Impact of Ikere Gorge Dam on Socioeconomic Development in Nigeria

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Aim/Purpose	The purpose of this paper is to examine the impact of Ikere Gorge Dam on socioeconomic development of Ikere Area of Oyo State, South-Western Nigeria and the Nation at large.
Background	This study investigated the impact of Ikere Gorge Dam on socioeconomic development of Ikere Area of Oyo State, South-Western Nigeria and the Nation at large by employing correlational research design. Secondary data were sourced from journals; books among others while Primary data were collected through the passage of web-based questionnaires to those have knowledge about the potentials of the Dam.
Methodology	The study employed correlational research design. Secondary data was sourced from journals; books among others while Primary data was collected through the passage of web-based questionnaires. The study employed Partial Least Square Structural Equation Model (PLS 3-SEM) for drawing the research results.
Findings	The study found that there is a positive relationship between Ikere Gorge Dam Potentiality (hydroelectric power generation, irrigation, fishery, tourism capacities) and socioeconomic development in Nigeria.
Impact on Society	Ikere Gorge Dam is endowed with resources, which are essential for social amenities required by the Host Communities and the entire country.
Keywords	Ikere Gorge Dam, Oke-Ogun, Oil Revenue, Hydropower, Tourism

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				☒	Social Sciences
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				☐	Psychology/Consciousness
				☐	Astronomy
				☒	Economics

Human Elements Addressed					
☐	Personality Traits	☒	Development	☐	Mental Wellbeing
☐	Behaviour	☐	Environmental	☐	Consciousness
☐	Cognition	☒	Social	☐	Physical Wellbeing

INTRODUCTION

No Nation grows to greatness without the significant influence of social and economic developments, which could be achieved through her river basin reservoir capacities because the legacy of human efforts to direct and regulate nature has transformed river basins across countries (Fox, 2009). Several developed countries such as U.S.A., Canada, United Kingdom, Germany, Japan as well as developing economies such as China, India, Indonesia and South Africa leverage on their river basins or dams for domestic and industrial water supply, irrigation farming, fishing, tourism and hydroelectric power. This is due to the fact that water is a basic and indispensable natural and economic resource required for sustaining human life, production activities and other socioeconomic developments of any Nation, (Zhang, Jin, & Yu, 2018). In Nigeria, twelve River Basin Authorities were established in order to promote hydroelectricity, fishery, tourism, navigation, irrigation farming and livestock developments with a view to minimizing rural-urban migration and diversifying the national economy away from crude oil. To date, the impact of the River Basin Development Authorities (RBDAs) has been negligible in Nigeria (Ogundele, 2019). Ikere Gorge Dam, which is managed by Ogun-Osun River Basin Development Authority has remained untapped as a driver for economic development. It is an earth-fill dam located in Iseyin Local Government area of Oyo State, Nigeria (Adeyemo, 2016). The dam, with reservoir capacity of 690 million m^3, was planned by the then Military Regime of former President Olusegun Obasanjo; work on the Dam commenced in 1982 during Shehu Sagari Administration. The dam was proposed to generate 37.5 Megawatts of electricity and provide water for drinking, recreation, navigation and irrigation.

The dam, which is one of the biggest in South-West, Nigeria is always of full capacity between March and October, which is also the best period for visitation and tourism. The dam can provide significant volumes of water for irrigation activities throughout the year. The electricity generating turbines procured in 1982 for the Dam still remained uninstalled, abandoned and are obsolete. The dam was estimated to produce electricity for communities in Oyo State and beyond. Odunfa, Saudu and Oladimeji (2019) estimated that Ikere Gorge Dam could produce 3.6 x 107 kWh of hydropower electricity each year and generate nearly N580 million1 annually for Nigeria. Also, the study sought to cover some theoretical gaps in the literature that examined associationship between socioeconomic development and Ikere Gorge Dam Potentialities in Nigeria. Firstly, there had been inconsistent results on the relationship between social economic development and River Basins. While studies such as Salau,

Paul, and Ganiyu (2017); Raphael, Adekanye, and Alhassan (2016); Danladi, and Naankiel (2019); Gbadegesin, (2016); Oyediran (2014) and Howe (1976) found the independent variables (Hydroelectric power generation, irrigation system, water supply fishing and torusim) to have had significant relationships socioeconomic development whereas Tan, Han, Yu, Hu, Lv, and Shu (2021) as well as Freden (2011) reported otherwise in other jurisdictions. As there is no consensus among the scholars on the drivers of socioeconomic development with respect to the River Basins, there is the need to conduct this research in order to close the knowledge gap so as to possibly identify which factors drive River Basins related socioeconomic development in developing economies such as Nigeria.

