

OTT PLATFORMS AND SUSTAINABLE BUSINESS MODELS (SDG 9: INNOVATION & INDUSTRY)

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Abstract

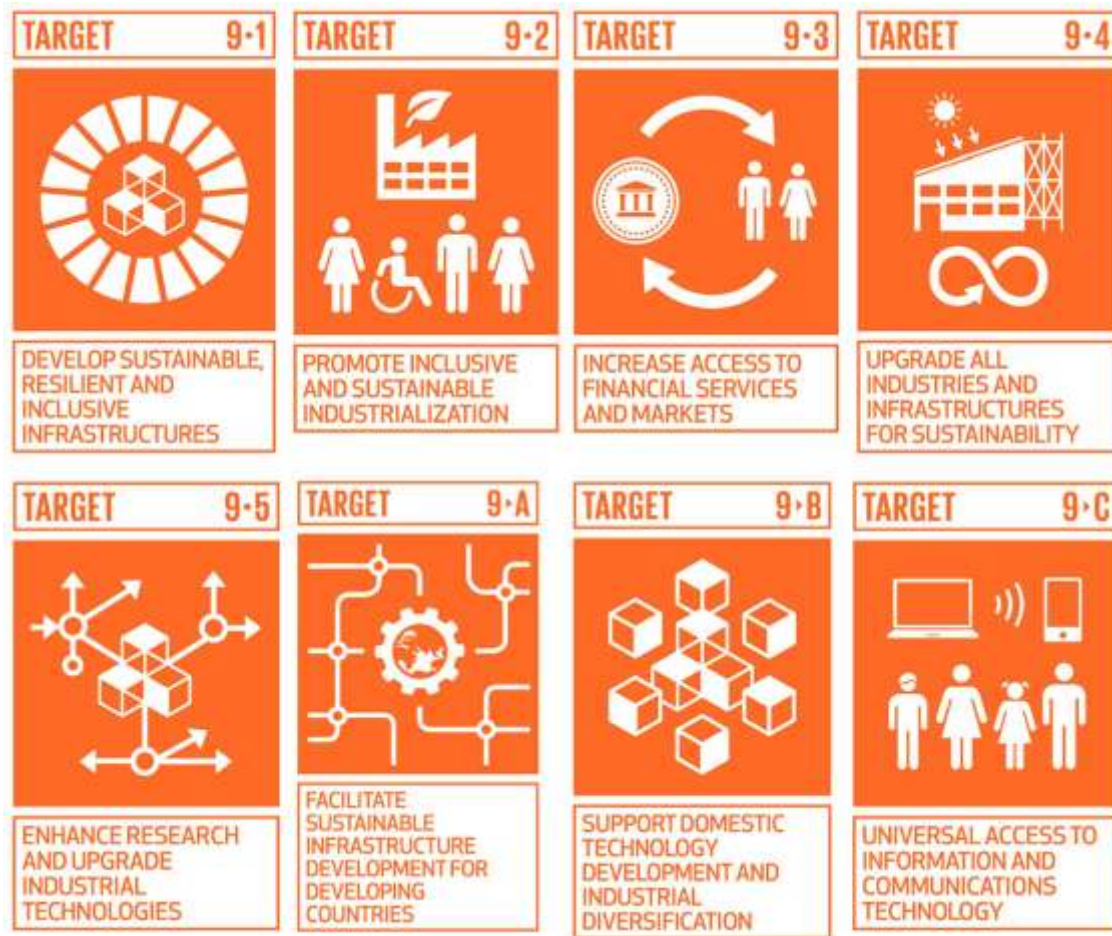
The rapid evolution of Over-The-Top (OTT) has altered the media and entertainment sector through facilitating accessibility of media content to consumers through the internet without necessarily going through the traditional distribution units. In this paper, the theme of innovation, adoption of technology and transformations in industries, will be assessed in terms of how OTT platforms can facilitate sustainable business models that can be aligned with SDG 9: Innovation and Industry. In this research, the strategies followed by the large OTT services are utilized to ascertain how digital innovation, content monetization, and operational sustainability fits in long term growth. Findings have revealed that the OTT systems are data informed with scalable cloud computing and eco-friendly production strategies that are driving innovation within the sector. The paper dwells on the opportunities which were created by OTT ecosystems to create an entertainment sector that is sustainable and resilient in assisting to spur economic development and technological advancement.

