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**DELIVERING WATER, SANITATION AND HYGIENE SERVICES
IN AN UNCERTAIN ENVIRONMENT**

**Women and microfinancing of water and sanitation in
communities with expanding population in Nigeria**

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This paper discusses the efforts of the Women Associations in Obizi communities of Awka South Local Government Area, Nigeria, in mobilizing funds for loan to their members for the expansion of Water and Sanitation services. These Associations provide credit services on loan basis to their members to engage in only Water and Sanitation businesses so as to reduce the gap in demand and supply existing in the sector among the Households of the area as a result of continuous population increases and to aid benefiting women generate income to their families. Findings indicate that this funding method has proved successful in expanding the sector access as well as generating income to the Households. It is, therefore, recommended that the model could be scaled up to cover other local communities in South Eastern Nigeria as the entire region has almost the same culture and tradition.

Introduction

The prevailing water scarcity and sanitation problems in most rural communities of Anambra State, Nigeria especially those with high population growth rates have provoked women of such areas into taking practical actions on how to deal with it. One of the actions which is fast spreading in most communities of Awka South Local Government area of Nigeria is the use of traditional microfinance to improve household access to water supply and sanitation. In our area of study, Women Associations have recently become viable local institutions that have undertaken the development of water and sanitation as a poverty alleviation measure of its members. Faced with high population growth rates and worsening poverty level, the women began to provide credit services to their members to invest only in household water supply and sanitation. Most studies on new financing model for water and sanitation focus on using the loan fund to reduce barriers to access credit employed in sustaining the infrastructure already put in place by government (Mehta and Virjee, 2007). Investigations on the use of loans by individuals from a group for the expansion of water and sanitation access as well as generating income to the household has been scanty. This paper, discusses the use of the traditional funding method by some Women Associations in Nigeria to improve Household water supply and sanitation and at the same time generate funds for the repayment of loans and improve household income.

Background

The study of Women Associations that provide traditional microfinance to its members in five communities located in the southern parts of Awka South Local Government Area of Anambra State for water supply and sanitation was undertaken from October 2010 to September 2012. The five communities namely Isiagu, Mbaukwu, Nibo Nise and Umuawulu are located in the peri-urban areas of Awka capital of Anambra State of Nigeria. Their nearness to Awka town made their population to be growing by the day because many city dwellers and new immigrants had continued to relocate to these communities as a result of continuous congestion of the inner city. The annual population growth rates of these communities were estimated at between 4% and 6% by Dandy (2012) which are by far above the national average of 3.1% for the corresponding areas in most parts of Anambra State and the country at large. The population growth of these communities is no doubt one of the most important factors resulting in water and sanitation scarcity in the

area. To solve the perennial water supply problems, the President Generals of Women Associations in these communities came together in 2010, discussed the problem and decided to use the Associations as an avenue in their individual communities to raise funds which were used to offer credit to their members to improve household water and sanitation services and at the same time engage in water and sanitation businesses. The structure of the Women Associations in these communities is such that there is a central executive, while each of the component villages in the community has its own executive committee that reports to the central executive from time to time. The central executive raises funds which are loaned to the village executive with the maturity period of four years and one year moratorium. The loan has been used to site boreholes at the village squares fitted with overhead tanks and multiple taps. Some women in the village who require and meet the loan conditions of the village executive are allowed to establish either water kiosks or toilets with the loan and pay back at an agreed period usually not more than three years. Microfinancing of water and her sanitation by associations has so many variants from different backgrounds. Some of these variants are those described by (i) Agbenorheri and Fonesca (2005) in Ghana (ii) Mehta and Virjee (2007) in Kenya. Furthermore Mehta (2008) in a study of East, South – East Asia and Sub-Saharan African described that loans obtained by the poor for the expansion of water and sanitation access are mainly from conventional microfinance providers.

Methodology

Data for the study was generated through the use of two sets of questionnaire administered between September 2010 – August 2012. Five questionnaire which constituted the first set was served on the President Generals of these Associations in which we tried to ascertain how the pooled funds were generated, the problems involved, the basic methods of disbursement, the conditions applied etc. Another set questionnaire numbering 170 was served on loan beneficiaries from different communities on how the loan has helped them to improve water supply and sanitation access as well as generated income to their households. Also secondary data gathered from published census records and government ministries were utilized. Ten research officers were recruited to distribute and retrieve the questionnaire from respondents.