Secondly, some studies were conducted by combining several River Basins and their potentialities such as Danladi, and Naankiel (2019) while others focused only on a River Basin or a Specific Dam and its Potentialities such as Tan, Han, Yu, Hu, Lv, and Shu (2021) and Oyediran (2014) among others. However, this study is poised to utilize data obtainable from the primary source to examine how socioeconomic development is influenced by facilities realizable from a River Basin or Dam in Nigeria. Since facilities such as hydroelectricity, irrigation, water supply, fishery and tourism, which form hypotheses 1-5 of this paper are likely to drive socioeconomic development, this study will test the strength of those factors in influencing the lives of the inhabitants of Ikere Gorge Dam Community in this jurisdiction.

LITERATURE REVIEW

EMPIRICAL STUDIES OF SOCIOECONOMIC IMPACTS OF RIVER BASIN RESERVOIRS (DAMS)

Community developers are specialists who work to improve people's and Some empirical studies have sought to examine the impact of River Basin Reservoirs (Dams) on socioeconomic developments. Most of the studies reviewed focus on the conceptual approaches to evaluating the influence of reservoirs (dams) on socioeconomic development of a country.

International Studies

Tan, Han, Yu, Hu, Lv, and Shu (2021) examined the impact of the Yellow River on economic and social development in China from 1984 to 2018. The findings of the study revealed that the decline in runoff from Toudaoguai and Sanmenxia stations influenced a decline in the level of sediment of the Yellow River in China. This has the same research objective with that of Freden (2011), which evaluated the effect of Mekong River catchment (Dam) on Lowland Agricul-

ture in Laos, Cambodia and the delta in Vietnam. Therefore, the studies are Asian specific, which may not address the socioeconomic importance of Ikere Gorge Dam in Nigeria. The present research will focus on inherent benefits of Ikere Gorge Dam to socioeconomic development in Nigeria.Additionally, Howe (1976) studied effect of Arizonal and Arkansas River Basins on economic growth in the U.S.A. It was a conceptual paper without data analysis but opinion formation. Howe's review of other studies on Central Arizona River and Arkansas River, U.S.A. showed that the existing river basin has a strong positive impact on economic growth. However, the study failed to explore empirical examination of the subject. The current study would seek to investigate the subject through the survey research approach in a developing economy (Nigeria).

Domestic Studies

Danladi, and Naankiel (2019) studied the effect of RBDA on Economic Development in Nigeria. The investigation was mainly conceptual without data analysis but opinion formation. The result of the study showed that there is a slight impact of River Basins on social and economic developments in Nigeria due to mismanagement, inadequate funding, insecurity, corruption and poor political will. Salau, Paul, and Ganiyu (2017) also investigated the influence of Ikere Gorge Dam on hydrokinetic power generation in Nigeria without any empirical assessment of the issue and the research methodology of Raphael, Adekanye, and Alhassan (2016) is essentially similar to that of Danladi, and Naankiel (2019); Salau, Paul, and Ganiyu (2017) as well as Gbadegesin, (2016), which lacked empirical investigations. Hence, the methodological defect in the literature will be addressed by the present research by using recent data, which would be analyzed through the structural equation modeling (PLS 3).

Additionally, Okukua, Bouillona, Ochiewob, Munyi, Kiteresi, and Tole (2015) assessed the impact of hydropower development on rural livelihood sustenance in Kenya. Primary and secondary data were gathered through interviews and questionnaire. The data were analyzed through the use of Charts. The findings showed marginal positive effect of hydropower development on rural livelihood sustenance of people around Tana Reservoir in Kenya. The research was conducted in Kenya with only hydropower as an independent variable. The present study is however conducted in another context in a West African country, thereby taking care of environmental, variables and period gaps identified in the literature.
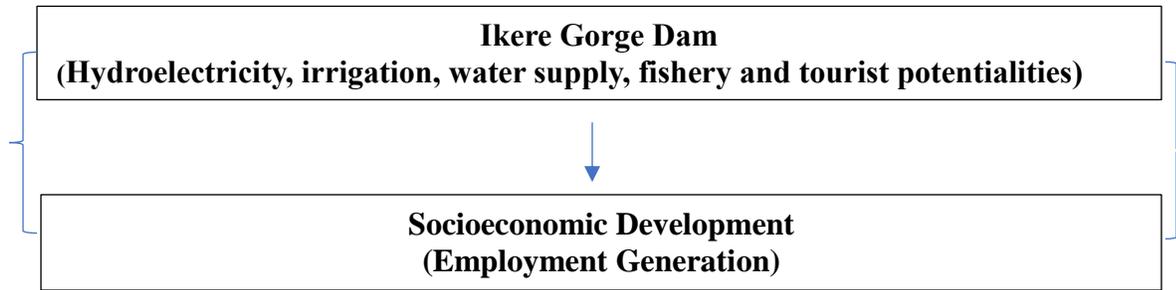
Finally, Oyediran (2014) studied the influence of Ikere Gorge Dam on Fishing and Farming activities in Nigeria. Primary and secondary data were obtained using cluster and systematic random sampling techniques. The data were analyzed using simple analytical techniques (frequencies and percentages). The findings revealed that Ikere Gorge Dam has capacity for large scale fishing and irrigation farming. Notwithstanding, the study failed to employ econometric technique of analysis in deriving the outcome of the research. The present research seeks to utilize a robust technique of data analysis with more variables of interest.

