Social Acceptance and Environmental Justice: Promoting Kashimbila Multipurpose Dam Development in Taraba State, Nigeria

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Dam project is said to be accompanied by many benefits for the affected communities but several dams face lots of challenges mostly during the constructions processes. To curtail these challenges, require people’s attention to be drawn to proposed projects. However, the rate of dam construction is in the increase. Therefore, the aim of this study is to assess factors responsible for social acceptance of Kashimbila Multipurpose dam construction project by local communities in the study area. To this end, the study answered the following question: what factors contribute to social acceptability of the Kashimbila Multipurpose Dam? Mixed research method was adopted for the study and the instruments used for data collection are questionnaire, interview and observation. The respondents were drawn from communities within 2km, 4km and 6km from the dam. The estimated population of the area is 247, 657 and the sample size of the research is 269. The participants for interview were identified using a stratified sampling method while those whom questionnaire were administered on were identified using simple random sampling. The responses received suggests that public participation in decision/planning process of dam project, employment and location of dam can curtail dam construction challenges. These results indicated that public participation in decision/planning process of dam project, employment and location of dam does have influence in social acceptance of Kashimbila Multipurpose Dam project construction. On this basis it is recommended that project developers should always bear in mind the involvement of affected communities during decision and planning processes of the proposed projects.

Key words: Hydropower, Environmental justice, Social acceptance, Dam.

INTRODUCTION

Mankind has been undertaking dam projects for many millennia leading to wonders that have fascinated the world as displaying human achievement. In Canada, Hydro-Quebec has developed large dams in James Bay as a highly profitable source of electricity, which is partly exported to neighboring regions and the USA (Henri and Michel, 2016).

China has, by far, the largest hydroelectric potential in the world. Since July 2012, the famous Three Gorges Dam has reached full power at 22,500 MW, the current world record (a capacity equivalent to more than a dozen nuclear reactors or some thirty coal-fired power stations) (Henri and Michel 2016). More than 1.2 million people were resettled, and more than a hundred towns and villages disappeared under the waters of the Yangtze. It is worth remembering that the main motivation for building the dam was not electricity production but rather to combat the violent floods to which the Yangtze was prone, that regularly kill thousands of victims (100,000 dead in 1911, 145,000 dead in 1935, 33,000 dead in 1954) and leaves hundreds of thousands of homes destroyed and families with nowhere to live (Henri and Michel 2016 and Yangtze River Cruise, 2009).

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In sub-Saharan Africa, where the rate of electrification remains very low despite an explosion in demographic growth, there is an enormous hydroelectric potential to be developed. One needs only look at the dams of Manantali (Mali, Senegal, Mauritania), Garafiri in Guinea, “Renaissance” in Ethiopia, on the Upper Nile, Ruzizi 3, the Zambezi (International rivers, 2005 and Henri and Michel, 2016).

The Kashimbila Multipurpose Dam (KMD) which is 40 mega watts capacity is meant to protect and save the citizens of Nigeria from destruction as a result of flooding from possible collapse of Lake Nyos in the Cameroon republic. The decision came after warning by the United Nations to the Nigerian government in 2005 on the need to create a buffer dam to contain the water of Lake Nyos as a result of breakage in 5-10 years. The lake was said to have been formed 400 years ago as a result of volcanic eruptions. When it finally breaks, water from the lake will wash away villages, farm lands and cities along the River Benue in Taraba, Benue and Kogi States, and will lead to the death of thousands of people (Oruonye, 2015 and Adebisi, Ikpeawojo, Ekpo & Abubakar 2015).

Unlike other sources of energy, hydropower generation provides an abundance of unique benefits which can be those emanating from the generation of electricity itself or from side benefits associated with hydropower reservoirs. Such benefits can include a secure water supply, irrigation and flood control including increased navigation and increased recreational opportunities (TERI, 2015).

Despite the facts that Hydropower is a low CO2 emissions source of electricity, it has its drawbacks. Dams are both a blessing and a curse. Dams destroy ecosystems, impacting wetlands and freshwater species, while economic benefits are not necessarily distributed justly, but rather mostly to developers and investors. According to Steffen (2012), the potential negative outcomes of Dam are: environmental degradation, watershed damage, malodor, noise and pollution during construction, and other safety concerns. While Cohen et al. (2014) sees landscape change, potential view shed effects, potential changes in recreation opportunities, and ecosystem change as negative outcomes of dam. To add to the list: displacement of wild animals, extinction of plant species and concretizing of surface area which may hinder percolation and increases surface water runoff.

