

# **Tourists visit to Boti falls in the Yilo Krobo district of the eastern region, Ghana: Revenue and development perspectives**

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## **Abstract**

The study was to assess Tourists visit to Boti Falls in the Yilo Krobo District of the Eastern Region, Ghana: Revenue and Development perspectives as the general objective. The specific objectives were to: rank the level of satisfaction of Tourist for visiting the water falls, identify other means apart from the revenue the water falls generate, estimate the rate at which Tourists (people) visit the fall, and identify other falls closer to Boti falls. A survey was used to sample the target population; in all a total of 260 respondents participated in the research. The data obtained were coded and analyzed by the use of SPSS version 16. The study employed the simple random sampling as a sampling technique couple with the Travel cost method. The study revealed arbitrary charge of entrance fee to the falls and that leads to loss of revenue to the assembly. The study also observed no provision of tickets as this could lead to embezzlement of funds. The study recommended the provision of tickets upon entry and fixed rates should be maintained. Land owners should provide lands for building guess houses at the falls.

## **Keywords**

Tourists Visit, Boti Falls, Yilo Krobo District, Eastern Region, Ghana, Revenue and Development

## **1. Introduction**

Tourists visit influence tourism development and tourism has been among the largest contributor to local domestic development in terms of revenue and national development in terms of Gross Domestic Product [3].

The Boti Falls is situated in the Yilo Krobo district of the Eastern Region of Ghana. This important waterfall is located at the heart of the forest reserve at Huhunya, which is about 17km North-East of Koforidua, the regional capital. The falls flow from river Ponpon which starts at Ahenkwa-Amalakpo and through to Boti Langmase where it turns into the waterfalls and it is a 30m high waterfall 30.

Recreational visit has played an important role in the provision of leisure and reduction of stress. Individuals and households pay to enjoy this natural resource that has been provided by nature.

Revenue is the money that, a government receives from taxes or that an organization, company, and so on receives from its business (operations). Revenue also refers to, an amount earned or received from the sale of an item.

Boti falls witnessed a tremendous increased in tourists visitation each day and entrance fee is charged before access to the site. Caretakers of the falls receive entrance fees from tourists (visitors) which serve as revenue for its operation. Proper documentation and quantitation of how revenue is accrued from visitors' visitation and how much of this revenue is used for the development of the Yilo Krobo district has been very difficult to approximate.

The general objective of the study is to assess Tourists visit to Boti Falls in the Yilo Krobo District of the Eastern Region, Ghana: Revenue and Development perspectives.

The specific objectives are put as follows:

- To assess the revenue contribution from the Boti Falls to the Assembly.

- To rank the level of satisfaction of tourist for visiting the water falls.
- To identify other means apart from the revenue the water falls generate.
- To estimate the rate at which tourists (people) visit the fall.
- To identify other falls closer to Boti falls.

The study therefore, posed these research questions, which are as follows:

- What is the revenue contribution from the Boti Falls to the Assembly?
- What other means apart from the revenue the water falls generate?
- What is the rate of visit by tourists (people) to the Boti fall?
- Are there other falls which have the same characteristics as Boti falls?

This study was undertaken as a step towards understanding the contribution of Boti falls to the revenue of the Yilo Krobo district. The study explained how tourism effects the local community of Boti and therefore, makes inferences to other falls in Ghana.

[4] estimated the economic impacts of tourism on the economy of Grand County, UTAH. This study opined that, tourism has led to the rapid population growth and economic change in Grand County. The study asserted that, recreational uses are in conflict with traditional use activities such as grazing and mining. The researcher provided information on how spending by tourists effects the Grand County.

[2] looked at tourism development in the Yellowstone National Park over two decades. They applied the Tourism Area Life Cycle concept (TALC) in the Greater Yellowstone Region. The study concluded that, tourism is seen as a system by which all actors can work together to enhance development.

In general, the impact of tourism to local communities and countries at large cannot be over emphasised.

[10] posited that, main positive economic impacts of tourism relate to foreign exchange earnings, contributions to government revenues, and generation of employment and business opportunities. Tourism expenditures and the export and import of related goods and services generate income to the host economy and can stimulate the investment necessary to finance growth in other economic sectors.