Data analysis

In the treatment of the data collected, simple statistical parameters such as percentages, means, bar graphs etc. were used to deduce patterns and relationships.

Results

Table 1 shows the demographic composition of the study area in 2010 where the population of that year, number of women, annual population growth rate, size of household and number of households in each committee were reflected. The Table additionally indicates that the total population of the area was 120,760 out which women were 26,698 or 22.1%, the general population growth rate was approximately 5%, with the average household size of 7 and the total number of households of 18,562 (Dandy, 2012).

Community	2010 Population	No. of Women	Annual Growth Rate	Size of Household	Number of Households
Isiagu	9,216	2,198	4%	6	1,536
Nibo	44,761	10,819	6%	6	7,460
Nise	23,914	4,108	5%	8	2,989
Mbaukwu	27,378	6,559	4%	6	4,563
Umuawulu	15,491	3,014	5%	7	2,014
Total	120,760	26,698	5%	7	18,562

Source: (Field work, 2010)

The above demographic data (Table 1) were individual factors that affect water demand and supply situation in the area (Table 2).

Community	Per Capita Water Demand (Litre)	Total Water Demand (Litre)	Per Capita Water Supply (Litre)	Total Water Supply	% Demand Satisfied by Supply
Isiagu	36	331,776	17	156,672	42.7
Nibo	41	1,835,201	19	850,459	46.3
Nise	53	1,267,442	18	430,452	33.9
Mbaukwu	34	930,852	15	410,670	44.1
Umuawulu	38	588,658	18	278,838	47.3

Source: (Field work, 2010)

The Table 2 indicates that no community was able to supply up to 50% of household water supply before 2010. This situation increased the reported cases of such household water borne-diseases as diarrhoea, typhoid and cholera, which provoked the women into finding a solution. With the intervention of the women through its loan programme for water and sanitation, the situation improved remarkably by 2012 just two year after the commencement of the programme (Table 3 Fig. 2)

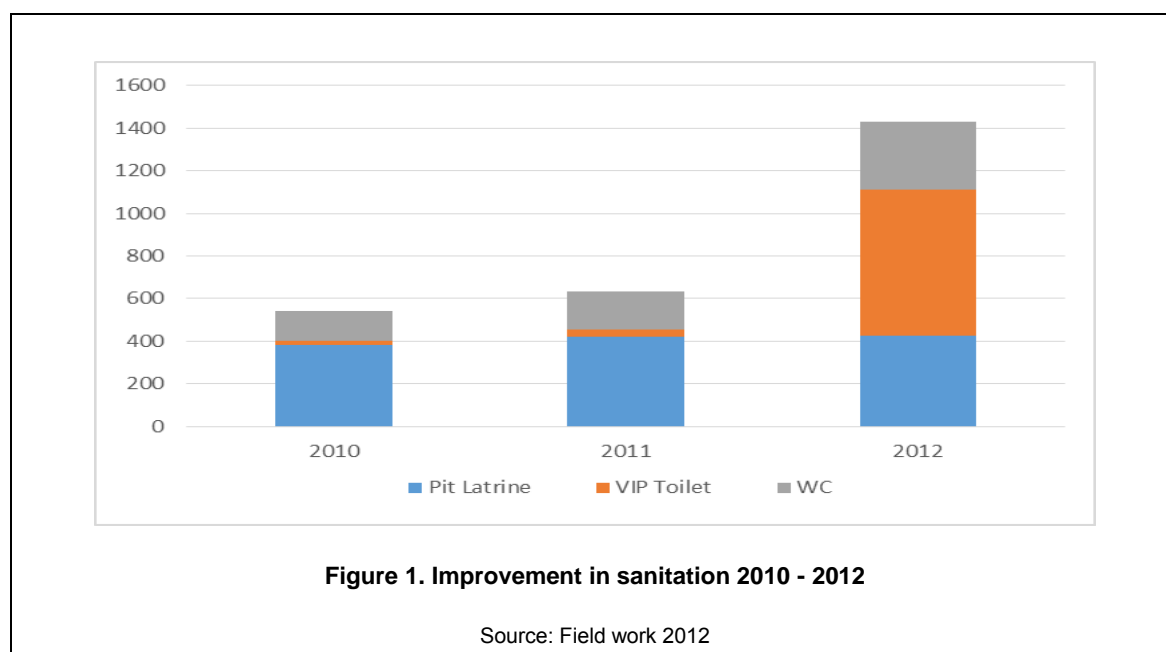
Name of Community	2012 Population	Per water capita demand (Litre)	Total Water Demand (Litre)	Per Water Capita Supply (Litre)	Total Water Supply(Litre)	% Demand achieved by supply
Isiagu	9968	36	358,848	24	239,232	66.7
Nibo	50,293	41	2,062,013	21	1,056,153	51.2
Nise	26,365	53	1,397,342	28	738,220	52.8
Mbaukwu	29,612	34	1,006,808	26	769,912	76.5
Umuawulu	17,079	38	649,002	25	426,975	65.8

