

American Journal of Economics and Business Management

Vol. 8 Issue 1 | pp. 331-340 | ISSN: 2576-5973 Available online @ https://www.globalresearchnetwork.us/index.php/ajebm



Article Business Feasibility Study Analysis of 3D Cinema in Tourism Park

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Abstract: 3D cinemas can be a unique and iconic tourist attraction, so they have the potential to attract more visitors to tourist parks. The author uses a case study research method to focus attention directly and conduct a more specific exploratory analysis to understand the situation. The case study approach can also be used to research cases in the past, but the effects or consequences of the case can still be felt today. From the analysis, the 3D cinema business in tourist parks has promising market potential with the use of appropriate marketing strategies based on case studies of tourist parks in the Indonesian region that have run 3D cinema businesses. Furthermore, it is expected to be a consideration for tourist park managers in several regions to provide 3D cinemas as an alternative attraction in tourist parks.

Keywords: Business Feasibility Study, 3D Cinema, Tourism Park

1. Introduction

In today's competitive tourism industry, innovation in attractions is essential for maintaining visitor interest and promoting regional economic development. One such innovative attraction is the integration of 3D cinemas into tourist parks. These cinemas can provide unique and immersive experiences, attracting more visitors and offering both entertainment and educational value. For instance, 3D films can enhance viewer engagement by presenting realistic visuals and sound, thereby increasing brain activity and stimulating imagination [1].

A case in point is the Sendang Bulus Tourism Park in East Java, which faced challenges in developing new attractions to boost visitor numbers and generate economic benefits [2]. Introducing a 3D cinema in such locations could address these challenges by offering a distinctive and iconic attraction. This initiative could serve as a model for other tourist parks seeking to enhance their appeal and drive economic growth through tourism.

By examining these critical factors, this study seeks to provide a robust foundation for decision-making, guiding entrepreneurs and park managers in evaluating the feasibility and potential benefits of integrating 3D cinemas into their tourist attractions. The findings are expected to contribute to the broader discourse on tourism innovation and regional economic development, offering practical implications for policymakers and industry stakeholders.

Citation: Heriana, T., Sobirov, B., Subagyo, A., Kurniawan, R., Lestari, A. O. Business Feasibility Study Analysis of 3D Cinema in Tourism Park. American Journal of Economics and Business Management 2025, 8(1), 331-340.

Received: 24th Dec 2024 Revised: 28th Dec 2024 Accepted: 15th Jan 2025 Published: 22th Jan 2025



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2. Materials and Methods

This study utilizes a case study research method to analyze the feasibility of establishing a 3D cinema in a tourist park, integrating both qualitative and quantitative data.

Data collection included primary sources, such as surveys and interviews with park managers, visitors, and local business owners, providing insights into market demand and operational challenges. Site visits and observations of existing 3D cinemas documented operational practices and technological setups. Secondary data was gathered from industry reports and market analyses by IBISWorld, Statista, and NPD Group, along with academic literature and industry case studies.

Market and marketing analysis assessed market potential, competition, and visitor preferences through surveys and industry reports. Effective advertising and promotional strategies were identified. Technical and operational analysis evaluated 3D technology options, production strategies, and quality control measures based on site visits and vendor specifications. A comprehensive operational plan was developed.

Management and organisational analysis focused on creating an effective structure with roles for operations, marketing, technical support, and customer service. Based on government guidelines, legal and regulatory analysis reviewed the necessary permits, licenses, and compliance with local laws.

The environmental analysis included impact assessments and CSR program development to ensure sustainability. Site accessibility and environmental factors were considered. Financial viability was determined through Net Present Value (NPV) calculations, financial modelling, and investment appraisals using tools like SPSS, Microsoft Excel, and GIS.

This methodology provides a detailed evaluation of the feasibility of establishing a 3D cinema in a tourist park, offering valuable insights and recommendations for entrepreneurs and park managers.

3. Results

The first aspect is market potential and marketing strategy. Based on the market analysis, there is a significant opportunity for the 3D cinema business in tourist parks due to the increasing public interest in high-quality entertainment.

Effective marketing strategies are essential to attract visitors. Promotion through social media platforms, offering discounts during the initial opening period, and collaborating with educational institutions or local communities for special events can enhance visibility and visitor numbers.