THEORETICAL FRAMEWORK OF SOCIOECONOMIC IMPACTS OF RIVER BASIN RESERVOIRS (DAMS)

Stakeholder Theory hinges on social economy, in which organizations make money while creating positive impact on the society in which they operate. The theory is in consideration of corporations' return of capital to their owners and the social benefits to the communities in which they operate. Stakeholder Theory was first propounded by the Stanford Research Institute in 1963 and it was strengthened by the work of Freeman in 1984, (Freeman, & Mcvea, 2001). He stated that entities consist of stakeholders, which affect or are affected by the achievements of the organizations' objectives because they have legitimate interests, which the management ought to satisfy (Retolaza, & San-Jose, 2011). Studies such as Oluwafemi and Oyatoye, (2012); Ihugba, (2012); Abubakre, (2015); Christopher Isike, C. & Ajeh A. (2017) employed the Stakeholder Theory in the examination of multinational, oil and gas companies in Nigeria but no study has contentiously utilized the theory in the investigation of socioeconomic benefits of Ikere Gorge Dam in the country. Hence, this study would explore the stakeholder theory to underpin the research result.

STUDY FRAMEWORK

Based on the review of both domestic and foreign previous studies on the relationship between Ikere Gorge Dam Potentialities and socioeconomic development, the following research framework shown in Figure 1 was developed in order to encapsulate the study objective and scope with regards to the dependent (socioeconomic development) and independent variable Ikere Gorge Dam employed in this empirical research.

Ikere Gorge Dam **(Hydroelectricity, irrigation, water supply, fishery and tourist potentialities)**

↓

Socioeconomic Development **(Employment Generation)**

Source: Author's Formulation

Figure 1: Conceptual Framework

Concept of Dams

A dam is a barrier built to retain water and it is also a structure constructed to hold back the flow of water (The British Dam Society, 2021). Water from dams is required for various purposes such as domestic and industrial uses, thermoelectric and hydroelectric power uses, recreational and navigation uses, (Altinbilek, 2001) for the increasing needs of the country's increasing population (Maninder, 1999). During the 20th century, dam construction was specifically classified as the major measure of managing river basin required for flood control, water supply, generating hydroelectric power and minimizing risks against natural disaster (Shi, Chen, Liu, & Sivakumar, 2019) as shown in figure 1, leading to employment opportunities and other socioeconomic developments both for the for the benefits of the host communities in Oyo State and Nigeria in generally.

Overview of Ikere Gorge Dam

The Ikere Gorge Dam is an earth-filled dam located at Ikere Village, thirty-three kilometers (33 km) northeast of Iseyin Local Government Area of Oyo State, Nigeria. Iseyin is one of the ten local governments that constitute Oke-Ogun Area of Oyo State and the city is about 100 kilometers north of Ibadan, the Capital of Oyo State. The Dam has water capacity of 690 million m3 with a surface area of 47 km2, length of about 50 meters and depth of 35.599 meters, (Adeyemo, 2016) as shown in Figure 2. As depicted in Figure II, Ikere Gorge Dam was constructed by Ogun-Osun River Basin Development Authority in order to develop water resources potentials of the Ogun River basins. The reservoir has four water sources but Ogun River feeds the dam with over eighty-five percent (85%) of water. The Dam was expected to generate 3,750 units of electricity per hour through turbines for rural electrification. It was also planned that the Dam would supply two hundred and thirty-three million cubic

meters (233m3) of water to service twelve thousand hectares (12,000 ha) for irrigation activities. It was anticipated that the Dam would equally supply nine-ty-two million cubic meters (92m3) of water to towns such as Iseyin, Iganna, Okeho and their environs as well as the supply of eighty million cubic meters (80m3) of water to Lagos State Water Corporation for their consumption re-spectively (ICRC, 2018).

Source: (Ogunjobi, 2021)

Figure 2: Ikere Gorge Dam View

METHODOLOGY

RESEARCH DESIGN

In line with previous studies such as such as Henseler, Hubona and Ray (2016); Garson, (2016) and (Malik, Noreen, and Awan, 2018), the research approach employed in this paper is quantitative in nature. The research design used in this study is the descriptive and correlational research design due to the fact that it is used to determine the degree of relationship between two or more variables.