Introduction

OTT platforms like Netflix, Amazon Prime Video, Disney+ and domestic streaming platforms have become essential agents of digital change in the media and entertainment industry. Not only does the focus of these platforms offer access to on-demand content but

they combine inspirational business models and innovation to offer services on subscription fees, ad-founded content and hybrid approaches to monetisation. The emergence of OTT services within the traditional broadcast media is an example of how innovation can transform the industry and provide it with the opportunity to create long-term economic possibilities. In addition, OTT platforms can offer personalized content and optimize distribution, as well as improve customer experience, by adopting cloud computing, artificial intelligence (AI), and advanced analytics. The study will seek to investigate the way this platforms can be consistent with sustainable business practice and support industrial innovation in support of SDG 9 goal of establishing resilient infrastructure, encouraging inclusive industrialization, and sustainable innovation.

Over-The-Top (OTT) services have radically changed the media and entertainment sector across the globe by providing the content to the consumer directly through the internet bypassing the traditional broadcast and cable content delivery systems (Sharma et al. 2023). The internet penetration and use of smartphones have consistently expanded at a fast rate, which has made OTT platforms the most desirable manner of content consumption across demographic groups. The OTT market is expected to reach more than 300 billion by 2030, which is why it is growing very fast and economically is important. Netflix, Amazon Prime Video, Disney+, and Hotstar are some platforms that utilize cloud computing, artificial intelligence, and big data analytics to tailor user experience, maximize content suggestions and simplify production and distribution.



Such platforms are also the prerequisites of innovation, as in this case, advanced technologies like machine learning are utilized in content predictions, scalable streaming with the use of cloud-based storage, and the incorporation of AR/VR into immersive experience. Moreover, OTT services also pay more attention to local and regional content to increase coverage, which proves the possibility of inclusive industrial growth. This change has been identified in line with SDG 9: Innovation and Industry because besides fostering the competitiveness of industries, the use of OTT platforms can foster sustainable technological uptake and development of infrastructure (Roy and Das, 2025). Besides, the emergence of OTT platforms is indicative of an ever-expanding trend towards digital economies, in which the monetization of content, the subscription economy, and the embracing hybrid business models facilitates scalable and sustainable business practices. Implementation of sustainability, eco-efficient production and carbon-neutral server operation strategies portrays how media companies can strike the right balance between profitability and environment responsibility. This paper, consequently, examines the convergence point of the OTT

innovation, sustainable business models, and industrial development, with the aim of shedding light on the way in which the entertainment industry may be internationalized to achieve the dual-pronged objectives of profitability and sustainability.

Significance of the Study

This research is important to various investors, such as media companies, policymakers, investors and consumers. This exploration of the sustainable business models of OTT platforms offers some insight into how digital innovation can be used to grow industries in the long term. The study identifies a focus on environmentally friendly production processes, sound use of resources, and scalable technology systems, which lead to sustainability. It further proves to the policy makers of the potential of OTT platforms in revitalizing employment, digital literacy as well as industrial competitiveness. The findings provide insights into the strategies the investors and the industry champions should follow when investing into scalable, innovative, and environmentally friendly models that will not only be profitable but also socially responsible (Lee et al. 2020). In conclusion, the paper highlights how OTT platforms can help transform the current media landscape to be sustainable, technologically progressive, and innovation-driven.