Recently a study was conducted in Switzerland by Tabi and Wüstenhagen (2017) which explored the influence of environmental justice on acceptance of hydropower projects with emphasis on two dimension of environmental justice (procedural and distributional justice). This study, therefore, contribute to filling the gap in the current literature by using the three dimension of environmental justice (procedural, recognition and distributional justice) on social acceptance of Kashimbila multipurpose dam project.

**Statement of Problem**

History have shown that world dams and reservoirs are being constructed in order to prevent floods, to supply drinking and domestic water, to generate energy and for irrigation purpose. In other words, dams are constructed to solve either identified or foreseeable problems (TERI, 2015). Despite the said advantages of dam to the society, societal acceptance that was expected to be high because of the social and economic benefits that dam projects have to offer often appears to be very low. Dam projects often face opposition from citizens, NGOs, policy actors or other interest groups because of disagreements regarding project objectives, planning and design. Consequently, most dam projects report significant delays, cost overruns, or even fail to deliver the expected value. Sometimes the negative attitude towards dam projects comes as a result of failure on the side of the project developers in fulfilling the terms of agreement with the affected communities in terms of meaningful compensation and proper resettlement of displaced people (Cohen et al; 2014). There exists quite much information on the internet by online newspapers on the Kashimbila multipurpose dam project. Much of this information does contradict one another. There is contradiction when information from project developers and one from the affected communities are compared. The government on her part is claiming all are well while affected communities are complaining that government had failed in fulfilling its promises of compensation and resettling them. If these contradictions existed, how do the affected communities perceive the dam project? Hence there is need for some study/research to provide information on the true state of the Kashimbila Multipurpose dam project at the moment. Therefore, this study attempted to explore the level of social acceptance of KMD by the local communities.

The peoples’ attitude towards the dam will positively influenced by the extent of their involvement (procedural justice) in decision-making, recognition of their right of social, ethnical, racial and gender (recognition justice) and expected positive impacts from the dam project that will better their living conditions (fig. 1).

**Figure 1**: (Framework of social acceptance).
The Concept of Social Acceptability

Definition of the concept of social acceptability as Thomassin, White, Stead, & David, (2010) contend is “a measure of support towards a set of regulations, management tools or towards an organization by an individual or a group of individuals based on geographic, social, economic and/or cultural criteria”. While Voyer, Gladstone & Goodall, (2015) in their opinion state that the reasons for acceptability of, or opposition against, a project can vary among stakeholder groups, and also within them since these groups are not necessarily homogenous. Schuitema and Jakobsson Bergstad (2012), state that social acceptability of an environmental policy can be defined as either positive or negative attitudes towards it, or certain behaviour resisting the policy. They further state that negative attitudes can in turn lead to different behaviors resisting the policy, which can be anything from signing petitions to non-compliance with the policy. Schuitema and Jakobsson further posit that social acceptability can change over time, e.g. an initial resistance can transform into support during the course of time if positive effects are experienced by opponents. There is no doubt about the complexity around the social acceptance of renewable energy innovations.

Environmental Justice Theory

The South African Environmental Justice Networking Forum asserts: “Environmental justice (EJ) is about social transformation directed towards meeting basic human needs and enhancing the quality of life – economic quality, health care, housing, human rights, environmental protection, and democracy. It was asserted that with EJ there are three areas of concern: the provision of widely beneficial outcomes of equity (who gets what?), participation (who is included?) and recognition (who are they and what do they value?). (Schlosberg, 2004).

Distributional Justice

Distributional justice was the departure point for environmental justice, and remains its most well-known component. Initially, when the concept emerged with social activists, the primary concern was the distribution of ills from pollution, which was attributed to structural and systematic discrimination. Environmental justice theorists have sought to link the concept to more established theories of justice (Schlosberg, 2004), leading to strong associations with the philosophy of John Rawls. Rawls’ original position is focused on creating societal rules that enable equitable distribution, and is clearly situated within liberal justice theory as it seeks to create rules for fairness without considering the substantive nature of what is “good” (Rawls, 2005). In this way, the theoretical association of environmental justice with established theories of justice and with Rawls in particular, has increased the importance of distributional justice within the theory (Schlosberg, 2004).