METHODS AND SOURCES OF DATA COLLECTION

The main rationale behind this research stems from the need to evaluate the impact of Ikere Gorge Dam on the socioeconomic development in Nigeria us-ing data from primary and secondary sources using the electronic Survey meth-od (e-questionnaires), which are analyzed through the use of Partial Least Squares Structural Equation Modeling (PLS-SEM) as indicated in Table 3 of this study.

POPULATION SIZE

The population of the study consists of 4,008 fishermen and food crop farmers in the Northwestern part of Oyo State as estimated by 2009 National Population Commission Statistics (Oyediran, 2014). As a result of the restriction imposed by the Covid-19 Pandemic, one hundred (100) online questionnaires were successfully sent to the literate participants using a google-form link. The use of online survey method was justified based on the current ravaging effect of Covid-19 (Corona) pandemic and the need to keep social distancing. The target participants in the area were also chosen based on their access to the internet.

SAMPLE SIZE

Eighty-five (85) responses were obtained as sampled data in the year 2021 while sixty=two (62) were appropriately and completely filled. Illustratively, the average number of household size of Ikere Gorge Dam Communities was obtained as seven (7), making the total number of households in the area to be N=573 (4008 / 7). Israel (2003) reported a simplified formula for determining sample size as proposed by Yamane (1967) using 90% confidence level as stated below:

$$n = N/1 + Ne2$$
$$n = 573 / 1 + 573 (0.102)$$
$$n = 85 \text{ (sample size)}$$
$$Where:$$
$$n = sample size$$
$$e = significance level (10\%)$$

VARIABLES

Six (6) variables are used based on the e-questionnaire assigned and depicted in Appendix I of this study. The independent variable is the Ikere Gorge Dam Potentiality represented by hydropower, irrigation, water supply, fishing and tourism while the Dependent Variable is the Socioeconomic Development proxied by the Employment Generation, which is in line with the procedure used by Malik, Noreen and Awan (2018).

Table 1: Summary of variables employed in this study

No.	Variables	Code	Measures
1	Hydropower capacity	Hydt	Ikere Gorge Dam in generating electricity Potentiality.
2	Irrigation capacity	Irrigt	Ikere Gorge Dam in boosting irrigation Potentiality.
3	Water Supply capacity	Watert	Ikere Gorge Dam in promoting commercial fishing Potentiality.
4	Fishing capacity	Fisht	Ikere Gorge Dam as a centre of attraction and tourism Potentiality.
5	Tourism capacity	Tourt	Ikere Gorge Dam in supplying water Potentiality.
6	Socioeconomic Development	SEDt	Employment generation Potentiality.

Source: Author's Compilation

RESULTS

This part presents analysis and discussion of the study results. Specifically, descriptive statistics and correlation analysis of the research variables are presented together with the responses of respondents using tabulation and frequencies as shown in Appendices II-VI of this study. Subsequently, the policy implication of the research results will be covered in this section.

DESCRIPTIVE STATISTICS

From Table 2, the average value of socioeconomic development of 4.532 signifies that socioeconomic development deviates from the mean value by 0.756. Also, the standard deviations fell within ± 1 range for all the variables used in this research, implying that the variables; Ikere Gorge Dam Potentialities (Explanatory Variables) and socioeconomic development (Explained variable) are normally distributed. Furthermore, the anticipated range of chance fluctuations for kurtosis and skewness is ± 7 (Tabachnick, & Fidell, 2007). The Table 2 therefore revealed that both kurtosis and skewness are within the accepted range of ± 7. The following part covers the correlation result of the variables of this study.

Table 2: Descriptive Statistics of the study variables (N= 573)

Variables	Mean	Min	Max	STDEV	Kurtosis	Skewness
Socioecon-Dev.	4.532	1	5	0.756	6.549	-2.178

Hydropower	4.742	3	5	0.473	1.624	-1.593
Irrigation	4.355	2	5	0.764	1.168	-1.16
Water Supply	4.548	3	5	0.664	0.229	-1.197
Fishing	4.500	1	5	0.798	4.779	-1.951
Tourism	4.629	2	5	0.678	5.631	-2.24

Source: PLS 3 (SEM)

CORRELATION ANALYSIS OF THE IKERE GORGE DAM POTENTIALITIES AND SOCIOECONOMIC DEVELOPMENT

This section shows the relationship between the dependent (socioeconomic development) and the independent variable (Ikere Gorge Dam Potentialities). Table 3 shows the correlation results between independent variable (Ikere Gorge Dam Potentialities) and dependent variable (socioeconomic development). The correlation coefficient signifies the linear relationship between explanatory and explained variables and also between the explanatory variables themselves.