The importance of researching OTT platforms and sustainable business models is multivaried to affect the stakeholders, policymakers, investors and society in general. In industry terms, knowledge of innovative practices can help media firms to optimize operations, minimize environmental effects as well as implementing scalable technologies. Spotify suggests that sustainable business approaches, including data storage that is environmentally friendly and content creation that does not harm the environment, do not necessarily come at the expense of financial profitability; thus, OTT platforms like Netflix, Amazon Prime Video, and Disney+ serve as a role model that can be followed by future platforms. Economically, OTT services help improve job creation, creation of local content, and infrastructure expansion. Research shows that OTT growth in the world has generated employment in the content production and technology sector, and marketing, analytics, customer support, and analytics sectors. The local and regional platform in particular has the advantage of sharing of knowledge and investing in technological capabilities, which facilitate both inclusive industrialization according to SDG number 9.

To policy makers and regulators, the study of sustainable OTT business models provides insight on how to advance policies conducive to innovation, digital literacy, and fair access to

the media content. Venture capitalists and investors obtain strategic advice on how to fund scaling and environmental responsible OTT projects. Moreover, the paper highlights the social importance of the OTT platforms in terms of cultural representation, local narration, and access because it should ensure that media innovation is socially beneficial in general (Sharma et al. 2023). Comprehensively, the study fills the research gap between technological innovation, industrial development, and sustainability, focusing on the role of OTT platforms to drive a long-term economic, environmental, and social value.

Problem Statement

The concept of integrating new and sustainable business models is not consistent despite the fast advancement of OTT platforms. Various platforms are driven more by short-term profit-making than by long-term sustainability, resulting in overproduction of content, data storage that requires excessive energy and unnecessarily plentiful use of digital infrastructure. There is also the issue of smaller regional OTT having a problem putting scalable and eco-efficient solutions into practice because of resources. It is the interest of this study to fill these gaps by examining innovative practices by OTT platforms that achieve profitability, technological growth and sustainability, in order to serve the larger goals of SDG 9.

Literature Review

OTT sites are leaders of digital innovations and take advantage of cloud computing, artificial intelligence (AI), and big data analytics to engage users. The studies show that Personalization based on data enhances retention, content division, and minimizes the waste of infrastructural resources, which would contribute to the sustainable growth. The OTT services have revolutionized the media and entertainment sector by offering new methods of providing content to the consumers. Examples such as Netflix, Amazon Prime Video, and Disney+, are using technologies such as cloud computing, artificial intelligence (AI), and big data analytics to create personalized experiences, improve content recommendation systems, and increase viewer engagement (Hallur et al. 2023). Algorithms produced by AI based on user preferences and viewing data allow platforms to personalize the content and enhance the retention rate. Cloud-based infrastructure is also scalable and flexible to enable devices to stream seamlessly. They not only enhance the efficiency of operations, but also help content creators to communicate to millions all over the world, developing a more competitive and vibrant digital media ecosystem.

OTT services have transformed how people consume media because they are now able to access the content on demand and these methods have disrupted the conventional systems of distributing television and cinema. They employ the latest technologies, like cloud computing to scale their infrastructure, artificial intelligence with its algorithms used to implement personalized recommendations, and big data analytics to analyze user behavior. To illustrate this, the recommendation engine on Netflix processes the trends in viewings to predict the content to show and attract more users and keep them longer. Amazon Prime employs AI to streamline their content production investment by estimating the kind of content that will appeal to their subscribers. Furthermore, interactive and immersive technologies such as AR/VR have been adopted by OTT platforms embrace a new format of storytelling, which is more open to experimentation and creativity. These digital innovations do not only improve customer experience, they also optimize operations, which makes it intuitive to all parts of the world, and the operations are also more efficient.