Justice as Recognition

Recognition refers to the right of social, ethnical, racial, gender and other groups (and also individuals) to be recognized by the state, authorities, companies or the society in general (Hess, Ribeiro and Wieprecht, 2016). It is fairly uncontroverial to state that there are differences in the way groupings in society are seen and treated. Privilege and oppression are simultaneous phenomena across the world, and there are patterns to their attachment to social groupings. Misrecognition can be a general practice of cultural domination, non-recognition or disrespect “being routinely maligned or disparaged in stereotypic public and cultural representations” (Schlosberg, 2007).

This aspect is of importance in hydropower projects regarding the recognition of all affected people. In many projects throughout the world the amount of affected people has been consequently under-estimated and frequently whole affected groups have been omitted, to which Sousa Junior & Bermann (2012) refer to as the invisibility phenomenon.

Procedural Justice

The third key component of environmental justice involves procedure. Procedural justice refers to the “how” of environmental decision-making or how projects are implemented (Tabi and Wüstenhagen, 2017). Justice in procedure rests on “fair treatment”, such that environmental burdens are not disproportionately borne by one group and “meaningful involvement” so that all people that are affected by a project have a stake in decision-making about it. Procedural justice is closely related to justice in recognition, and it has even been suggested that procedural justice is not possible without recognition (Schlosberg, 2004). A key driver of perceived procedural justice, and hence potentially social acceptance, is participatory planning and decision-making (Wüstenhagen, et al. 2007).

MATERIALS AND METHODS

The research adopted a mixed research methods to ensure good results acquired. Data for this study was sourced using interview and survey questionnaire as instruments. The questionnaire was designed with structure and open ended questions to identify the factors responsible for social acceptance of KMD by the local communities. The estimated population of the area is 247, 657. From the population therefore the sample size of the research is 269 at 90% confidence level and 5% (0.05) margin of error, (SurveyMonkey, 2018). Interviews were conducted and the participants were drawn from the communities living within a radius of 6km from the KMD. The radius was divided into three: people living within 2km, 4km and 6km from the dam to ensure even spatial coverage. Data collected and the result obtained from this
study was analysed using simple descriptive statistics in form of percentages and tables as well as inferential statistics i.e. three-way analysis of variance (ANOVA) was conducted on the factors of acceptance of KMD.

RESULT AND DISCUSSION

Socio-demographic characteristics of the respondents

Data were collected through field observation, interview and questionnaire administered to 269 respondents from the study area. The sample was representative of the study area population in terms of gender, age, educational level; marital status and occupation (Table 1). Gender comprises of 182 males respondents (67.7%) and 87 females respondents (32.3%) interviewed in the study area. This indicates that there are more males respondents than females as at the time of data collection.

| Table 1: Distribution of gender, Age, Educational level, Marital status and Occupation of the interviewees in the study area. |
|-------------------------------------------------|-----------------|-----------------|
| Gender                                         | Frequency       | Percent         |
| Male                                           | 182             | 67.7            |
| Female                                         | 87              | 32.3            |
| Total                                          | 269             | 100.0           |
| Age                                            | Frequency       | Percent         |
| 20-35                                          | 59              | 21.9            |
| 36-45                                          | 128             | 47.6            |
| 46-55                                          | 63              | 23.4            |
| 56-65                                          | 19              | 7.1             |
| Total                                          | 269             | 100.0           |
| Educational level                              | Frequency       | Percent         |
| No formal education                            | 13              | 4.8             |
| Primary                                        | 75              | 27.9            |
| Secondary                                      | 135             | 50.2            |
| Tertiary                                       | 46              | 17.1            |
| Total                                          | 269             | 100.0           |
| Marital status                                 | Frequency       | Percent         |
| Single                                         | 42              | 15.6            |
| Married                                        | 209             | 77.7            |
| Divorced                                       | 6               | 2.2             |
| Widow                                          | 12              | 4.5             |
| Total                                          | 269             | 100.0           |
| Occupation                                     | Frequency       | Percent         |
| Farming                                        | 151             | 56.1            |
| Civil Servant                                  | 36              | 13.4            |
| Business                                       | 70              | 26.0            |
| Student                                        | 12              | 4.5             |
| Total                                          | 269             | 100.0           |


