
Feasibility Analysis of Water Play Amusement Rides of Kartika Swimming Pool, Central Java

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Abstract - The government has designed various programs to improve community welfare based on local potentials and wisdom. One of the most marvelously finished products of this program is Kartika Swimming Pool in Kroyo, Sragen, Central Java. This study population were 50 employees and the manager of Kartika Swimming Pool, as well as 100 respondent by accidental sampling. The data were analyzed with financial analysis and Structural Equation Modeling-Partial Least Square (SEM-PLS). This study indicated that the level of feasibility of amusement rides is 75.5%, and 56% by visitors perception. SEM-PLS results show that price, sales promotion and service of quality have a significant effect on visitor satisfaction at Kartika Swimming Pool.

Keywords – Investment, Locally generated revenue, Tourism destination

JEL classification: Q58, Z32

1. INTRODUCTION

The government, local government, provincial government and central government have been developing programs to improve community welfare based on its limitless potentials and local wisdoms [21]. Kartika Swimming Pool in Kroyo Sragen, Central Java was a considerable evidence of their all-out efforts. It is one of the tourist destination in the village of Kroyo, Sragen Regency strategically located on Jalan Veteran street next to Sragen Football Stadium. Sustainable efforts to develop it are necessary to make it as one of the

favorite tourism destination in Sragen. The development of tourism is one attempt to utilize the potential of existing local revenue source [1]. The responsibility of managing tourism should become the focus of both public and private organizations including the role of governments, associations, entrepreneurs, communities and other stakeholders since the progress of tourism development in the area heavily depends on involvement from planning to implementation [5], [7], [10], [14], [32].

Tourism increases local product exports. It is estimated that 15-20% of total tourist expenditure is spent on buying souvenirs and culinary delights. As long as the products sold are distinctive local products or typical souvenirs, it could affect the economy of the local community. Various tourist destinations provide markets selling local products to facilitate local producers and give interesting shopping experience for tourists [3].

Some of them have been expanding their landmarks to increase visitor capacity and accommodate more local products [18], [34], [38]. The government believe that tourism could create jobs, draw economic benefits and do special promotion for their regional potentials through marketing activities [27], [29], [31], [32]. Activities they do, particularly in the construction of facilities, and improvement of transportation network infrastructure will potentially bring in investment and new business to support tourism activities.

The domino effect plays a key role in understanding regional economics [16]. This underlines that one person's expenditure becomes income for another person, since consumption increases when income increases [11], [23].

Standard is a technical specification including the procedures and methods based on the consensus of all concerned parties with regard to the requirements for safety, security, health, environment, development of science and technology as well as experience, current and future developments to get maximum benefits [9].

The development of community-based ecotourism is a strategic media to increase community income around tourist showpieces in Sirigu, Ghana [35]. Ecotourism has a positive effect on the socio-economic life of communities around the region [2]. Ecotourism can provide social, economic and environmental benefits in the local area [23]. Local communities are very enthusiastic about developing this location as an ecotourism location [25]. The development of ecotourism has a positive influence on the socioeconomic surrounding communities. The ecotourism has a significant influence on the economic condition of the community around the site, since it has a major role in the social life of the community, and creates socio-economic balance of the community around the area [8]. There is a relationship between sustainable tourism development and environmental management [13], [20], [26], [28]. The local government participation, by making proper regulations, is mandatory enabling ecotourism to bring positive effects on the economic life of the communities around the area [20], [35].

2. RESEARCH METHOD

This research is a qualitative and quantitative research. It collects data on a natural setting with natural methods, and is conducted by naturally interested researchers [6], [16]. This

definition clearly illustrates that qualitative research prioritizes natural settings, natural methods, and is conducted by people with natural concerns [12]. This study investigates the feasibility of Kartika Swimming Pool in Kroyo Sragen, Central Java and the effect of price, sales promotion and quality of service on visitor satisfaction. The data sources were primary data collected from questionnaires and secondary data which include documents, surveys, observations and interviews.

The results of the questionnaires filled out by respondents were qualitative data. The researchers converted the data into quantitative data to analyze them by, firstly, giving one score for each answer of each question, and, secondly, calculating the frequency for each category of answers in each variable and sub-variable. The calculation results in the formula will produce figures in the form of percentages. The effect of price, sales promotion and quality of service on visitor satisfaction was analyzed using Structural Equation Modeling-Partial Least Square (SEM-PLS).