All these aspects of sustainability within media have been described as environmentally friendly media content, eco-friendly data storage, and data centers that can be expanded. Research has indicated that green production techniques and use of renewable energy in server farms can greatly minimize carbon footprints of OTT sites in line with sustainability across the world. Sustainability in the media industry is the embracement of a system where environmental impact is minimised with the financial viability of the sector being maintained. The OTTs are also incorporating greener production processes, including digital sets, fewer physical shoots, and servers that consume less energy. SVOD and Hybrid monetization systems (SVOD + AVOD) are used to boil down steady flows of income, embedding them to invest in sustainable pursuits and innovative technologies (Tejedor et al. 2020). Additionally, programs such as carbon-neutral streaming and being powered by renewable energy information centers is becoming popular since businesses understand the need to accept environmental responsibility and grow accordingly. These are sustainable practices that prove it is possible to be profitable and environmentally aware in the present media.

Media sustainability is not only about the financial prosperity, it is about the ecological accountability and social impacts. OTT sites are also embracing greener production practices, including virtual sets, computer-based workflows and server farms that consume less energy, unlike conventional production techniques that are carbon emitting. The models of business like Subscription Video-on-Demand (SVOD), Advertising Video-on-Demand (AVOD), and hybrid models are responsible sources of revenue and they create an opportunity to reinvest

in sustainable operations. Disney+ has been ambitious about utilizing renewable energy in running the server and Netflix has been working towards turning to carbon-neutral production efforts of major original series. These efforts show that profitability and sustainability are not mutually exclusive and that innovation can be used to develop business models, which are not only environmentally responsible, socially aware, and scalable on a global scale.

OTT Platforms Economic and Industrial impact

OTT services have also broken through the barriers that existed in the traditional media industry and generated new revenue and job opportunities. It has been proposed in the literature that creative subscription and hybrid models are more likely to be financially viable and to assist in the efforts of small-scale creators and therefore help in inclusive industrialization. OTT platforms have changed the way broadcasting and film industry is carried out by providing new sources of revenue and workplaces. Their new models of content distribution drive the competitiveness of industries, empower the small creators, and raise the diversity of creations. Platforms provide by facilitating economic growth through economic scalability by facilitating production, reaching all 7 continents with content, and forging cross-industry relationships (Prasad, 2022). Research has shown that inclusive industrialization that is promoted by the development of OTT services encourages digital literacy, use of technology and development of infrastructure. This economic contribution is consistent with SDG 9 in promoting innovation and industrial capability in the press industry.

OTT sites have greatly transformed the media industry, created economic prospects and improved the competitiveness of the industry. They help creators to connect with the audiences around the world, distributing the content democratically, and promoting small-scale and independent productions. This inclusivity contributes to the innovation of the narration and methods of the production. OTT creates employment in technology, marketing, and the creative industries, which sparks the digital industrial growth, economically. Services and applications such as Netflix and Amazon invest in producing regional content in certain countries, which boosts the industries and infrastructure in the region. This is in accordance with SDG 9 that encourages sustainable industrialization that is inclusive and contributes to technological capability and innovation in both traditional and digital media.

Challenges and Limitations

OTT platforms have difficulties in execution of fully sustainable operations regardless of their potential. There are high-energy consumptions, content redundancy, and problems of

digital divide which are still common. The researchers highlight the necessity of combined policies, technical modernization, and collaborative solutions in order to cut such obstacles. OTT platforms despite their potential typically have the challenge of ensuring that they carry out fully sustainable and innovative operations. Accessing high-energy to store content and streamline the content, redundancy in contents, and geographic restrictions continue to be a major challenge. Smaller OTT and regional services cannot implement advanced technologies because they usually do not have resources to support their sustainability efforts. Moreover, the limitations of regulations, copyright, and problems of digital divide make a smooth process of innovation and fair industrial development difficult. These dilemmas can be mitigated by collective solutions, technological modernisation, and government assistance enabling the OTT platforms to deliver sustainability and innovation on the scale of the entire industry.

Irrespective of this potential, OTT operations are experiencing various challenges towards sustainable and innovative activities. Data centers consume high energy, overutilize servers and duplicate content, which all play a role in environmental issues. Smaller regional platforms find it difficult to execute scalable technologies because of the lack of resources which restricts their impact on the sustainability. The other challenges of innovation and equitable access are hindered by regulatory and copyright challenges, the problem of digital divides, and the complexity in localizing content. Implementing these issues needs consolidated technological innovations, government policies, and collaboration in the industry to make sure that OTT platforms can find the middle ground related to innovation, sustainability and industrial developments.