[1] explained that, residents of a community have different explanation as regards the impact of tourism to their local communities.

Tourists visitation to falls is dependent on the level of satisfaction from the recreational activity and how attractive the recreation resource. [5] argued that, tourism attractiveness is dependent on the personal benefits of travelers and on the perceived delivery of those benefits.

Tourist centres in Ghana have various tourist products which if properly developed and marketed will generate the large amount desired revenues that could economically

sustain tourism institutions and places in the country.

## 2. Methodology

The research was based on a social survey aimed at eliciting information from the respondents. In the accomplishment of the objectives of the study, a questionnaire was developed in order to obtain views of the respondents and obtain the necessary data. After the data collection, there was analysis of data.

The target population for the study was tourists who visited Boti falls, staff and people living closer to the Boti falls. This was chosen in order to have the main respondents answer the questions. It further enhances the reliability of results and findings. The study used Simple random sampling as a sampling technique and this was used in order to obtain adequate representation of the target population.

For analysis and presentations of data, two hundred and sixty (260) questionnaires retrieved out of 300 questionnaires (86.67% response rate) and fed into Statistical Package for Social Sciences (SPSS) software version 16 for analysis. The frequency counts were converted to percentages. The results were then summarized as major findings of the study. The discussions were done according to the major findings identified in the study and were used to answer the research questions.

This study entirely was an evaluative cross sectional study.

### Theoretical Model

Tourists Visit to Boti falls was modelled based on individual travel cost model. We assumed a utility based on a number of socio-economic characteristics of respondents including: The total time spent at the Boti falls, the quality of the falls, the number of visits and other basic information.

The Utility Maximization Problem:

$$\text{Max: } U(X, r, q) \quad (1)$$

This is subject to a double constraint of monetary and time budgets:

$$M + P_w * t_w = X + C * r \quad (2)$$

$$t^* = t_w + (t_1 + t_2) r \quad (3)$$

Where  $X$  = the quality of the numeraire whose price is one.

$r$  = the number of visits to Boti falls

$q$  = environmental quality at Boti falls

$M$  = exogenous income

$P_w$  = Wage rate

$C$  = Monetary cost of a trip

$t^*$  = total discretionary time

$t_w$  = hours worked

$t_1$  = round trip travel

t<sub>2</sub>= time spent at Boti fall

The monetary cost of a visit to Boti falls is composed of the entrance fee and the cost of transportation to the Boti falls. In order to maximize the utility function subject to (2) and (3) will yield the individual demand function for visits as follows:

$$r = r (P_r, M, q) \tag{4}$$

The study therefore, employed the rates of visitation and the travel costs to estimate the coefficient on P<sub>r</sub> in a travel cost – visitation function. [6] puts it that, the coefficient P<sub>r</sub> can be used to derive the individual’s demand for visits to any site (Boti falls) [8].

From the above models (1, 2, and 3), the basic assumption is that, the respondents visitation is solely for Boti fall and therefore, any cost incurred to the falls is included in the model for analysis. However, if visit to the Boti fall is secondary, such a cost will not be included into the model for analysis. The time spent in the travel process has always been a matter of debate, whereas some researchers including [9] treat travel time as endogenous, others like [7] treat travel time as a proportion of wage.

**Empirical Model**

The empirical model used for the analysis was an ordinary least squares (OLS) regression of the travel cost method. This model was used because, it has a very good predictive power to explain the explanatory variables.

An individual visitation to Boti falls using the travel cost per trip was modelled following Richard et al (N.d) as follows:

$$\text{Travel Costs}_i = \alpha + \sum \beta_j X_{ji} + U_i \tag{5}$$

Where; j represents each variable, i represents the individual and X is the value of each explanatory variable with β been the coefficient of the explanatory variables. The explanatory variables included in this model are, income, education, age, number of immediate dependents and alternative sites.