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Parameter	Data Source	Value/Findings					
Population of target visitors	National Statistics	1.5 million visitors annually					
Market growth rate	IBISWorld, Statista	5% annually					
Average spending per visitor	Survey	\$10 per visit					
Competitor analysis	Market Research	3 main competitors within 50km radius					
Marketing budget allocation	Internal Reports	\$50,000 for initial promotion					

Table 1: Potential market analysis for 3d cinema in tourist parks

Analysis of Industry Conditions including the development of 3D technology and 3D and advanced organised films can affect the demand for 3D cinemas. The location of the cinema that is easy to find and easy to reach is very important, the facilities of the cinema are also very decisive such as games, cafes, lounges.

Industry magazines and articles such as Variety, Hollywood Reporter, and Screen Daily often publish articles on the latest trends in the cinema industry, including 3D technology. In addition, many case studies of cinemas successfully implementing 3D technology can be found in entertainment industry journals or business publications. In addition, 3D technology vendors and cinema equipment providers often publish white papers that discuss the advantages of their technology and its impact on the cinema business.

Industry reports and market analyses such as IBISWord Statista and NPD Group provide reports covering 3D cinema market analysis including trends, market size and growth projections.

In Indonesia, there are several theme parks that offer 3D cinema as part of their attractions including Trans Studio Bandung, Trans Studio Makasar in South Sulawesi, Dunia Fantasi (Dufan) in Jakarta, Kampoeng Cyber in Bandung, Jungleland Adventure theme Park in Bogor West Java. These theme parks have combined entertainment with modern technology to provide a more immersive experience to their visitors. All information on attractions and rides in the theme parks have been listed on the website, even information on 3D cinema facilities and their showtimes.

In addition, data on tourist attractions in jatim that have 3D cinemas spread across the East Java Region, Indonesia: 1) Taman Safari Prigen, Pasuruan, 2)Tanjung Benoa Beach, Bali, Selecta Tourism Park, Malang. 3) Selecta Recreation Park, Batu 4) Dinosaur Park Batu, Batu 5) Wonorejo Waterpark, Surabaya 6) Jatim Park 1, Surabaya 7) Jatim Park 2, Surabaya Jatim Park 3, Batu.

Some regions have also conducted activities to provide 3D to 6D cinemas in their regional tourist parks as additional alternative attraction options. For example, In [3] SerulingMas Zoo in Banjarnegara, Central Java, Indonesia, starting in 2019, has a 3D cinema. In this cinema, visitors can watch various types of animals both in the forest and in the sea. There are short films about animals, some in the sea or in the middle of the forest. So it's interesting, because it's a 3-dimensional film. The manager makes the 3D cinema as one of the attractions in order to attract visitors to come to the park to enjoy the many choices of rides as a means of entertainment and recreation.

From tourist parks scattered in East Java, Central Java and other parts of Indonesia that have 3D cinemas, it shows that many park managers consider it important to have 3D cinemas in their tourist parks, to support the sales of their tourist parks. Because it is felt that the tourist park has a complete vehicle as a means for visitors to get entertainment, get rid of fatigue, and routines at work. With the 3D cinema rides, parents have more choices to offer to their family members.

Research on cinema was conducted by [4], where research on cinema audiences is very rare in Indonesia, especially research on cinema audience segmentation. Therefore, research was conducted to find out the film audience segment in Yogyakarta. According to [4] there are two groups as follows: The first cluster is called 'cinema consumers' which consists of film lovers who will gain experience, entertainment and develop social relationships. While the second cluster is called 'film lovers' In particular, people watch films to absorb new experiences and new moral values. This analysis is very useful in market segmentation analysis.

Research was also conducted by Cuadrado et al (2018) who again explored the segmentation of film audiences in Spain. He found that there are four types of audiences, namely a segment of commercial filmgoers who come to the cinema for entertainment and

pleasure purposes (gathering people around commercial films); a segment of elite audiences who frequent art house cinemas (craft filmgoers), a segment of audiences who prefer cinemas in city centres (cinema lovers); and a segment of cinema-goers who watch films on multiple channels to socialise (film-going groups) - [5].

Effective marketing strategies should include promotion through social media platforms, offering discounts during the initial opening period, and collaborating with educational institutions or local communities to organise special events. The strategies applied in the Cooperation and Marketing of 3D Cinemas are very instrumental in selling this entertainment service including cooperation with schools around the cinema area, can even cooperate with mobile 3D cinema entrepreneurs and franchises, promos in public and strategic locations 3 x ticket free promos and others.