Source: Author's computation

This computation was based on the per capita water demand and supply as supplied by the respondents in the questionnaire. It is fairly accurate because the estimate where done by the consumers themselves. Again, the estimate where not random improvement because all the five communities recorded a fairly uniform progressive improvement. The loan to beneficiaries indicates that it has a low interest rate while the repayment rates are equally low. The loan disbursement to the sanitation subsector is, however, more than double that of water supply for the obvious reason that the sanitation problem is higher than water as manifested in the prevalent open defecation method in the communities together with the State Government’s campaign against it made the various Women Associations to direct their attention to it (Table 4). The loan were unutilized by beneficiaries to construct water boreholes and kiosks from where villagers buy water from at the cost of (\$0.063) for a 20 litre jerrycan and the use of toilets by villagers at the rate of (\$0.13) per use. The money collected by the providers are used to repay the loan they collected while the leftover is ploughed back as family income.

Community	Interest Rate	Amount Released as Loan (USD)	No. Of Persons Benefited	Repayment Rate (%)	Average per Person Loan (USD)	Loan to Sanitation	Loan to Water
Isiagu	3%	31,847	80	46	398	21,847	10,000
Nibo	5%	42,633	103	54	414	22,000	20,633
Nise	3%	56,900	140	50	406	29,400	27,500
Mbaukwu	2½%	34,660	92	58	376	18,204	16,456
Umuawulu	3%	29,130	72	51	405	16,900	12,230
Total Average		195,170	170	52	400	108,357	86,819
Percentage		-	-	-	-	55.5%	45.5%

It is interesting to observe that in the second year of the programme, the average repayment rate of 52%, was achieved and this is quite commendable. From Table 3, we could see that the application of microfinancing to water supply provision improved the supply when we use the percentage of water demand achieve by supply as an indicator. All the communities have great improvements except in Nibo where the programme has just started. Figure 1, also shows improvement in sanitation when we employed the three categories of toilets built between 2010 and 2012 to arrive at this conclusion.



It could be seen that while the pit latrines decreased within the same period, the VIP toilet and water closet (WC) systems increased indicating a clear improvement in access to sanitation. The attraction of members to the loan is the relaxed collateral involved which has given rise to this commendable repayment rate. Other reasons include (1) the agreement among women that any default in payment of loan would attract “Nzele”, which is a debt recovery means in which members would troop to the debtors’ house at an agreed date to confiscate any property adjudged to be equivalent to the owed amount. In most cases, the property forcefully taken away value twice the amount owed. In very few instances people have taken the association to court for employing the social sanction on them. In all these instances the cases were eventually withdrawn and settled out of court by the association. There has not been any instance of using the (Nzele) to settle old scores. It has been used by communities for ages to ensure that common rules are observed which help to foster community development. (2) depending on the extent (in terms debt) the debtor will not be allowed to take any further loan, until she repays it (3) the membership of the affected person of Women Association may be withdrawn until she finishes the payment of her loan and (4) there is a ready market for water and sanitation businesses in all the areas as a result of low access to the sector in the area. These somewhat non-conventional means of ensuring that the loans are paid back may have given rise to the good response observed in the rate of loan repayment. Our investigation revealed that the beneficiaries of these loans tried as much as possible not to divert the loan to solving domestic problems especially payment of children’s school fees and building of houses although these were observed in very few cases. In line with the findings of Barenberg (2011) around the city of Tiruchirappalli, India that programme activities have considerably increased the pool of loan capital available to poor women and their families for water and sanitation improvement, in the study area it is equally shown that Obizi women were initially sceptical to access the loan but have now become eager to do so.

