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# Transparency and the Quality of Water Services Delivery in Iramba and Singida Districts, Tanzania

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## **Abstract**

*This paper examined how transparency affects the delivery of quality water services in Iramba and Singida Districts. The study used a cross-sectional research design approach. A sample of 350 households was drawn from the population by using random sampling. The collected data were analysed using probit regression model. The study findings revealed that, there is a positive relationship between transparency variables and quality of water service delivery. The study recommends that budget transparency, performance report, income and expenditure, rules and regulations as well as convening of meetings should be enhanced in Community Based Water Service Organizations for the community to achieve quality water services.*

**Key words:** *Transparency, budget, performance report, income and expenditure, quality of water delivery*

## **1.0 Introduction**

Transparency is a matter of global concern; this is because transparency is seen as a key to better governance. For many decades, the lack of transparency has been contributing significantly to the problem of delivery of quality water services in many countries including Tanzania (Sherry, 2017). Despite the importance of water as a resource for sustainable development and quality of life, much of this

resource is unevenly distributed. Almost one-fifth of the world's population lives in the regions where water is scarce and one-quarter suffers from severe water shortage (UNDP, 2012). The shortage is contributed by various factors mainly lack of transparency in service delivery. The available evidence shows that, lack of transparency in public service delivery encourages corruption, mismanagement, lack of commitment and absenteeism in public institutions (Islam, 2015). Other studies indicate that, half of the global water projects fail to deliver because of poor community involvement and lack of transparency (Policy Forum, 2013; Islam, 2015). In democratic societies, transparency implies free access to information, which is one of the key human rights. The right to information, as it is clearly stated in Article 19 of the United Nations Universal Declaration of Human Rights, is increasingly recognised as a fundamental democratic right (Fox, 2007). Moreover, transparency is also critical for human development because it provides the opportunity to users of accessing and participation in the distribution of water resources (Kaufmann and Bellver, 2005). Various organs globally have been adopting various initiatives in addressing the challenges of water service delivery. For example WHO and UNICEF, have made tremendous efforts in securing quality water services around the world (UNDP, 2012). Consequently, the proportional of the global population using safely managed water services increased from 70 to 74 per cent, rural water services coverage increased from 53 to 60 percent and urban coverage increased from 85 to 86 per cent. Eight out of ten people lacking basic water services live in the rural areas (WHO and UNICEF, 2021), and about half of these live in Less Developed Countries (Ibid). Despite the progress made, the quality of drinking water in developed countries is not assured, while the situation in developing countries is even worse (WHO, 2012). According to the Declaration of the Human Right to water and sanitation passed by the UN Assembly in 2010, member states are bound to ensure that universal access to "sufficient, safe, acceptable, physically accessible and affordable water" is progressively carried out for all without discrimination (WHO and UNICEF, 2021). On the other hand however, potable water for all is a goal, which has not yet been realized. As noted by WHO/UNICEF, 663 million people lack even basic drinking-water services (WHO/UNICEF, 2017).

As revealed in literature, it is difficult to claim effective public service delivery if there is no good governance. Good governance is characterised by participatory, consensus oriented, accountability, transparency, responsiveness, effective, efficient, equitable and inclusive public service delivery (O'Reilly, 2009, Chaterera, 2016). However, it has been realised that transparency is a powerful force against fight corruption leading to improved governance and hence improvement of service delivery (Lindberg, 2009). Studies show that, transparency refers to the government openness about its actions and readiness of engaging with citizens for their views, comments and insights. This is inevitable in building trust among the citizens towards their government (Chaterera, 2016: Zimmerman, 2014).

The importance of water in people's livelihoods cannot be over emphasized. Good governance of the available water resources is a key to achieving water security at the local, national and international levels (UNDP, 2015). However, good governance without transparency cannot help people to get connected to those in power; this means that those in power cannot be held to account by the people they govern (Zimmerman (2014). In this respect, water users are likely to experience persistent problems of access to water resources. According to Rodgers and Hall (2003), transparency is a key feature of effective governance, but this feature has been lacking for many decades contributing significantly to poor delivery of quality water services in many countries (Sherry, 2017).