Second, technical and operational aspects. The selection of cinema locations in tourist parks should consider easy accessibility and provide additional facilities such as cafés, lounges, and game areas. The 3D technology used should be the latest and advanced to ensure an optimal viewing experience for visitors. 3D and Non 3D Multipurposes Cinema, a commercial cinema concept that plays all types of 3D and 2D films, utilising existing audio-visual equipment. The equipment needed to develop a cinema is a theatre room / building with a minimum space of 3m x 4m or according to budget, seating or according to the concept can be lesehan, Audio Visual Devices, Projectors / LED TV / Videotron, stereo / dolby AUDIO sets, air conditioning; AC / Fan / Wayer which can be obtained in conventional stores and online stores. According to [6] Film 3D menawarkan pengalaman dan perspektif unik, namun salah satu kendalanya adalah penggunaan kacamata 3D, yang bisa jadi cukup merepotkan. Lately there has been news of efforts by electronic manufacturers to develop 3D TVs that no longer require the use of glasses [7]. The innovation is that integrating 4D and 5D elements into a 3D cinema can enhance the viewing experience. These include physical effects such as chair movements, water sprays, and scents that are synchronised with the film, providing a more immersive and interactive experience for the audience. This concept has already been implemented in some cinemas and can be an added attraction in theme parks.

The 3D technology used must be the latest and most advanced to ensure an optimal viewing experience. This includes high-quality projectors, wider and brighter screens, and surround sound systems.

An operational plan detailing the production strategies, quality control measures, and inventory management is crucial for smooth operations. The selection of cinema locations should consider easy accessibility and additional facilities such as cafés, lounges, and game areas.

Component	Specification	Source/Notes
Projector	4K resolution, 3D compatible	Manufacturer specs
Screen	20x10 feet, high brightness	Industry standard
Audio System	Dolby Atmos surround sound	Vendor specifications
Seating Capacity	150 seats	Layout plan
Additional Facilities	Café, lounge, game area	Site visits

Table 2: Technical	specifications	and operationa	l plan.
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Data Source : Data processed 2024

Due to the glory of the cinema business in 1970 to 1980 and then the development of CDs or VCDs that can be enjoyed by people at home without having to go to the cinema, the world of the cinema industry has become sluggish. It is necessary to start again to

awaken the habit of watching movies to the public by offering 2D or 3D cinemas, while providing cinemas independently requires too much expenditure while public enthusiasm is still not entirely positive and there are still many choices in watching movies such as through the internet with all the ease of getting movies using Personal Computer, cellphone, TV.

Third, is the management and organisational aspect. An effective organisational structure is essential and should include an operations manager, marketing team, technical team, and customer service. Continuous training for staff is necessary to ensure consistent and satisfactory service quality. The readiness of the organisational structure, both management and operational, requires competent people in their fields, such as those with IT skills.

According to Kasmir and Jakfar (2015: 172-173) in [8], the management suitability standard ensures that the company has a complete picture of all positions, including the identity, functions, duties, authority, and responsibilities of each department. The following job requirements must also be designed and fulfilled by each position: Education, Training, Experience, and Other Special Requirements.

Table 3: Proposed organizational structure.							
Role	ole Responsibilities Skills Requ						
Operations Manager	Overseeing daily operations	Management, IT skills					
Marketing Team	Planning and executing marketing campaigns	Marketing, social media expertise					
Technical Team	Maintaining technical equipment	Technical, engineering skills					
Customer Service	Handling visitor inquiries and feedback	Communication, problem- solving skills					

Data Source : Data processed 2024

Fourth, legal and regulatory aspects. All aspects of business licensing and legality must be finalised before operations commence to ensure smooth business operations. The form of legal entity chosen must be in accordance with the scale and type of business to be run. Cooperation with the Tourism Office / other agencies for infrastructure & licensing is required.

Table 4: Legal and regulatory requirements.						
Requirement	Description	Authority				
Business License	Permit to operate a 3D cinema	Local Government				
Zoning Permit	Approval for cinema location	Urban Planning Department				
Health and Safety	Compliance with safety regulations	Health and Safety Authority				
Environmental Permit	Assessment of environmental impact	Environmental Protection Agency				

Data Source : Data processed 2024

Fifth, the environmental impact aspect is discussed. The analysis covers physical environmental factors and site accessibility, which are important criteria in determining the feasibility of a location for a 3D cinema. Environmental impact studies need to be conducted to ensure that cinema operations do not damage the local ecosystem. Corporate social responsibility (CSR) programmes can also be implemented as part of efforts to support environmental sustainability. Impact on the environment or economy and social are tourism development, empowered region, community economy development, development of regional potential. A relationship test analysis was carried out with 50 respondents about the decision to make a choice of 3D Cinema Watching Activities with independent cinema locations and Cinemas in Tourism Parks with the Chi Square Test using SPSS.