Age distribution of the respondents indicates that 59 (21.9%) respondents fall between the age of 20-35, 128 (47.6%) respondents between 36-45 age range, while 63 (23.4) respondents are between 46-55 age range, and 19(7.1%) between 56-65 age brackets. This shows that majority of the respondents are within the ages of 36-45.

In terms of educational level, 13 (4.8) respondents have no formal education, 75(27.9) respondents completed primary school level. While 135 (50.2%) respondents have secondary education, 46 (17.1%) respondents are within the tertiary levels of education. Majority of the respondents are secondary school leavers as indicated in table 1. Marital status of the respondents indicates that 42(15.6%) respondents are single, 209 (77.7) respondents are married, divorced are 6(2.2%) respondents, and 12 respondents (4.5%) are widows. Married people take the lead in terms of marital status in the study area.

The occupation of respondents shows that 151 respondents (56.1) are into farming, 36 (13.4) respondents are civil servants, 70(26%) are into business, and the students are 12(4.5%). This indicates that majorities of the respondents are farmers. As for the students the number is questionable because as at the time of data collection schools in the state are in session. Those responded are those that came for weekends.

From Table 2, the first attribute deals with the very general question about the respondents claimed they participated in the decision and planning process of Kashimbila multipurpose dam construction in the district. This attribute was designed to capture respondents’ choices for a variety of procedure justices’ scenarios. Majority of the respondents claimed to have participated in the decision making and planning process for the dam project. It was found that the degree of participation was limited to Passive participation (PP) and Participation for material incentives (PMI). The former is representing a rather limited to one-way communication from project developer to the affected communities and the latter is participation by providing resources, for example labor, in return for food, cash or other material incentives. This attribute attracted higher support from the respondents as indicated in table 2. Giving pre-information to affected people beforehand about the proposed project will gain their acceptance for the project in their area. This is in line with Devine-Wright, 2011, who said the drivers of social acceptance are influence by locals’ awareness of both the outcomes of a new development and the procedures of the development process.

As for procedural justice, the researcher found mixed results. People value participation, but not as strongly as one might expect a priori which means that if a certain minimum level of participation is fulfilled, more participation might not lead to stronger acceptance which contradicts findings from other surveys (Wüstenhagen, et al. 2007) suggesting a straight linear relationship between participation and acceptance.
The second attribute deals with the provision of local services in the affected district by the dam such as health facilities, water sources, electric facilities, educational facilities and houses. The respondents disagreed with 94.1%. In answering the question “What kinds of infrastructure facilities were developed in the district in relation to the dam project”? One of the interviewee (management of the dam) exclaimed;

Presently we are able to build ATM gallery, upgraded the Road and constructed Air strip in the district while some are presently ongoing such as electricity power line, water treatment plant and irrigation (DM1) Source: field survey, 2018.

The lack of local services in the affected district, this could not hinder the project or gain rejection of the project simply because little can be seen on ground as confirmed in the above statement made by management of the dam. Also the pre-information giving by the project developer to the affected communities plays a vital role in the acceptance of the project as people are anticipating better future benefits from the dam. Therefore, people give more concern to the future socio-economic benefits than what is obtainable at hand. A question was asked during the interview session with the household heads “What benefits this project brings to your community” One of the interviewee said:

The palm tree plantation is not for everyone but for those that are patience, we are looking at this project with the mindset of palm tree farmer. Though little is on ground now, but we will reap more tomorrow God willing (HH2) Source: field survey, 2018.

Public acceptance is often linked to positive expectations for socio-economic improvement, Susanne et al.(2016), particularly in a case such as the study area where the people are economically disadvantaged. The third attributes indicates that 86.2% respondents accepted the location of the dam to be the best place for the project. While 10.4% respondents’ disputes it. This is what one of the interviewee said:

God had blessed us with good thing I can’t reject it, this is what we don’t dream of and today we have it so the location is okay (HH10) Source: field survey, 2018.