In this respect, the Government of Tanzania has been taking different initiatives to improve public services delivery through reforms such as a shift from top-down approach to decentralized approach and decentralisation by devolution which aimed at improving transparency and resource management (Lufunyo, 2013). According to Twaweza (2014) report, the Government of Tanzania has increased water expenditure per person since 1999/2000 from TZS 1000 per day to 3000 TZS in the previous decade. Yet, there are little improvements observed regarding water service delivery, particularly in rural areas. Furthermore, Tanzania has considerably been receiving significant amounts of monetary aids for rural water supply and sanitation.

a report by Policy Forum indicate that, the majority of water projects both in the rural and urban areas in Tanzania fail to deliver due to rampant corruption and misuse of funds from donors (Policy Forum, 2013). Thus, strengthening governance structures is expected to improve the services, fulfil user rights and entitlements while improving the credibility of the service agencies and stimulating greater openness and trust between water service provider (the government) and water users in the study area. However, understanding of the effect of transparency on quality water services requires a study to establish empirical evidence. In that respect, this study was carried out to examine the effect of transparency of community owned water supply organisations (COWSOs) in the delivery of quality water services in Iramba and Singida Districts. Specifically aspects of budget transparency, performance report, income and expenditure, rules and regulations, meeting convening, repair and investment were analysed as to relation with water service delivery in the study area. In recent years, the Water and Sanitation Act of 2019 changed the name of Community Owned Water Supply Organizations to Community Based Water Supply Organizations (CBWSOs)

## **2.0 Methodology**

This study was conducted in Iramba and Singida Districts in Singida Region. The two districts were chosen because of having the lowest rate of access to domestic water services. Approximately, 1 in 2 dwellers lack access to quality water services in the area. (Joint Monitoring Programme 2010). A Cross-sectional research design was used in the study. The design allows the collection of data at a single point in time (Mann, 2003).

The quantitative data involved a household survey, whereby 350 households were involved. Proportionate sampling using a household village register was applied to determine sub-samples from each village involved in the study. Six villages three from each district were chosen for the study,. The selected villages were Mgori, Ilongero and Mtinko from Singida District; and Msigiri, Nselembwe and Nguvumali from Iramba District. Thereafter, a simple random sampling was used to select the households (respondents) from each village.

Both qualitative and quantitative data collection methods were used. The qualitative data were collected from six (6) Focus Group Discussions (FGDs), and from twenty four Key Informants Interviews (KIIs) that were selected purposively based on their positions and expertise on the delivery of water services. This included twelve representatives of CBWSOs, three Ward Executive Officers (WEO), six Village Executive Officers (VEO), two Districts Water Engineers, one from Iramba District and another from Singida District. Quantitative data were collected using questionnaire, which was administered to the households.

In this study, both descriptive and inferential statistics were employed to analyse the data. Descriptive statistics involved frequencies, percentages and means, whilst inferential statistics involved Probit regression model to determine the influence of transparency on quality water services delivery. The model was used because the outcome variables were dichotomous and ordinal. Qualitative data were analysed by using thematic analysis, whereby data coded and conclusions were drawn based on themes of the study.

A total of six statements were used to indicate transparency of water service in water service delivery, while a total of 12 statements were used to indicate the quality of water service delivery. Each respondent was asked to indicate as to whether he/she was strongly dissatisfied (1 score), dissatisfied (2 scores), undecided (3 scores), satisfied (4 scores) or strongly satisfied (5 scores) on each item in the scale. This scale was later reduced to three levels whereby the closely related responses were collapsed into single responses. The reduced levels included dissatisfied (1 score), undecided (2 scores) and satisfied (3 scores). The means were used as a cut-off point between low, medium, and high levels of the quality of water service delivery.