Discussion

The microfinance method described here is relatively underdeveloped although it is achieving good result. Its soul and character differ from the existing microfinance model in the provision of water and sanitation in some other developing countries. Our study area operates its own variant which is the mobilization of funds by women town unions from a range of sources which include normal membership dues, contributions and loans from well-to-do members, etc. These basket of funds provide the source from where loans are offered. With this, a number of achievements were made which include:

- The empowerment of more women as they now engage in income generating activities (Table 4 on number of loan beneficiaries);
- the increased access to water and sanitation; and
- sustainability of the water and sanitation projects, because beneficiaries try to maintain their water and sanitation projects so as to ensure that their regular income from the subsists.

However, it is not all success story as there are areas where the model tends to be having problems. These are; the high illiteracy level among the local women in the area, repayment of loans and lack of support from the menfolk.

High illiteracy level

The high illiteracy level observed among women in the area is one of the problems of employing the traditional microfinance model for the expansion of water and sanitation in the area. According to a recent study by Okri (2011) about 20.4% of the women in the area had primary school certificate, while about 25.6% were with secondary school certificate and 10% with National Diploma or University Degree. This therefore, means that as high as 44% of the women did not either finish primary school or received any formal education. Surprisingly among the members of the executive both at the town and village levels are mostly those who are not well educated. Our findings indicate that some of these women were even elected chairmen of the women group. A look at their official papers show that some central Women Association in the area lack the basic documentation of the beneficiaries of the loans although intriguingly all who had been beneficiaries have not defaulted. Again since they do not bank this money in any conventional financial institution we found that sometimes there is no documentation of the amount of money handed over to the treasurer, but are done based on the mere confidence reposed on the officer.

Repayment of loans

Repayment of loans by borrowers in the area looked very impressive. However beyond this it was discussed that at times to escape the punishment served on defaulters, beneficiaries borrow to repay the loan. This

issue was discussed by Waldorf (2012) when he noted that many microfinance organisations only publish the repayment rates of loans as an indicator of success of projects. However, according to him, studies have shown that borrowers may go into debt in order to repay loans to microfinance institutions or lenders which defeats the purpose of issuing loans to the poor since the objective of a microfinance project is to improve the quality of life of the recipients. Our findings seriously show that to solve this problem, the size of the loan may have to be reduced while the repayment period extended.

Lack of support from the menfolk

The Igbo tribe of Nigeria has a culture of male domination. This is true of the people of Obizi communities of Awka South Local Government Area. In some of these communities our findings indicate that men have not offered any good support to the women regarding the project described since it started. In one of the communities, the men wing of the Town Union ordered the Women Association to surrender to them all funds they collected for the issuing of loans on the reasons that the women might not be able to handle a community project of the magnitude involved. Although this was later resolved, another incident involved some beneficiaries of the loan, whose husbands demanded that they render daily account of water and sanitation businesses to them and the refusal of the women to do so had resulted in constant quarrels and in few instances the suspension of the business. These two examples serve as a pointer to the fact that men find it difficult to support women in community development.

Conclusion

The use of traditional microfinance method by women to expand access in water and sanitation to communities with increasing population was examined in this paper. The method has really improved access to loans which could not have been possible in conventional microfinance institutions in the study area. The high rate of population growth coupled with the underdeveloped microfinance banking system as well as high collateral requirements in conventional commercial banks are important factors necessitating the employment of this method. The implication from the study for those involved in WASH programme is that it has proved that nonconventional home-grown method of improving the sector services holds great promise necessitating a closer study.

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