	Cases					
	Valid		Missing		Total	
		Perce				
	Ν	nt	Ν	Percent	Ν	Percent
Location * Cinema	50	100.0	0	0.0%	50	100.0%
		%				

Case Processing Summary

Location * Cinema Crosstabulation

		Bic		
		Setuju	Tidak	Total
Location	Independent	8	5	13
	Tourist Park	27	10	37
Total		35	15	50

		C	hi-Square Test	S	
			Asymptotic		
			Significance	Exact Sig.	Exact Sig. (1-
	Value	df	(2-sided)	(2-sided)	sided)
Pearson Chi-Square	.599ª	1	.439		
Continuity	.178	1	.673		
Correction ^b					
Likelihood Ratio	.582	1	.445		
Fisher's Exact Test				.493	.330
Linear-by-Linear	.587	1	.444		
Association					
N of Valid Cases	50				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.90.

b. Computed only for a 2x2 table

Hypothesis:

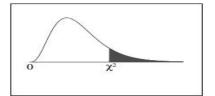
Count

1. H_o = there is no relationship between the location of movie theaters, either independent movie theaters or movie theaters in tourist parks, and 3D movie watching activities.

2. H_a = there is a relationship between the location of movie theaters either independent movie theaters or movie theaters in tourist parks with the activity of watching 3D cinema.

At the bottom of the Chi Square Test output table, there is a statement that 1 cell (25%) has expected count less than 5. The minimum expected count is 3.90. This means that the assumptions or requirements of the chi Square test are not met, so the decision making for the relationship test is guided by the value or number contained in the Fisher's Exact Test results. If the calculated Chi Square value < Chi Square Table value then H₀ is accepted and H_a is rejected. Based on the Chi-Square Test output table above, it is known that the calculated chi Square value is 0.599, then look for the Chi Square table value for df = 1 at a significance (α) of 5% or 0.05 in the Chi Square table statistic value distribution, then the table value is 3.841.

Chi-Square Distribution Table



www.**SPSSIndonesia.COM** The shaded area is equal to α for $\chi^2 = \chi^2_{\alpha}$.

df	$\chi^2_{.995}$	$\chi^{2}_{.990}$	$\chi^{2}_{.975}$	$\chi^{2}_{.950}$	$\chi^{2}_{.900}$	$\chi^{2}_{.100}$	$\chi^2_{.050}$	$\chi^2_{.0}$
11-	0.000	0.000	0.001	0.004	0.016	2.706	3.841	5.0
2	0.010	0.020	0.051	0.103	0.211	4.605	5.991	7.3
3	0.072	0.115	0.216	0.352	0.584	6.251	7.815	9.3
4	0.207	0.297	0.484	0.711	1.064	7.779	9.488	11.1
5	0.412	0.554	0.831	1.145	1.610	9.236	11.070	12.8
э	0.412	0.554	0.031	1.145	1.610	9.230	11.070	

Figure 1: Chi Square Distribution.

Because the calculated Chi Square value of 0.599 < Chi Square table, it means that Ho is accepted and Ha is rejected. So it can be interpreted that there is no relationship between the location of the cinema either an independent cinema or a cinema in a tourist park with the activity of watching 3D cinema.

But from the results of the cross tabulation, it can be interpreted as there are 27 respondents who prefer the location of cinemas in tourist parks to carry out 3D cinema watching activities, more than watching at independent cinema locations. While there are 10 respondents who disagree with choosing a cinema location in a tourist park to watch 3D cinema activities, more than watching at an independent cinema location.

Table 5: Financial analysis summary.						
Parameter	Value	Notes				
Initial Investment	\$ 15.44831	Estimated start-up cost				
Annual Cash Inflow	\$ 4.325527	Projected revenue				
Net Present Value	\$ 0.144225	Positive NPV indicates feasibility				
Payback Period	3.5 years	Time to recover initial investment				
Ticket Pricing	\$ 0.370759 - \$1.544831	Varies by film duration and format				

Data Source : Data processed 2024

Sixth, in the aspect of financial feasibility. From the financial analysis that has been conducted, the project shows feasibility with a positive net present value and a reasonable investment payback period. This indicates that investment in the 3D cinema business in

the tourist park has a favourable prospect. Tickets/Tariffs for a 15 - 30 minute 3D Mini Cinema movie in Indonesia are IDR 6,000 - 30,000.