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3. RESULTS AND DISCUSSION

The data analysis of the feasibility Kartika Swimming Pool amusement rides is to determine the level of their feasibility according to visitors.

There are 24.5% of the amusement rides in Kartika Swimming Pool did not meet the eligibility standards, while the rest 75.5% were fairly decent. This implies that, in conformity with comparative feasibility standards set by FINA and GN Technologies, these amusement rides have a decent feasibility level of 75.5%. Figure 1 below shows the feasibility analysis of Kartika Swimming Pool amusement rides.

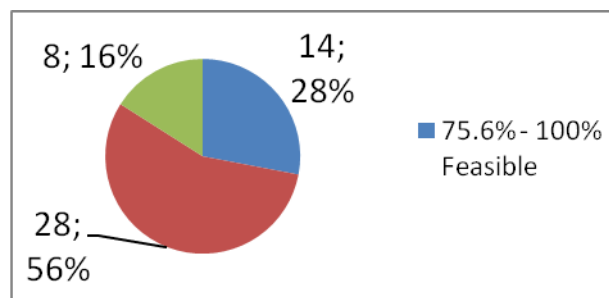


Figure 1. Amusement Ride Feasibility Test Based on Respondents Assessment

Sources: Primary Data (2020)

Figure 1 above indicates that there were 28% of respondents considered that the amusement rides were feasible. The other 56% believed that the rides were decent, and the rest 16% perceived the rides were unfeasible. This draws a conclusion that in general the level of feasibility of the Kartika Swimming Pool was fairly decent of 56%.

In its planning process, Kartika Swimming Pool considers elements of urban design that support the formation of the city's visual structure able to be utilized in the arrangement and development of the region [15], [38]. These elements are:

a. Land Use

Land use consists of public and private areas. Public tourism areas are those with general land use and chargeless to access them [17]. Private tourism areas, such as of Kartika Swimming Pool, require a set of rules to access them such as ticket fees, security, length of visit.

b. Construction Shapes and Massing

Prior to their construction, tourist destinations should meet the height requirement to comply with the location of the building.

c. Traffic Flow and Parking

Traffic flow for cars and pedestrian walkways are necessary to be well planned for people with disabilities, toddlers, and parents who demanding comfortable public facilities [4]. Other comfortable public facilities should be integrated and become additional elements of the pedestrian walkways, such as stools, lighting, vegetation and others.

d. Activity Support

This could be placed in a large parking area as a festival market and rest area enabling visitors who travel through the Solo-Surabaya road to freely stop by [28].

e. Open Space

It covers all parks, roads, trails, including recreation areas, both public and private open space.

f. Sign Boards

It could be billboards, signposts, banners and gates. Despite the attractive design, these sign boards should be able to deliver useful information and educational elements such as, ticket queues, trash bins, and traffic signs.

g. Preservation

It comprises protection of the environment and public places in the city (soccer fields, plazas, shopping areas). This is carried out as in the preservation of buildings and historic sites [32].

In Kartika Swimming Pool master plan, the consultant pays attention to the general criteria of planning according to the function and needs. The Master Plan includes:

a. Elements of Education.

The master plan produces tourism area products that guarantee to increase knowledge, educate and provide the users and surrounding communities with broad insights.

b. Elements of Entertainment

The Master Plan guarantees a positive impact on spiritual refreshment for the visitors.

c. Elements of Environmental and Social Cultural Conservation of the Community

The Master Plan pays attention to the condition of the existing environment of the area from impedences which damage, and decrease the capacity and quality of the environment, social preservation, culture, community art, and its development.

d. Element of Small Community Empowerment

The Master Plan empowers small communities around the area to participate and improve their economy.

e. Element of Architec and Environment

The Master Plan has a good and modern architectural appeal, adds beauty and does not pollute the environment.

f. Elements of Accessibility

The Master Plan takes into account the needs of all elements, by providing adequate, easily accessible utilities including toddlers, elderly and disabled.