Table 3 Correlation Matrix of the Research Variables

	Socioecon.Dev.	**Hydropower**	**Irrigation**	**Water Supply**	**Fishing**	**Tourism**
Socioecon.Dev.	1					
Hydropower	0.294	1				
Irrigation	0.259	0.343	1			
Water Supply	0.093	0.553	0.411	1		
Fishing	0.521	0.384	0.476	0.304	1	
Tourism	0.228	0.607	0.41	0.488	0.462	1

Lastly, issue of multicollinearity arises when the correlation exceeds 0.8 (Kennedy, 2008). The correlation table 3 therefore shows that the overall correlation among the explanatory variables fell below 0.8, implying that there is an inconsequential level of collinearity among the variables. The following section presents the demographic information as well as respondents' responses from which inferences would also be drawn and hypotheses tested about the independent and dependent variables.

DEMOGRAPHIC INFORMATION OF THE RESPONDENTS

From the Table 4, the gender distributions of the respondents showed that they were predominantly male (89%) while female were (11%). This implies that River Basin or reservoir activities are mainly conducted by male counterparts in Nigeria.

Table 4: The Respondents' Demographic Information

Characteristics	Frequency	Percentage	Cumulative Percentage
Gender			100%
Male	55	89%	
Female	7	11%	
Age			100%
18-30 years	12	19%	
31-45 years	39	63%	
46-60 years	9	15%	
61 and above	2	3%	
Educational Qualification			100%
NONE	1	2%	
WASC/GCE	2	3%	
OND/HND	16	26%	
Bsc/BA	28	45%	
MBA/MA/MSc	14	23%	
PhD	1	2%	
Professional Qualification			100%
NONE	52	84%	
ICAN	3	5%	
ACCA	4	6%	
ANAN	1	2%	
COREN	2	3%	
Work Experience			100%
NONE	1	2%	
1 - 5yrs	20	32%	
6 -10yrs	22	35%	
11-15yrs	9	15%	
16yrs and above	10	16%	

Source: Author's Compilation

The age distribution also revealed that they are largely in the range of 31-45 years of age (63%), which signifies that they are of active working-class population in the country. The educational qualification distribution of the respondents showed that they (45%) are mainly university graduates but most of them (84%) do not have professional qualifications. This is not surprising because majority of the farmers and other extractive workers in the research area fall within non-professional group. Also, 35% of the respondents have six (6) to ten (10) years work experience and they form the highest percentage of the total respondents.

IKERE GORGE DAM POTENTIALITY (HYDROELECTRICITY GENERATION) AND SOCIOECONOMIC DEVELOPMENT- TESTING HYPOTHESES

The study conducted a survey through a questionnaire distribution for the purpose of obtaining data for the analysis of research hypotheses on the impact of Ikere Gorge Dam facilities on the socioeconomic development in Nigeria. The data have therefore been analyzed and results obtained through charts and tables as shown in the next part.

H_{01}: Ikere Gorge Dam Potentiality (hydroelectricity) has no positive relationship with socioeconomic development in Nigeria.

From Table 3, it can be viewed that the relationship between the independent variable and the dependent variable is positive at 0.294, which is below 0.8 threshold. It can be confirmed that there is a positive correlation between Ikere Gorge Dam Potential (Hydroelectricity) and socioeconomic development (employment generation) in Nigeria. The Null hypothesis is therefore rejected. This is in line with the findings of Okukua, Bouillona, Ochiewob, Munyi, Kiteresi, and Tole (2015) as well as Salau, Paul, and Ganiyu (2017).

H_{02}: Ikere Gorge Dam (Irrigation Potentiality) has no positive relationship with socioeconomic development in Nigeria.

Table 3 shows that there is a positive correlation between the independent variable and the dependent variable at 0.259 below the 0.8 threshold. It can be confirmed that there is a positive relationship between Ikere Gorge Dam Potential (Irrigation) and socioeconomic development (employment generation) in Nigeria. The Null hypothesis is therefore rejected. Studies such as Tan, Han, Yu, Hu, Lv, and Shu (2021) as well as Freden (2011) reported similar findings.

H_{03}: Ikere Gorge Dam (Water supply system) has no positive relationship with socioeconomic development in Nigeria.

Table 3 illustrates that there is a positive correlation between the independent variable and the dependent variable at 0.093. It can be confirmed that there is a positive correlation between Ikere Gorge Dam Potential (Water Supply) and socioeconomic development (employment generation) in Nigeria. The Null hypothesis is hereby rejected. The finding of this study is consistent with that of Danladi, and Naankiel (2019).

H_{04}: Ikere Gorge Dam (Fishery) has no positive relationship with socioeconomic development in Nigeria.