The dam location was never a problem to the respondents as reveals by the study. The study was carryout in three different distances (2km, 4km, and 6km) from the dam in order to capture the opinion of those proximal to the dam project and those far a little from the dam. Majority of the communities within 1km to 6km downstream of the dam lost their fields, gardens and grazing lands. In other word they were more affected negatively by the dam construction. The study found that though the ill distribution (distribution justice) was not evenly on the respondents due to their location to the site, but unanimously they show satisfaction with the dam location. This is in line with Susanne et al. (2016) study in Morocco found that a high level of support was achieved among local communities who may be negatively affected or who are living in proximity to the project. This contradict other previous surveys such as (Petrova, 2013) who found that individuals who generally support renewable energy technology might still be against concrete projects in their close vicinity. Though the communities were satisfy with the dam location but frown at the compensation procedure.

The fourth attribute was focused on and tested the respondents answer base on the provision of jobs by the Kashimbila multipurpose dam project in the study area 50.9% respondents agreed with that the dam provide jobs. 48.3% were in disagreement with the opinion. The study found that Construction Company provided the affected community members with few jobs (distribution justice) which are mostly junior staff. In an interview one of the interviewee confirmed this when enumerating the benefits of the dam construction in the study area.

The coming of the Dam construction yielded jobs to our youths in the district some are security, drivers, masons, etc as a leader we are happy. (CL1) Source: field survey, 2018.

This was found to gains their support for the dam construction project in the district. This finding disagreed with Tabi and Wustenhagen, 2017 whose study in Switzerland found that project that create more jobs are accepted over projects that create fewer jobs. The reason may be as stated before the communities around Kashimbila Multipurpose dam project are economically disadvantaged any little changes in their living standard is capable of gaining their acceptance. Therefore, fewer jobs can gain their support for the dam construction in the district. This agreed with Cohen et al. (2014) study which states that social acceptance is a set of outcomes and aspects that leave locals as well-off as they were before the project. Another reason is their expectation of future benefits from the dam project.

The fifth attribute of the same table 2 indicates that 63.4% of the respondents disagreed with the assertion that the right of indigenous group is being recognized and respected by the construction company. At the contrary 24.2% of the respondents accepted the assertion. It was found that the rights of indigenous people were not respected by the construction company as testified during interview session:

The construction company have right here than we the indigene. They do what they want at any time and no body from the community can dear them. They break our rock for construction in other places other than ours when the youth went to inquire who permit them to break the rock. The next thing we can see was military men who came and arrested our children. If you are to judge can you say we are respected. (CL3) Source: field survey, 2018.
The factors of social acceptability of the Kashimbila multipurpose dam construction.

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision and planning process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreed</td>
<td>241</td>
<td>89.6</td>
</tr>
<tr>
<td>Disagreed</td>
<td>21</td>
<td>7.8</td>
</tr>
<tr>
<td>Undecided</td>
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<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>269</td>
<td>100.0</td>
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<tr>
<td>Provision of local services</td>
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<tr>
<td>Agreed</td>
<td>12</td>
<td>4.5</td>
</tr>
<tr>
<td>Disagreed</td>
<td>253</td>
<td>94.1</td>
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<tr>
<td>Undecided</td>
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<td>1.5</td>
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<td>Total</td>
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<td>100.0</td>
</tr>
<tr>
<td>Dam is location</td>
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<td></td>
</tr>
<tr>
<td>Agreed</td>
<td>232</td>
<td>86.2</td>
</tr>
<tr>
<td>Disagreed</td>
<td>28</td>
<td>10.4</td>
</tr>
<tr>
<td>Undecided</td>
<td>9</td>
<td>3.3</td>
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<tr>
<td>Total</td>
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<td>100.0</td>
</tr>
<tr>
<td>Job provision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreed</td>
<td>201</td>
<td>74.7</td>
</tr>
<tr>
<td>Disagreed</td>
<td>66</td>
<td>24.5</td>
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<tr>
<td>Undecided</td>
<td>2</td>
<td>0.7</td>
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<td>Total</td>
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<td>100.0</td>
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<tr>
<td>The right of indigenous group</td>
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<tr>
<td>Agreed</td>
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<td>24.2</td>
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<td>Disagreed</td>
<td>173</td>
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<td>Acceptance of dam</td>
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<tr>
<td>Agreed</td>
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<td>97.4</td>
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<tr>
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<td>2.6</td>
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<tr>
<td>Total</td>
<td>269</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: field survey, 2018

The study also found that the construction company failed in fulfilling their terms of Corporate Social Responsibility (CSR) promised to the host communities. A Church in new Birama was left uncompleted by the construction company. This shows neglecting of religious right of the indigenes by the construction company.