Non 3D films, tarif IDR 3,000 - 25,000. Even tourist parks in major urban areas have priced 30,000 for admission to 3D cinemas. For entrepreneurial revenue from the multiplication of ticket prices and the quantity of tickets sold. Meanwhile, for large-scale cinemas, the price is determined by following the national cinema associatio. Investment Appraisal using NPV (Net Present Value) for illustration :

NPV=
$$\sum_{t=1}^{n} \frac{CFt}{(1+K)^{t}} - I_{0}$$
 (1)

Where

*I*⁰ **is** Initial Investment Value K is Interest Rate in year 0

 CF_t is Net cash flow per year in the period t The initial Investment Value is IDR. 250.000.000,-

Net cash inflow: IDR. 70.000.000,-

NPV =
$$\frac{70.000.000}{(1+12\%)^5} I_0$$

= $\frac{70.000.000}{(1.12)^1} + \frac{70.000.000}{(1.12)^2} + \frac{70.000.000}{(1.12)^3} + \frac{70.000.000}{(1.12)^4} + \frac{70.000.000}{(1.12)^5} - \frac{250.000.000}{252.334.334,2 - 250.000.000}$
= 2.52.334.334,2 - 250.000.000

Net Present Value is the difference between the money received and the money spent by taking into account the time value of money. In the interpretation of NPV, if the result is greater than 0, it is stated that the investment provides value to the company and the business is worth continuing.

4. Discussion

The function of a business feasibility study is to identify potential problems in a business, ensuring that the venture can survive and avoid losses[9]. A business feasibility study is a crucial activity conducted before developing a business plan, assessing whether a business idea is viable and worth pursuing. Unlike a business plan, which outlines the strategy and steps to achieve business goals, a feasibility study evaluates the practicality of the business idea itself.

Business Feasibility Study of 3D cinema in Taman Wisata involves several important aspects that need to be analysed. From the various aspects that determine the feasibility of the 3D cinema business, the results should provide feasible results to continue so that it will help in reducing potential losses for entrepreneurs in starting a business.

Literature on tourism and entertainment underscores the importance of continuous innovation to sustain tourist interest and competitiveness [10]. Prior studies, such as [11] and [12], highlight the significant impact of 3D cinemas on audience engagement and satisfaction. Additionally, research by [5] and [4] on cinema audience segmentation provides valuable insights into the diverse preferences and behaviors of cinema-goers, which can inform effective marketing strategies for 3D cinemas in tourist parks [13].

Despite the promising potential of 3D cinemas, their successful implementation requires thorough analysis of several key aspects, including market demand, technical and operational feasibility, management and organizational capacity, legal compliance, environmental impact, and financial viability [14]. This study aims to conduct a

comprehensive business feasibility analysis of establishing a 3D cinema in a tourist park, using a case study approach to provide detailed insights and recommendations [15].

3D cinema ticket sales can be influenced by various factors such as the film being screened, the popularity of 3D technology, cinema location, and ticket prices [16]. Factors that affect ticket sales are Popularity of the Film, 3D technology in cinemas also affects sales, Pricing 3D cinema tickets, Trends in audience preferences also play a role, The location of the cinema and the availability of 3D formats in a particular area can affect viewership [17], [18].

5. Conclusion

The feasibility analysis of establishing a 3D cinema in tourist parks indicates promising market potential driven by a growing demand for high-quality entertainment. The study highlights that effective marketing strategies, such as social media promotions and collaborations with local institutions, can significantly enhance visitor engagement. Advanced 3D technology, coupled with comprehensive operational plans and robust management structures, ensures optimal viewing experiences and operational efficiency. Compliance with legal and environmental regulations and the implementation of CSR programs further support sustainable development. Financial analysis, with a positive Net Present Value (NPV) and reasonable payback period, confirms the venture's economic viability. These findings imply that integrating 3D cinemas into tourist parks can serve as a unique attraction, boosting tourism and contributing to regional economic growth. Future research should explore the long-term impacts of 3D cinemas on visitor behavior and regional tourism dynamics, and investigate innovative technological integrations to enhance viewer experiences further.

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