From the Table 3, it was indicated that that there is a positive association between the independent variable and the dependent variable at 0.521. It is confirmable that there is a positive correlation between Ikere Gorge Dam Potential (Fishery) and socioeconomic development (employment generation) in Nigeria. Hence, there is the need to reject the Null hypothesis. Studies such as Oyediran (2014) obtained similar results.

H_{05}: Ikere Gorge Dam (tourism) has no positive relationship with socioeconomic development in Nigeria.

Table 3 implied that that there is a positive correlation between the independent variable and the dependent variable at 0.228. It can be confirmed that there is a positive correlation between Ikere Gorge Dam Potential (Tourism) and socioeconomic development (employment generation) in Nigeria. Therefore, the Null hypothesis is rejected. This result is in line with the studies such as Danladi, and Naankiel (2019).

Finally, in line with the Stakeholder Theory, communities around Ikere Gorge have the propensities of enjoying social benefits such as Corporate Social Responsibilities (CSR) from the organizations operating in the proximity of the reservoir as well as other employment opportunities.

DISCUSSION

The findings of this study have numerous implications for the policy makers, revenue and employment generating agencies such Federal Inland Revenue Service (FIRS), National Productivity Centre (NPC) and National Directorate of Employment (NDE) in Nigeria.The study indicates that the people of Oyo

State (host communities) can benefit from the hydroelectric power generation capacity of Ikere Gorge Dam because the domestic and industrial use of hydroelectricity is key to the enhancement of the national employment.

Irrigation farming through the Ikere Gorge Dam is positively correlated with socioeconomic development of Nigeria especially now that various Government interventions in agriculture have been initiated (IrGlobal, 2020) to boost agriculture for food security and revenue generation away from the oil revenue in Nigeria.

Water supply through Ikere Gorge Dam is positively related to the socioeconomic development in Nigeria because water is indispensable and so, the dam will provide consistent supply necessary to attract water-utilizing industries.

Fishery through Ikere Gorge Dam is positively linked with socioeconomic development because it would support commercial fishery for communities/villages surrounding the dam's reservoir and it would reduce importation of fish into the country.

Tourism through Ikere Gorge Dam is positively associated with socioeconomic development in Nigeria in that it would enhance hospitality industry and boost the country's foreign exchange earnings.

CONCLUSION AND RECOMMENDATION

After careful analysis of the results and discussion, as well as review of relevant literature the following conclusions can be drawn as a result of the research.

As shown in Table 3 (correlation Matrix), the study found and concluded that the hydroelectricity has a positive relationship with socioeconomic development (employment generation) in Nigeria. The study conclusion is also underpinned by prior literature such as Okukua, Bouillona, Ochiewob, Munyi, Kiteresi, and Tole (2015) as well as Sa-lau, Paul, and Ganiyu (2017). Also, it is concluded that Irrigation has a positive relationship with socioeconomic development (employment generation) in Nigeria. This is equally in tandem with prior studies such as Tan, Han, Yu, Hu, Lv, and Shu (2021) as well as Freden (2011). Furthermore, it is concluded that water supply has a positive relationship with socioeconomic development (employment generation) in Nigeria. The conclusion of this study also has bearing with that of Danladi, and Naankiel (2019). Moreover, the conclusion of this study on fishery is that it has

a positive relationship with socioeconomic development (employment generation) in Nigeria. Previous studies such as Oyediran (2014) made similar conclusions. In addition, it is concluded that tourism has a positive relationship with socioeconomic development (employment generation) in Nigeria, which is consistent with the conclusion of studies such as Danladi, and Naankiel (2019).

On the overall, results of this study signified that the independent variable, Ikere Gorge Dam Potentiality proxied by Hydropower capacity, Irrigation capacity, Water Supply capacity, Fishing capacity and Tourism capacity have positive relationships with socioeconomic development (employment generation) in Nigeria during the study period.

In line with the findings and conclusion reached in this study, the following recommendations are proffered:

1. The Federal Government should create a special intervention fund or Public Private Partnership (PPP) arrangement with a view to completing the Hydropower Project in Ikere Gorge Dam in no time so as to enhance revenue for the government so as to minimize overdependence on oil revenue.
2. The Federal Government should also partner with Donor agencies in the supply of water from Ikere Gorge Dam to the needy communities and industries in Nigeria.
3. The Government should invoke foreign investors and interested local people in the area of commercial fishing in Ikere Gorge Dam so as to reduce dependence on imported fish.
4. Government should consider the re-construction or rehabilitation of the 33km Iseyin-Ikere road so as to ease the transportation of irrigation farm produce from Ikere area of Oyo State to the markets where they are needed.
5. The Nigerian Tourism Development Corporation should be empowered to take charge of the man-made beach and other tourist centres at Ikere Gorge Dam in liaison with investors in that line of business for greater revenues to the Government and for community development.