Financial analysis is carried out by taking into account that the analysis period is calculated for 15 years, the construction period is 1 year, the construction period interest is part of the investment value, the inflation rate (price increase) is 10% per year, the interest rate as a guide for analysis (MARR = Minimum Attractive Rate of Return) of 8% per year, income of entrance ticket to swimming pool, minimarket rent (2 minimarkets) of IDR 20.000.000 per year, stall rent (2stalls) of IDR 10.000.000 per year; parking with estimated annual income of IDR 72.000.000, parking fee of IDR 1.000 for a motorcycle and IDR 2.000 for a single parking car; the source of income has increased by 50% per 5 (five) years. The analytical method used is:

a. Pay Back Period

Payback period is to measure the time needed for the amount of investment can return from the results obtained (Net Cash Flow). For the analysis period of 15 years, the maximum pay back period is 7 years 2 months.

b. Net Present Value

It measuring the feasibility of an investment by comparing the value of the initial investment with the present value of the investment return (Net Cash Flow) during the analysis year at the expected interest rate / Minimum Attractive Rate of Return (MARR) (10%). If the comparison results are the same or positive, the investment is considered feasible. If the comparison results are negative, the investment is considered unfeasible.

c. Internal Rate of Return

This analysis uses a method of calculating the present value of the investment value (Net Cash flow) with a certain interest rate compared to the value of the investment until a negative result is obtained. Then, the interest rate at the present value is compared with the expected interest rate (MARR = 10%). If the yield is greater, the investment is considered feasible.

Additionally, the calculation of investment value and pool revenue estimated the investment value of two-story buildings of IDR 16.688.455.300. This number was derived from the estimation construction costs of IDR 15.171.323.000 plus interest during construction period of IDR 1.517.132.300.

Provided with the investment cost above, we could estimate the pool income. The estimated visitors of 300 people per day with entrance fee of IDR 25.000 produces pool income per of IDR 7.500.000, and pool income per year (Rp. 6,000 x 360) of IDR 2.700.000.000

The visitor satisfaction model at Kartika Swimming Pool based on the results of the SEM-PLS analysis is presented in Figure 2.

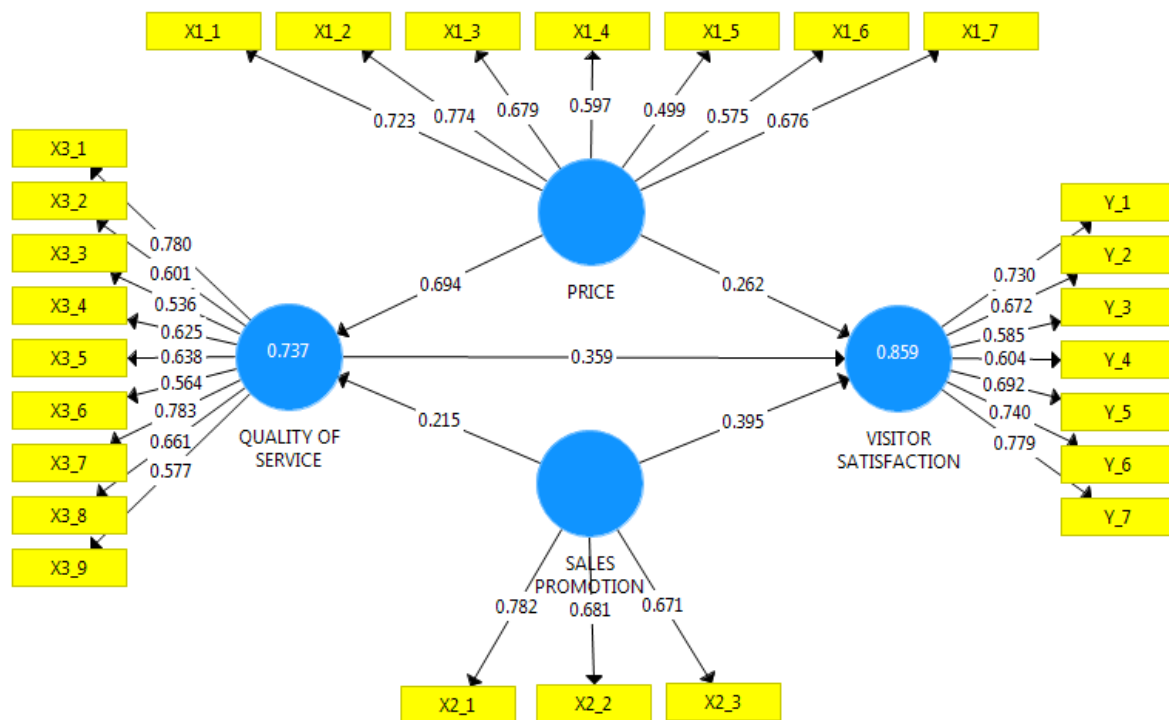


Figure 2. The Visitor Satisfaction Model at Kartika Swimming Pool

The R² Value from the SEM-PLS analysis results is presented in Table 1.