**3. Results and Discussions**

*Table 1. Gender Distribution of Tourists.*

Gender	Frequency	Percentages (%)
Male	151	58%
Female	109	42%
Total	260	100%

Source: Field Survey, 2013

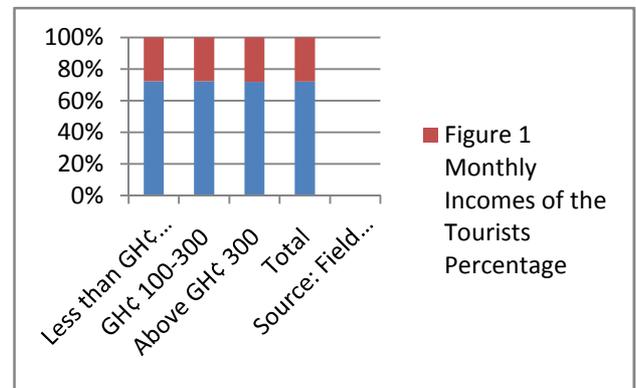
The table 1 above shows that both sexes visit the Boti fall but in different proportion, there were one hundred and fifty-one (151) males constituting 58% and One hundred and nine females representing 42% of the respondents. This shows that, within a period of time the visitation based on gender shift males were dominating.

*Table 2. Level of Education.*

Level of Education	Frequency	Percentage
None	31	12
JHS	63	24
SHS	109	42
Tertiary	57	22
Total	260	100

Source: Field Survey, 2013

Table 2 above indicates that as many as thirty-one (31) representing 12% of the respondents sampled out of the 260 respondents had no education; sixty-three (63) respondents representing 24% were individuals with Junior High School level certificate. Again, one hundred and nine (109) respondents thus 42% were Senior High School graduates and fifty-seven (57) respondents constituting 22%, were of tertiary certificate education.



*Figure 1. Monthly Income.*

The above figure 1 shows that, out of the 260 respondents, two hundred and three (203) respondents representing 78% earn monthly income less than GH¢ 100, twenty-one (21) respondents constituting 8% earn between GH¢ 100 - 300 and thirty six (36) respondents representing 14% earn above GH¢300.

*Table 3. Rate Tourists visit within a Month.*

Rate	Frequency	Percentage
Once	182	70
Twice	36	14
Thrice	26	10
Four and above	16	6
Total	260	100

Source: Field Survey, 2013

Table 3. above shows that, all respondents visit the falls but the rates at which they visit vary within the month. A hundred and eighty-two (182) respondents’ representing 70% visited the fall once in a month, thirty-six (36) respondents representing 14% visited the falls twice in a month. Twenty-six (26) respondents representing 10% visited the falls thrice in a month and sixteen (16) respondents constituting 6% visited the falls four times or more in a month.

From table 4, shows that twenty-six (26) respondents, representing 10% spent less than GH¢1.0 when visiting the Fall, seventy-eight (78) respondents representing 30% spent GH¢1.00 - 2.00, ninety-nine (99) respondents representing 38% spent GH¢3.00 - 4.00 and fifty-seven (57) respondents representing 22% spent GH¢5.00 and above whenever they visited the Fall.

**Table 4.** Amount Spend to Travel to Boti Falls.

Amount	Frequency	Percentage
Less than GH¢ 1	26	10
GH¢ 1- GH¢ 2	78	30
GH¢ 2 - GH¢ 3	99	38
GH¢ 3 and above	57	22
Total	260	100

Source: Field Survey, 2013

**Table 5.** Entry fees at Boti falls.

Amount GH¢	Frequency	Percentages (%)
Less than GH¢1	0	0%
GH¢1-2	213	82%
GH¢3-4	31	12%
Above GH¢ 4	16	6%
Total	260	100%

Source: Field Survey, 2013

From table 5.above, it is observed that the majority of the respondents, two hundred and thirteen (213) representing 82%, were people who spent GH¢1 - GH¢2 as entry fees when they visit Boti falls. Thirty-one (31) constituting 12% respondents also paid GH¢3 - GH¢4, sixteen (16) being 6% of the respondents paid GH¢4 and above while none of the respondents paid less than GH¢1.

**Table 6.** Level of Satisfaction of Tourist from Visiting Boti Falls.

Satisfaction Level	Frequency	Percentage
Very Satisfied	234	90
Satisfied	16	6
Neutral	5	2
Unsatisfied	5	2
Total	260	100

Source: Field Survey, 2013

In response to this question about the satisfaction level of tourists and individuals who visited the place, the graph above shows that, two hundred and thirty-four (234) respondents forming 90% indicated they were very happy to visit Boti falls, sixteen (16) respondents representing 6% indicated they were satisfied, five (5) forming (2%) responded neutral while one (2%) responded unsatisfied. This result demonstrated and similar to the results of the work of [5].

