. Technologies such as digital actors, AI-generated performances, and deepfake manipulations raise questions about intellectual property rights and the perception of authenticity in cinema (Benjamin, 2013; Erdoğan, 2023). Recent Hollywood actor and writer strikes have highlighted uncertainties regarding the role of AI in creative processes, emphasizing the need for clear regulatory frameworks (Arda & Akyol, 2020).

Metaverse, VR Cinema, and New Experiences

The impact of digitalization on the film industry extends beyond content production processes, fundamentally transforming the viewing experience. Metaverse and virtual reality (VR) technologies are reshaping audience engagement by moving beyond traditional cinematic practices and creating a hybrid form that blends cinema and gaming (Baudrillard, 1981; Atmacaoğlu, 2021).

The metaverse provides a virtual environment where users interact through digital avatars, allowing cinema experiences to be redefined within social, immersive digital spaces (Başer & Söğütlüler, 2023). Meanwhile, VR cinema offers audiences a 360-degree narrative experience, breaking away from conventional cinematic formats (Anadolu, 2020). Filmmakers are exploring techniques that extend beyond classic cinematography, using directed gaze methods to guide viewers through specific storylines while integrating interactive elements that allow audiences to actively participate in narratives (Prince, 2002).

The widespread adoption of these new technologies depends largely on economic and technical requirements. VR and metaverse-based cinematic experiences demand expensive hardware and software, which has so far limited their accessibility to a broad audience (Zengin, 2018). However, if digital platforms introduce exclusive film screenings in the metaverse or integrate VR content into subscription services, these technologies could gain faster adoption and mainstream popularity (Hesmondhalgh, 2019).

From a cultural perspective, VR and metaverse cinema have the potential to individualize the collective viewing experience traditionally offered by cinema theaters (Horkheimer & Adorno, 2002 [1947]). This shift raises new debates about how cinema will be positioned as a social experience in the digital age.

In conclusion, digital platform technologies are transforming the film industry in both production and audience engagement, introducing new dynamics through AI, VR, and the metaverse. However, this transformation must be critically assessed in terms of its impact on the aesthetic authenticity of cinema and the future of creative storytelling.

CONCLUSION

The process of digitalization has profoundly transformed the film industry in terms of production, distribution, and consumption practices, reshaping its economic and cultural structure. The traditional theater-centered distribution model has been largely replaced by digital platforms, creating a new content consumption ecosystem that eliminates spatial and temporal limitations. While this transformation has provided new opportunities for both major studios and independent filmmakers, it has also introduced risks such as monopolization, content standardization, and algorithm-driven curation.

One of the most prominent effects of digitalization in the film industry has been the widespread adoption of AI-driven content production and distribution processes. Digital platforms analyze viewing habits and develop data-driven content strategies, which, in turn, risk shifting artistic creativity toward a market-driven model. From the perspective of Hesmondhalgh's (2019) cultural industries approach, the increasing economic power of major media companies has led to the marginalization of independent productions and a growing tendency to adhere to commercially driven narrative structures.

However, digitalization has also opened significant opportunities for independent cinema. Filmmakers struggling to access traditional distribution channels have gained the ability to reach global audiences through digital platforms, allowing even low-budget projects to achieve international visibility. Yet, this transformation has also heightened dependency on platform policies and content recommendation algorithms, raising concerns about structural limitations for independent creators.

The economic dimension of digitalization in the film sector, as analyzed through Zuboff's (2019) concept of platform capitalism, highlights the increasing commercialization of user data and the dominance of algorithm-driven content production. Digital platforms, through subscription-based and ad-supported revenue models, have strengthened the financial influence of major media companies while simultaneously undermining traditional box office revenue models.

The rise of metaverse, virtual reality (VR), and augmented reality (AR) technologies further signals a shift from a passive cinematic experience toward interactive and immersive forms of engagement. However, in the context of Baudrillard's (1981) concept of hyperreality, the extent to which VR and metaverse-based cinema will alter audience perceptions of reality and how they will coexist with traditional film formats remains a crucial area of debate.

In conclusion, digitalization has redefined the economic and cultural dynamics of the film industry, offering both opportunities and challenges for major studios and independent filmmakers alike. While AI and big data analytics have increased efficiency in content production, they have also posed risks in terms of artistic originality and aesthetic diversity. As digital platforms continue to expand globally, the necessity of developing new business models for the economic sustainability of the film sector becomes more evident.

The future of the film industry will largely depend on technological advancements, evolving audience behaviors, and regulatory policies shaping the sector. The competition between traditional theaters and digital platforms is likely to evolve into hybrid distribution strategies, making this transition one of the defining forces of the industry's trajectory. The ability of film as an art form and an industry to preserve its creative originality will ultimately depend on how it balances technological innovations with artistic expression.

Ethical Statement

I declare that ethical guidelines were strictly adhered to during the preparation of this study.

Author Contributions

Research Design (CRediT 1): Author 1 (50%) – Author 2 (50%) Data Collection (CRediT 2): Author 1 (50%) – Author 2 (50%) Investigation, Data Analysis, Validation (CRediT 3–4–6–11): Author 1 (50%) – Author 2 (50%) Manuscript Writing (CRediT 12–13): Author 1 (50%) – Author 2 (50%) Editing and Text Revision (CRediT 14): Author 1 (50%) – Author 2 (50%)

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Conflict of Interest

There is no conflict of interest in this study.

Sustainable Development Goals (SDG)

Sustainable Development Goals 4 - Quality Education

The increased accessibility of film and media content through digital platforms contributes to the dissemination of cultural education. Moreover, the transformation of creative industries offers new opportunities for young individuals and educational institutions.

Sustainable Development Goals 8 - Decent Work and Economic Growth

Digitalization fosters the emergence of new business models and economic structures within the film industry. In particular, it enhances global accessibility for independent filmmakers, thereby supporting the growth of the creative economy.

Sustainable Development Goals 9 - Industry, Innovation and Infrastructure

The integration of technologies such as artificial intelligence, virtual reality, and the metaverse into the film sector contributes to the strengthening of digital infrastructure and the advancement of innovative production methods.

Sustainable Development Goals 10 - Reduced Inequalities

Digital platforms enable independent productions, which often lack access to traditional distribution channels, to achieve global visibility. This development supports a more equitable structure in terms of cultural production and accessibility.

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