Table 1. R² Value

Variables	R ²
Quality of service	0.737
Visitor satisfaction	0.859

The value of R^2 in the quality of service variable is 0.737, which means that the indicators on the price and sales promotion variables are able to explain the quality of service variable by 73.70%. the value of R^2 on the visitor satisfaction is 0.859 which means that the indicators on the variable price, sales promotion and quality of service are able to explain the visitor satisfaction variables by 85.90%, while the remaining 14.10% is explained by other variables outside the model.

The value of the path coefficient on the Kartika Swimming Pool visitor satisfaction model is presented in Table 2.

Table 2. Path Coefficient Value

Variables	Path Coefficient Value	p-value
Price → quality of service	0.694	0.000
Price → visitor satisfaction	0.262	0.004
Quality of service → visitor satisfaction	0.359	0.000
Sales promotion → quality of service	0.215	0.031
Sales promotion → visitor satisfaction	0.395	0.000

Based on Table 2, the SEM-PLS model equation is obtained as follow :

$$Y = 0.262X_1 + 0.359X_2 + 0.395X_3$$

Information :

Y = visitor satisfaction

X₁ = price

X₂ = sales promotion

X₃ = quality of service

Based on the path coefficient value table, it can be explained that the direct influence of the variable price, sales promotion and quality of service on visitor satisfaction is significant ($p < 0.05$) with coefficient values of 0.262, 0.359 and 0.395. The indirect effect of the variable price on the visitor satisfaction variable through the mediation of quality of service shows significant results ($p < 0.05$) with a coefficient value of 0.694, the quality of service variable has a significant effect on visitor satisfaction ($p < 0.05$). this shows that the quality of service variable gives full mediation effect. The indirect effect of the sales promotion variable through quality of service mediation showed significant results ($p < 0.05$) with a coefficient value of 0.215, the quality of service variable had a significant effect on visitor satisfaction ($p < 0.05$). this shows that the quality of service has a full mediation effect.

The results are in line with the results of research by Ibrahim and Musadad (2019) which affect the satisfaction of visitors to the Queen Star Waterpark in Siak Regency, meaning that price is a very sensitive factor in determining visitor satisfaction. Sales promotion

berpengaruh terhadap visitor satisfaction. This result is in accordance with Bekator et al (2018) that marketing communication in the form of promotional activities has a positive effect on customer satisfaction. Quality of service affect visitors satisfaction. This is in line with the results of research by Agulo *et al* (2015), namely that visitors are satisfied with the service of polite and friendly officers. Officers who can make a positive impression on visitors.

4. CONCLUSION

The feasibility level of the amusement rides of Kartika Swimming Pool, according to visitors, is fairly decent by 75% of 100%. High enthusiasm of visitors made at least 100 tickets were sold every day and on holidays up to 500 tickets were sold.

The feasibility level of the overall amusement rides is fairly decent. The feasibility level of the rides in Kartika Swimming Pool is 75.5%, while according to visitors assessment, it is 56%. To sum up, the rides in Kartika Swimming Pool in Kroyo Sragen, Central Java are fairly feasible an interval of 50.6% -75.5%.

The feasibility analysis and the results of the calculations produced the feasibility analysis results that: (1) Pay Back Period is reached in the seventh year, second month; (2) Positive NPV is 3.526.413.990; and (3) Calculation of IRR at an interest rate is 13.913% above MARR by 10%. The calculation above leads to the conclusion that Kartika Swimming Pool Construction Investment is feasible as long as it is in accordance with the assumptions.

price, sales promotion and service of quality have a significant effect on visitor satisfaction at Kartika Swimming Pool.

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