## **3.0 Results and Discussion**

### **3.1 Descriptive analysis on transparency**

Descriptively, the respondents were asked to indicate whether there was transparency in the delivery of quality water service. The results presented in

Table 1 show that 72.3 percent of the respondents indicated that transparency on budget was low, while the majority (69.7%) of the respondents reported that transparency on performance report was low. Furthermore, 74.6 percent indicated that openness on income and expenditure was low. Seventy six percent (76%) of the respondents reported that meeting procedures was low. Transparency on repair and investment was reported to be low by 73.4 percent of the respondents. Furthermore, 28.1 percent of the respondents indicated that transparency on rules and regulations was high (Table 1). These findings imply that transparency on the cited variables was very low in the study area, meaning that the service providers did not inform their clients on what was happening and why. This situation could be attributed to corruption and bureaucracy and was potential in compromising the delivery of quality water service. Along these lines, Islam (2015) argues that inadequate transparency contributes to corruption and absenteeism of service providers both of which have an impact on the quality of public services such as water and health.

**Table 1: Descriptive analysis of variables of transparency n = 350**

Variable	Low	Medium	High
	Frequency (%)	Frequency (%)	Frequency (%)
Budget	143(40.8)	110(31.5)	97(27.7)
Performance Report	152(43.4)	127(36.3)	71(20.3)
Income & Expend	162(46.4)	99(28.2)	89(25.4)
Meeting procedures	145 (41.3)	120(34.4)	85(24.3)
Repair & Investment	151(43.2)	106(30.2)	93(26.6)
Rules & Regulation	131(37.5)	116(33.4)	102(29.1)

NB: The numbers in brackets are per cents (%).

### 3.2 Level of delivery of quality of water service

On the level of quality water services delivery, based on the attitudinal statements (Table 3) the average points scored were distributed in three categories namely dissatisfied (low level), satisfied (high level) and undecided (medium level).

**Table 2: Descriptive analysis of quality of water services delivery (n = 350)**

Statements	Dissatisfied	Undecided	Satisfied
Colour of water from the source	187(53.4)	65(18.6)	98(28.0)
Smell of water collected from the source	190(54.3)	118(33.7)	42(12.0)
Test of water from the source	176(50.3)	96(27.4)	78(22.3)
Water treatment	182(52.0)	107(30.6)	61(17.4)
Water collected for drinking & food preparation	159(45.4)	56(16.0)	135(38.6)
Water collected for house clean-up & personal hygiene	224(64.0)	48(13.7)	78(22.3)
Water collected for laundry	208(59.4)	52(14.9)	90(25.7)
Flow of water at WCP	161(46.0)	57(16.3)	132(37.7)
There is continuity of water services	183(52.3)	51(14.6)	116(33.1)
Availability of maintenance of water facilities	102(29.1)	59(16.9)	189(54.0)
Availability of technicians to repair water facilities	193(55.1)	36(10.3)	121(34.6)
Availability of water supply for 24 hours in the village	178(50.9)	42(12.0)	130(37.1)

NB: The numbers in brackets are percents (%).

Four elements of quality water services were combined together and an index was developed to determine the level of quality water service delivery as high, low and medium. The results (Table 3) indicate that the level of quality of water service delivery was low as only 9.1 percent indicated that the service level was high and 50.9 percent indicated to have high level service delivery.

**Table 3: Levels of quality water services delivery (n = 350)**

Levels	Frequency	Percent
Low (Dissatisfied)	178	50.9
Medium (Undecided)	140	40.0
High (Satisfied)	32	9.1

On determining the level of quality of water service delivery, four variables (Quality, quantity, accessibility and reliability) were combined t. Slightly more than a half (51%) of the respondents indicated that the level of quality of water

service delivery was low, while only 40 percent of respondents said the quality of water services was of medium level, and 9.1 percent said the quality of water service delivery was high. Generally, the results imply that the level of quality of water service delivery was low.

### 3.3 Transparency in Delivery of Quality of Water Service

Probit regression model was used to determine the influence of the transparency variables (performance report, meeting procedures, budget, income and expenditure, investment and repair and rules and regulations) on the quality of water service delivery. The results are as presented in Table 4. The findings revealed that of the six (6) factors, three (3) included performance report transparency, income and expenditure transparency, and repair and investment transparency had significant influence on the delivery of quality water services with Chi-square statistic = 78.93, ( $p = 0.000$ ). The findings revealed further that the  $R^2$  statistic, which represented the adjusted Cox and Snell  $R^2$  statistic was 0.1670, which implies that 16% quality of the variance on attitude of water users towards water service delivered was explained by the independent variables that were entered in the model.