Methodology

The research is qualitative and exploratory in nature. It used secondary sources as the means of data collection such as academic journals, industry reports, company whitepapers, and analyses of the major OTT platforms in the market. The research is based on the comparative study of business models and technological adoption as well as sustainability efforts of OTT services around the world and regionally. Some of the key performance indicators are efficiency of delivering content, energy used, revenue model, and the adoption of innovations. Patterns, challenges, and best practices were found in the qualitative synthesis that can give insights on the sustainable and innovation-based practices in the OTT industry.

Results and Discussion

The discussion shows that OTT streaming sites have implemented various mechanisms to maintain the business as well as foster innovation. Subscriptions (SVOD) and hybrid business models (SVOD + AVOD) produce predictable revenues, which enable increased investment in the content development. Adoption of technology applications such as AI-based personalization, and cloud-based infrastructure decrease business operation expenses and improve energy efficiency. Sites that effect the use of environmental friendly content creation and optimization of servers indicate a quantifiable carbon emission decrease (Hallur et al. 2023). When comparing the policies of the global players such as Netflix and Disney+ and those of smaller regional platforms, one can see that the latter possess greater sustainability policies, yet emerging technologies allow all players to embrace environmental responsible and innovative practices. By and large, OTT services can be used as an indication of how technological innovation and sustainable business can be integrated to achieve sustained industrial growth and resilience (Tejedor et al. 2020).

Table: OTT Platforms and Digital Innovation Practices

OTT Platform	Innovation Technologies	Key Features	Impact on Sustainability
Netflix	AI, Big Data, Cloud	Personalized recommendations, predictive analytics	Reduces redundant streaming, optimized server use
Amazon Prime Video	AI, Cloud, Data Analytics	Targeted content, production forecasting	Efficient resource allocation, reduces wastage
Disney+	Cloud, Green Tech Initiatives	Carbon-neutral productions, scalable streaming	Eco-friendly server use, reduces carbon footprint
Hotstar / Disney+ India	AI, Cloud, Localization	Regional content personalization	Enhances local content reach, reduces physical distribution
Local OTT platforms	Basic Cloud, Limited AI	Regional streaming, basic personalization	Limited energy efficiency, infrastructure constraints

As the analysis of the OTT platforms has shown, they stand on the vanguard of the digital innovation, using advanced technology to push their profitable and sustainable business. Netflix, Amazon Prime Video, Disney +, and Hotstar are platforms that have embraced recommendation engines that are driven by AI, cloud hosted infrastructure, and data analytics to offer better content personalization and efficiency in their operations. These technologies minimize the overhead of delivering the unnecessary content and maximize server capacity, which indirectly leads to sustainability by decreasing energy usage. Smaller or regional OTT implementations are innovative, but still suffer infrastructure and scalability constraints, which shows a disparity in how the industry is embracing technology. The paper suggests that sustainable business models are becoming more of a part of the OTT ecosystem. The models are subscription-based (SVOD) and hybrid monetization approach (SVOD and AVOD) which enable consistent revenue streams so that the platforms can invest in greener production processes and green server systems. As a case in point, Netflix and Disney Plus have funded projects to become carbon-neutral in their production processes, whereas other platforms are gradually moving to using renewable energy resources in their server farms. This strategy shows that there is a close connection between innovation and financial sustainability, as well as the responsibility toward the environment.