Neglecting the indigenous people’s right has been found to be common to some project developers (Schlosberg, 2007). Recognition for traditional and indigenous populations is very important and it expected that the project developers and Construction Company should also see it as paramount by putting it into practices during development. Abusing indigenous recognition can be term as cultural domination or disrespect. The call for recognition is a core principle of environmental justice and it should not be neglected for whatsoever reasons; therefore, it is of high importance in hydropower projects all affected people should be recognized and respected. Indigenous traditions, cultures, and ways of life need to be recognized and respected as alive, valid, and on part with other cultures.

Attribute sixth shows majority of the respondents (97.4%) accepted the construction of Kashimbila Multipurpose dam in the area. The most important factors of social acceptance of Kashimbila Multipurpose dam is the Public participation with 92.2% follow by Dam location with 86.2% and job provision as the third most important with 57.6%.

Three-way between-subjects ANOVA

The three-way ANOVA was run in order to determine whether there is a three-way interaction between the three independent variables (i.e., Public participation*dam location*job provision interaction) and the acceptance of the dam. Table 3 shows that the statistical significance level of the three-way interaction term is 0.029 (i.e., $p = 0.029$). This value is less than 0.05 (i.e., it satisfies $p < 0.05$), which means that there is a statistically significant three-way Public participation*dam location*job provision interaction effect. There was a statistically significant three-way interaction between Public participation*dam location*job provision in influencing social acceptance of Kashimbila Multipurpose Dam, $F(1, 254) = 4.794, p = 0.029$

Table 3: Three-way between-subjects ANOVA

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P- value</th>
</tr>
</thead>
<tbody>
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<td>public participation</td>
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<td>2</td>
<td>0.011</td>
<td>0.124</td>
<td>0.883</td>
</tr>
<tr>
<td>Dam location</td>
<td>1.524</td>
<td>2</td>
<td>0.762</td>
<td>8.822</td>
<td>0.000</td>
</tr>
<tr>
<td>job provision</td>
<td>0.317</td>
<td>2</td>
<td>0.159</td>
<td>1.835</td>
<td>0.162</td>
</tr>
<tr>
<td>Public participation</td>
<td>0.414</td>
<td>1</td>
<td>0.414</td>
<td>4.794</td>
<td>0.029</td>
</tr>
<tr>
<td><em>dam location</em>job provision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>21.939</td>
<td>254</td>
<td>0.086</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>325.000</td>
<td>269</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R Squared = .196 (Adjusted R Squared = .151)

Source: field survey, 2018

CONCLUSION

Dam projects have been facing rejection by the affected communities’ despite the advantages that dam projects offered. The local communities’ acceptance of Kashimbila multipurpose Dam (KMD) has been the focus of this study. The aim of the study is to assess the influence of distribution, recognition and procedure justice on social acceptance of kashimbila multipurpose dam by the local communities. The scope of the study was people leaving within close fringes of the dam. The limitation of the research includes exclusion of people leaving beyond 6km from the dam.

The factors of social acceptance of KMD was found as the study designed attributes to capture respondents’ choices for a variety of procedure, distribution and recognition justices’ scenarios. These factors are public participation,
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dam location and jobs to local communities. The three way between-subject ANOVA was conducted on social acceptance and public participation, dam location and jobs to local communities revealed that the three factors play important role in influencing social acceptance of KMD. The Construction Company provided the followings facilities in the area; ATM gallery, road graded and Airstrip. The two components of environmental justice (procedural and distributional justice) out of three components of environmental justice influenced the social acceptance of KMD by the local communities.

REFERENCES


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