**Table 4: Probit regression model of transparency on quality of water service delivery**

Quality water Level		Coef.	Std. Err.	z	P> z
Budget Transparency	X <sub>1</sub>	.07917***	.137	0.14	0.069
	Performance Report				
Transparency	X <sub>2</sub>	.23204*	.085	2.74	0.006
	Income & Expenditure				
Transparency	X <sub>3</sub>	.39908*	.123	3.25	0.001
Meeting Procedures	X <sub>4</sub>	.25851***	.109	0.54	0.062
Rules and Regulations Transparency	X <sub>5</sub>		-.20107	.124	1.62
	0.104				
	Repair and Investment				
Transparency	X <sub>6</sub>	.08028**	.116	1.46	0.040
	Number of obs.		=	350	
	LR chi2		=	78.93	
	Prob. Chi2		=	0.001	
	Pseudo R2		=	0.1670	

Note: \*significant @ 1 percent level; \*\*significant @ 5 percent level; \*\*\*significant @ 10 percent level



### 3.4 Transparency on repair and investment information and delivery of quality water services

Transparency on repair and investment of water infrastructure was found to have significant influence on the delivery of quality water service with a coefficient 0.08028 and a p-value of 0.040. The findings revealed that if transparency on repair to water users increased by one unit, the chances of getting high quality of water services would increase by 0.08028 unit. Basing on these findings, it is evident that the improvement of water infrastructure leads to the improved delivery of quality water service. These findings are in line with the findings in a study by Water Engineering and Development Centre (WEDC) (2010) revealing that when water infrastructure such as water pumps were properly maintained then the end water users receive sustainable water supply. During interview, investment in water infrastructure was reported to improve the quality of water service delivery. Accordingly, one of the key informants has the following,

*I have seen differences between when there was no good water infrastructure and when there is good water infrastructure. When the district council constructed a new water tank and water pipelines were laid down in the village, water service improved than previously when there were old water pipelines (Female Key informant, Nguvumali village, 18<sup>th</sup> December 2016).*

### 3.5. Water budget transparency and the delivery of quality water service

The influence of transparency in budget on water services delivery was found significant with a coefficient of 0.07917 and a p-value of 0.069 as presented in Table 4. This implies that transparency on budget was a predictor of quality water service delivery. The findings revealed further that, if transparency on budget increased by one unit, the chances of getting high quality of water services among users increased by 0.07917 unit. This implies that transparency on budget is more likely to influence the quality of water service delivery to water users as more water users would participate in water service activities. The findings are in line with the observation made by Islam (2006), indicating that access to budget information and openness about economic information are positively related

to the highest quality in the governance of water resources. Such information facilitates the detection of corruption and reduces the temptation against criminal behaviour. As Del Bo and Florio (2012) observe, transparency on budget is a key component of institutional quality which can lead to improved service delivery at the institution. A similar observation was made during FGD, when one of the participants in Mgori Village made the following statement:

*My COWSO has some disappointing cases; it is supposed to prepare and publicise its budget to the village notice board or make it accessible to villagers. However, no budget has been publicised on the notice board. Hence, we feel that we are not valued and not responsible for preparation and evaluation of the water budget of COWSO. (Male FGD participant at Mgori Village, 6<sup>th</sup> November 2016).*

This means that transparency on water budget is useful as it makes people informed about water service, and thus facilitating their participation in the delivery service of quality water .

### **3.6. Water service performance report on transparency and the delivery of quality water**

The influence of transparency in the performance report of water service and on the quality of water service delivery was found significant with a coefficient 0.23204 and a p-value of 0.006. The study results imply that transparency on performance report was a significant predictor of the delivery services of quality water. The results also imply that if transparency on performance report of COWSO increased by one unit, the chances of getting high quality of water services would also increase by 0.23204 unit. The findings underpin the importance of having COWSOs that work in meeting the needs of beneficiaries through the preparation of periodic performance report. These findings are in line with the findings reported in a study by Piotrowsky and Berteli (2010) who emphasised the importance of transparency on periodic performance reports. These reports enable users to access information about their organisation and make them feel playing a part in the organisation performance. Similar observation was made

during focus group discussions when one of the FGD participants of Mtinko village summarised the FGD observations as follows:

*Periodic publicity of reports of COWSO makes us feel that COWSO is ours, hence it encourages us to participate in different water development programmes as set by COWSO and the district council. Publicity of the reports makes us engage ourselves in in water development projects (Female FGD Participants, Mtinko Village, 2016).*

### **3.7. Transparency of income and expenditure and the delivery of quality water service**

The influence of transparency on income and expenditure on the delivery of quality water service was found significant with a coefficient of 0.39908 and a p-value of 0.001. The study results imply that transparency on income and expenditure is a significant predictor of the delivery of quality water services. It also implies that if transparency of income and expenditure report of COWSO increased by one unit, the chances of getting high quality of water services would increase by 0.39908 unit. This implies that COWSOs can deliver quality services to water users and achieve their needs. The findings are in line with the findings in a study by Gambe (2013) who revealed that lack of transparency on income and expenditure of an organisation leads to lack of trust among stakeholders towards the entity. A study by Lalika et al. (2015) found that COWSOs suffered from problems on favouritism, inefficiency in management, and lack of financial transparency (Lalika et al., 2015). Focus group discussions also emphasised on the importance of transparency on income and expenditure regarding WUAs as FGD participants at Nguvumali village said,

*Information about income and expenditure for water services is very important. However, COWSO leaders do not provide reports on income and expenditure as required by the constitution (Male FGD Participants, Nguvumali Village, November, 2016).*

### 3.8. Transparent meeting procedures

The relationship between meeting procedures and the quality of water service delivery was found statistically significant with a coefficient of 0.25851 and a p-value of 0.062 as shown in Table 3.6. The results imply that COWSOs meeting procedures were a significant predictor of the delivery of quality water services. It was also indicated that if convening of COWSOs meetings increased by one unit, the chances of getting high quality of water services would also increase by 0.25851unit. The findings are in line with the findings in a study by Guillamon et al. (2011) who found that conducting political meetings between users and service providers is important in enhancing the relationship and involvement of two parties. One COWSO in Pangani was reported to have collapsed because leaders failed to convene regular meetings (Lalika et al., 2015). Focus group discussants also emphasised on the importance of convening COWSOs meeting, as one of the participants in an FGD said,

*Our leaders of COWSOs do not conduct water users' meetings to discuss water issues, which discourage people from participating in water development activities. This shows that leaders do not want to disclose all facts of water issues in public meetings (Female FGD participant, Ilongero Village, October 2016)*

### 3.9. Level of transparency

In the study area, transparency on water service delivery was low. The descriptive results in Table 5 show that 72percent of the respondents reported of low level of transparency, whilst 28 percent reported of high level of transparency on water service delivery. Generally, therefore, the level of transparency in the study area was low. Similar finding is reported in a study by La Porte et al. (2002) indicating that, higher level of transparency can enhance the value of public service.

**Table 3.7: Level of transparency of water service delivery n= 350**

Level	Frequency	Percent (%)
Low (0 – 5)	252	72
High (6 -10)	98	28
Total	350	100

## 4.0 . Conclusions and recommendations

Low level of transparency on water service delivery causes poor service delivery of quality of water. The results revealed that there is a positive relationship between transparency variables, which are budget transparency, performance report, income and expenditure, rules and regulations, convening meetings and quality of water service delivery. The responses from water users confirmed the prevalence of low level of transparency on water service delivery . As proposed by the agency theory, the success of the relationship between service provider (CBWSOs) and water users is based on the level of information provided. The agency theory is based on free flow of information on such variables as water budget transparency, water report transparency, income and expenditure transparency as well as good procedures in conducting meetings.

Therefore, the study recommends that budget transparency, performance report, income and expenditure, rules and regulations as well as convening meetings should be enhanced in Community Based Water Supply Organisations (CBWSO) to enable the community achieve quality water services.

The District Council, Ward Executive Officers and Villages Government Officer should focus on ensuring that water users have the information and capacity of holding the government and water service providers' to account on improved water service delivery. Service users cannot contribute to improved service delivery unless they have direct means of communicating with service providers, which are community based water supply organisations (CBWSOs) and Local Government Authorities.

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