The table 7. Shows responses of the respondents regarding their perspective on what the revenues were used for. According to the data collected, a hundred and thirty-nine (139) respondents making (53%) indicated that the revenue was used for development of the site, but eighty-three (83) of the respondents making (32%) had

other ideas and indicated otherwise (not for development). The remaining respondents (i.e. thirty-eight, (38) making 15%) had no idea on what the revenues were being used for.

**Table 7.** Perspectives on Uses of Revenue.

Uses	Frequency	Percentage
For Development	139	53
Not for Development	83	32
No Idea	38	15
Total	260	100

Source: Field Survey, 2013

**Table 8.** Results of the OLS Regression.

Variables	Coefficient	Standard Error
Intercept	7.1084	0.014
Income	-0.0154	0.01
Education	0.0213	0.004
Age	-0.0121	0.019
No. of Dependents	-0.154	0.059
Alternative Sites	-0.0012	0.032
R= 92%		
R <sup>2</sup> = 90%		
DW= 1.892		
Independent Variable: Travel Costs		
5% Significance Level		

Source: Field Survey, 2013

$$TC_i = 7.1084 + 0.0213Edu - 0.0154Y - 0.0121Age - 0.154Dep - 0.0012Alt.$$

The result of the OLS regression is consistent with economic reasoning and theory. The study considered individual Tourist socioeconomic characteristics to help in prediction.

From the analysis, as travel cost increases, it has a negative relationship with Tourist visits to Boti falls. This means that, many Tourists reduce their visits to Boti falls as costs of visit to the site increases. It was realised that, education had a positive relationship with visit to Boti falls. This is attributable to the leisure component Tourists attach to visit to recreational centres. This result is consistent with the results of [8].

Another variable like existence alternative sites have a negative impact on Tourist visits to Boti falls. The study observed the existence of Arkaah falls which is closer to Boti falls has influence Tourist patronage of Boti falls negatively. An increase in number of dependence has also negatively influence visits to Boti falls. Lastly, the older the person, the less likely he/she will visit Boti falls. Indeed, age had a negative relationship with Tourists visit to Boti falls. In all, the model has a very predictive power with R squared been 90% and DW= 2.

## 4. Conclusion and Recommendation

The general objective of the study was to assess Tourists visit to Boti Falls in the Yilo Krobo District of the Eastern Region, Ghana: Revenue and Development perspectives.

The analysis of the data from the respondents reveals

that, though on the bases of gender, males constitute 58% and females 42%, this is not fixed or constant. Majority of the Tourists who visit the falls are within the age range of nine years to thirty years with the highest educational level of Senior High School. The highest income level for most of the Tourists is below GH¢100 which is 78% and 14% are those above GH¢300.

In conclusion, Tourists visit to the falls but at different times in the month. According to the responses, about Eighty-three percent would choose Boti falls over a comparable falls (Arkaah falls); this was with the reasons being that, Boti falls is twins (that makes it more attractive than Arkaah falls) and it also lead you to other nearby tourist site like the three-headed palm tree, umbrella rock although Arkaah falls also lead you to other site like the snake-like palm tree. Most Tourists (visitors) suggested that effective management should be put in place that would lead to the development of the site,

Based on the findings and problems identified, the study put forward the underlying recommendations.

The Assembly and the Government should put in place the necessary actions and measures to effectively develop the site to attract more Tourist to generate more revenue.

Again, effective management should be put in place that would lead to the development of the site, whilst government and the assembly provide support to the operators.

As a result of high satisfaction, there should be more recreational centres at the place to entertain the Tourists.

The Ministry of Tourism should formulate policies for protection and development of the falls and all other ones that will lead to high revenue contribution to the State and the Assembly.

The revenues generated should be used to develop the

place and also the Assembly and the Land owners should made available some rooms as quest house for Tourists who come from far places and could not return to their various destinations on that same day.

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