AREAS FOR FURTHER RESEARCH

The study focused mainly on the impact of potentials (hydroelectric power generation, irrigation agriculture, water supply capacity, fishery and tourism) of Ikere Gorge Dam whereas there are other eleven (11) constructed dams in various parts of Nigeria, which were not covered by the present empirical re-

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search. Further studies could explore the potentials of other dams in the country for higher generalization of the study outcome. The socioeconomic importance of other earth-fill dams in other countries can also be explored by future studies.

CONTRIBUTION MADE BY THE STUDY TO THE EXISTING KNOWLEDGE

The major contribution to knowledge which the study has made is that it is the first empirical research on Ikere Gorge Dam potentials that utilized stakeholder theory in the explanation of the relevance of the dam with respect to socioeconomic development in Nigeria. Also, the study showed that there is a causal relationship between Ikere Gorge Dam capacities and socioeconomic development by employing Partial Least Square (PLS) Structural Equation Model (PLS 3-SEM) in drawing conclusions for the empirical research.

In spite of the restriction placed by Covid-19 Pandemic in reaching out to potential respondents due to social distancing, the study made use of online survey methods through google forms in getting questionnaires across to the potential respondents. Subsequently, the respondents filled the online questionnaires and they responded to telephone interviews accordingly. This e-questionnaire distribution avenue has not been explored by the previous studies in this jurisdiction.

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Saheed Adekunle IMRAN hails from Iseyin Local Government Area of Oyo State, Nigeria. He attended Ansarul-Deen Primary School, Atori and Aseyin High School, Iseyin. He then proceeded to Obafemi Awolowo University Obafemi Awolowo University, Ile-Ife, Nigeria where he obtained a Bachelor of Science (Bsc.) Accounting in 2004. He also obtained Msc. Finance Degree from London Metropolitan University, London in 2012. He was the Winner of 2002 Prof. A. A. Okunniga Memorial Essay Competition, Faculty of Law, Obafemi Awolowo University, Ile-Ife, Nigeria. He was also a Recipient of the National Honours Award conferred on him by the then President of Nigeria, Gen. Olusegun Obasanjo (GCFR) as an outstanding NYSC Corps. Member in 2005.

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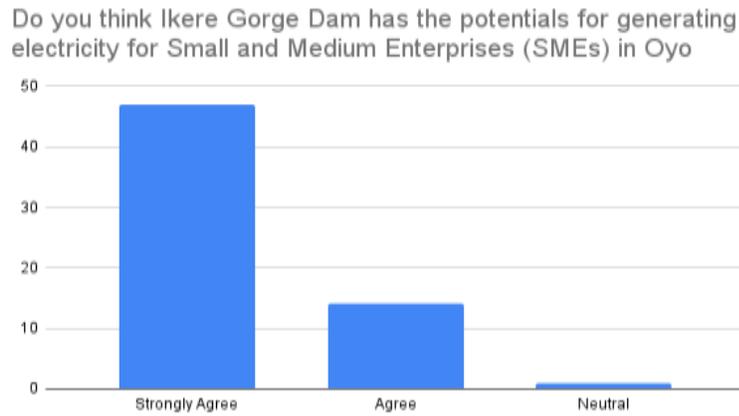
APENDIX

Impact of Ikere Gorge Dam on Socioeconomic Development in Nigeria
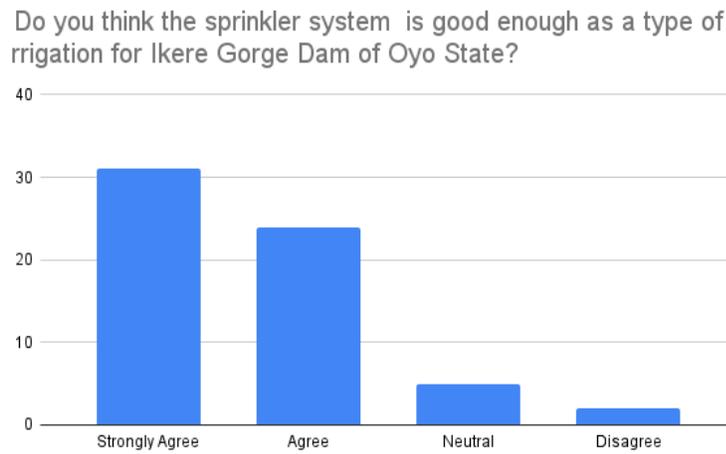Please Tick as appropriate.
Scale: Strongly Agree(5), Agree(4), Fairly Agree(3), Disagree(2), Strongly Disagree(1)