Table: Sustainable Business Models and Economic Impact

OTT Platform	Business Model	Sustainability Initiatives	Economic / Industrial Impact
Netflix	SVOD	Green production, carbon-neutral content	Global employment, infrastructure, tech adoption
Amazon Prime Video	Hybrid (SVOD + AVOD)	Cloud optimization, eco-efficient storage	Supports local content creators, regional industries
Disney+	SVOD	Renewable energy for servers	Inclusive industrial growth, global distribution
Hotstar / Disney+ India	SVOD + Advertising	Digital-only distribution	Job creation in tech and media sectors

Local OTT platforms	SVOD / Pay-per-view	Limited sustainability initiatives	Regional economic support, but smaller scale impact
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On the economic and industrial front, OTT platforms have disrupted the media to a great extent. They develop partnerships with independent creators, local content creators and technology developers. The global nature of the platforms allows the smaller industries to grow hence promoting an inclusive industrialization as per SDG 9 goals. The direct result of the OTT model is the generation of employment, growth of infrastructure, and uptake of technology, rendering the industry resilient, as well as, innovation oriented. Along with these positive results, the analysis points to a number of issues and constraints (Prasad, 2022). The cost of storing and streaming data as well as the redundancy of content, regulatory limitations, and the digital divide problems are still huge challenges. Less prominent regional platforms, especially, have difficulty following scalable technologies to enable them contribute towards sustainable innovation. Combination of policies and technology within the sector will be needed to address these challenges.

Conclusion

OTT platforms are a bright example of how the digital development can make the industry change. The platforms will help to achieve SDG 9 goals by implementing scalable business models, using AI and cloud infrastructure, and pivotal production processes, which are environmentally friendly. The industry holds great promise in profitable and stable innovation, although the smaller platform or newer experiences are still seen to be struggling. Outcomes can be further improved by regulatory assistance, funding green technologies and establishing systemic innovation ecosystems by policymakers and leaders in the industry. The study recognizes the importance of the emergence of the OTT platform in developing a resilient, technologically enhanced, and environmentally friendly media industry.

References

- Hallur, G. G., Aslekar, A., & Prabhu, S. G. (2023). Digital solution for entertainment: An overview of over the top (OTT) and digital media. *Digital entertainment as next evolution in service sector: Emerging digital solutions in reshaping different industries*, 35-53.

- Lee, Y. W., Moon, H. C., & Yin, W. (2020). Innovation process in the business ecosystem: the four cooperations practices in the media platform. *Business Process Management Journal*, 26(4), 943-971.
- Prasad, P. D. (2024). The ‘P-word’ in Indian juvenile justice: Toward a deeper understanding of legal rhetoric and practice. *Punishment & Society*, 27(3), 506-529
- Mallikarjun, Goda Dr (2022) "ROLE OF IRDAI IN PROMOTING E-COMMERCE IN INSURANCE SECTOR WHILE ENSURING POLICYHOLDER PROTECTION.," *International Journal on Consumer Law and Practice*: Vol. 10
- Mishra, Abhinav Kumar (2019) “IP protection of TKGR as an idea of justice and fairness” *Journal of Intellectual Property Law and Practice*, Vol 14, Pages: 77-78.
- Sharma, M. (2021). Compensatory justice to the victim of a crime and judicial practices in India: An empirical study. *International Review of Victimology*, 28(2), 167-190
- Das, U. C., Benjapolakul, W., Gupta, M., Somthawinpongsai, C., Vitoonpong, T., Suanpang, P., Butdisuwan, S., & Nanthaamornphong, A. (2024, October). Brain cancer tumor detection by U-Net deep learning algorithm from MRI images. In 2024 12th International Conference on Internet of Everything, Microwave, Embedded, Communication and Networks (IEMECON) (pp. 1–6). IEEE.
- Kumar, G. K. B. C., Kumar, G., Sangchumnong, A., Nand, P., Gupta, M., & Somthawinpongsai, C. (2024, October). Framework for evaluation and providing security in the tourism industry for a trustworthy rating system. In 2024 12th International Conference on Internet of Everything, Microwave, Embedded, Communication and Networks (IEMECON) (pp. IEEE. <https://doi.org/10.1109/IEMECON62401.2024.10846708>