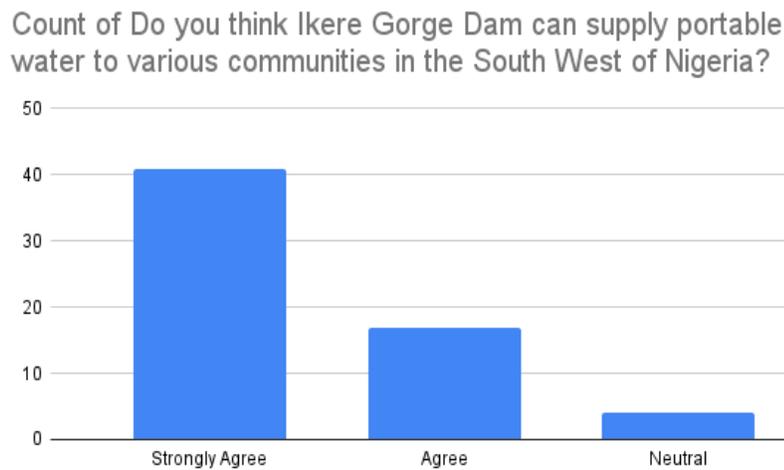| S/N	VARIABLE RESPONSES	5	4	3	2	1
	ELECRICITY GENERATION					
1	Do you think Ikere Gorge Dam has the potentials for hydroelectricity generation for rural electrification programme of the Federal Government?					
2	Do you think Ikere Gorge Dam has the potentials for generating electricity for Small and Medium Enterprises (SMEs) in the region?					
3	Do you think Ikere Gorge Dam electricity generation can aid the preservation of farmers' produce in the region?					
	IRRIGATION ACTIVITIES					
1	Do you think the sprinkler system is good enough as a type of irrigation for Ikere Gorge Dam?					
2	Do you think Ikere Gorge Dam can provide irrigation services to sizeable hectares of arable lands?					
	PIPE BORNE WATER PROVISION					
1	Do you think Ikere Gorge Dam can supply portable water to various communities in the South West of Nigeria?					
2	Do you think Ikere Gorge Dam can supply water for industrial use?					
	FISHING ACTIVITIES					
1	Do you think Ikere Gorge Dam has the potentials for fishery, thereby reducing the Country's dependence on imported fish?					
2	Do you think Ikere Gorge Dam can pave ways for artificial fish ponds in the area?					
	OTHER BUSINESS AND RECREATIONAL FACILITIES					
1	Do you think Ikere Gorge Dam can serve as a tourist centre, which can subsequently improve the wealth of the Nation?					
2	Do you think Ikere Gorge Dam can spring up other business activities such as eateries, hotels etc?					
3	Do you think Ikere Gorge Dam has the potentials for creating more employment opportunities for various categories of people in the South West Geopolitical Zone?					

Hydroelectric Power Capacity of Ikere Gorge Dam

Do you think Ikere Gorge Dam has the potentials for generating electricity for Small and Medium Enterprises (SMEs) in Oyo

Irrigation Capacity of Ikere Gorge Dam

Do you think the sprinkler system is good enough as a type of rrigation for Ikere Gorge Dam of Oyo State?

Water Supply Capacity of Ikere Gorge Dam

Count of Do you think Ikere Gorge Dam can supply portable water to various communities in the South West of Nigeria?
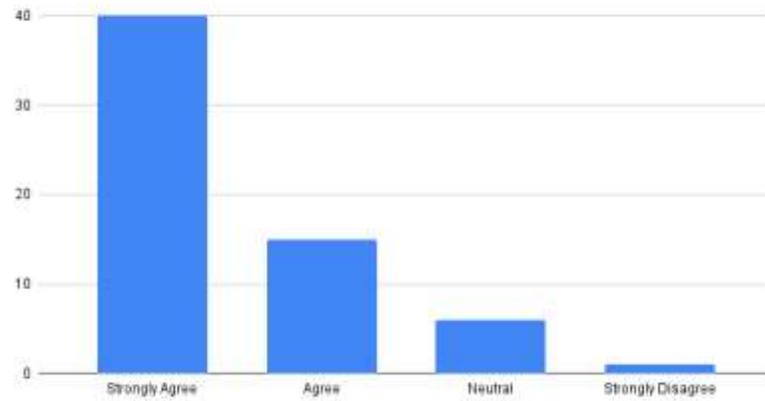
Fishery Capacity of Ikere Gorge Dam

Do you think Ikere Gorge Dam has the potentials for fishery, thereby reducing the Country's dependence on imported fish?

Tourist Capacity of Ikere Gorge Dam

Do you think Ikere Gorge Dam can serve as a tourist centre, which can subsequently improve the wealth of the Nation?