Financing Water Services in Africa: A Case Study of Water Corporation in Nigeria

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Introduction

• The Western Nigeria Water Corporation Law, 964 spelt out the duties and objectives of the Corporation in section 5(6) which includes:
  • To control and manage all waterworks vested in the Corporation,
  • To establish, control, manage, extend and develop such new waterworks
Introduction

• To ensure that water is supplied to the consumer thereof at reasonable charges and in potable quality and adequate quantity.

• To organize the conduct of comprehensive research for the purpose of the corporation from time to time on matters relating to its functions under the Edict and submit on request the result of such research to the Commissioner for the utilization by him in formulation of policy relating to the supply and usage of water.
The Water Sector in Nigeria generally and Water Corporation of Oyo State (WCOS) in particular is facing a far more difficult financial situation.

Water rates can only cover less than 15 percent of the cost of production and there has been cutbacks on state subvention for water supply.

Hence the burden of financing new capacity expansion and water system replacement is being increasingly borne through loan from African Development Bank (ADB) and the World Bank and the State Government.
Characteristics of the Water Sector in Nigeria

• This increase in financial responsibility of the Water Corporation of Oyo State is occurring at a time when the interest rates are at historic highs and sources of new water supplies are scarce.

• Furthermore the maintenance costs of water supply have escalated in recent times with galloping inflation rates placing more strain on WCOS budgets.

• Although the costs of water services are increasing, additional investment in water supplies are necessary due to population growth, increase in the number of industries with the resultant increased water use in the state.
Characteristics of the Water Sector in Nigeria

- This paper therefore examined the sources and application of fund of Water Corporation of Oyo State.
- Past pattern of financing are reviewed and alternative financing options for financing water services were examined.
- The rest of the research is divided into five sections. The background of the study; a review of selected literatures, The methodology, sources of data and the analysis and discussions and the summary and policy recommendations.
Background of the Study

- Africa is blessed with abundant water, although the distribution is uneven. There are 17 rivers with catchment area greater than 100,000 km² and more than 10 lakes with over 27 km².
- It has vast wetlands and limited but widespread of ground water. Due to exceptional variable and unpredictable runoffs, both in time and space, there are frequent droughts and floods, which pose great risk to the people and economics of Africa.
- High rainfall variation and low runoff lead to high variable and relatively low seasonal and annual flows in many African rivers including Nigeria.
Background of the Study

- This result in high vulnerability of the landscape to erosion and diversification. In order to cope with hydrological variability of African River, our ancestors adopted pasturalism, mobility and even migration in response to water and land pressure.

- With the emergence of state imposed on Africans by the colonial masters, the above coping strategies are no longer feasible.

- During the scramble for Africa by the colonial powers in late 19th and early 20th centuries, all the nation states of Africa were carved out without regard to major rivers forming national boundaries, tribes, traditions or customs. This lead to many countries sharing 2 or more river basin.
Background of the Study

• There are at least 34 river shared by 2 African countries, 28 rivers are shared by 3 or more countries. 10 river basin are shared by 3 or more countries.

• Majorities of international rivers in the world shared by 3 or more countries are in Africa. In Nigeria, the river Niger, Mali and Guinea. Also Lake Chad is shared by Chad, Niger, and Cameroon.

• Guinea has 14 International rivers, Cote D’Ivorie has 9 and Mozambique has 8. These make the management very difficult needing extensive international diplomacy and multiple political negotiation skills.
Background of the Study

- Government has invested heavily in urban water supply schemes since 1970; the capital expenditure had declined from 15 percent in 1950 to only 3 percent of total government's budget in 1980.

- With the creation of regional government in 1950, growth in demand and increasing cost, the regional governments were asked to set up independent bodies or Water Corporation to develop and operate and manage water supply schemes.

- Hence with the formation of the first water Corporation, that is the Western Nigeria Water Corporation in 1966 by the Western Region.
Background of the Study

- There are at present 36 states and the federal capital territory. In 1976, the federal government operates through Federal Ministry of Water Resources and Rural Development (FMWRRD) and it established 15 river basin development authority (RBDA). The Nigerian Government at all levels are involved in the water supply.

- The colonial master in Nigeria started public water supply in 1911 at Abeokuta. By 1937, 14 cities had water schemes, namely; Abeokuta, Lagos, Enugu, Ijebu-Ode, Ibadan, Aba, Onitsha, Makurdi, Kano, Kaduna, Akure, Jos, Okene and Porthacourt. By 1970 the number of water schemes had risen to 261.
Methodology

- We used ratio analysis to calculate income from various sources as a percentage of total annual income and the expenditure heads as a percentage of total expenditure.
- Secondary data was obtained from the Department of Finance and Commercial Services and Department of Training of the Oyo State Water Corporation.
- We obtained information about water services financing in Nigeria as a whole in the pre and post colonial era and data on the Revenue, Capital and Recurrent Expenditure of Oyo State Water Corporation from 1995 to 2001.
Empirical Analysis and Discussion

- In Nigeria, water supply is seen as a social service that must be provided free by the government.
- Oyo State Water Corporation (OSWC) with its accounting year ending on the 31st of March of each year generates its income from both internal and external sources.
- Internally generated funds are income from Water Development Levy, Water Fines and Fees, Renewal of Contractors’ Licenses, Earnings and Sales, Government Institutions and Domestic Consumers.
- External sources of funds consist of subvention from the State government and loans from African Development Bank (ADB) and the World Bank. Loans from loans from African Development bank and the World Bank are mainly to finance capital projects.
Empirical Analysis and Discussion

• In 1995 and 1996, the main sources of income to WCOS are subvention from state government, loans from African Development Bank and the World Bank and internally generated fund. Loans from African Development Bank and the World Bank are for capital expenditures.

• Subvention from state government was towards meeting concurrent expenditure during the period. Internally generated fund accounted for 46.47 per cent in 2001, while subvention from state government is about 53.53 per cent of the total income. This points to the fact that the internally generated fund is not enough to meet the needs of WCOS.
Table 1. Sources of Income of Oyo State Water Corporation (1995, 1996 and 2001)

<table>
<thead>
<tr>
<th>Year</th>
<th>Average %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income %:</td>
<td></td>
</tr>
<tr>
<td>Internally generated:</td>
<td></td>
</tr>
<tr>
<td>Water Devpt Levy</td>
<td>0.17</td>
</tr>
<tr>
<td>Water Fines &amp; Fees</td>
<td>0.26</td>
</tr>
<tr>
<td>Renewal of Contractors’ Licences</td>
<td>0.17</td>
</tr>
<tr>
<td>Earnings &amp; Sales</td>
<td>23.42</td>
</tr>
<tr>
<td>Government Institutions*</td>
<td>3.52</td>
</tr>
<tr>
<td>Domestic Consumers</td>
<td>18.55</td>
</tr>
<tr>
<td>Interest and dividends</td>
<td>0.01</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.37</td>
</tr>
<tr>
<td>Total internal fund</td>
<td>46.47</td>
</tr>
<tr>
<td>External sources:</td>
<td></td>
</tr>
<tr>
<td>Subvention from State Govt.</td>
<td>53.53</td>
</tr>
</tbody>
</table>

Source: Computed by Authors from data obtained from Oyo State Water Corporation.
Empirical Analysis and Discussion

- Expenditure heads of WCOS includes procurement of water treatment chemicals, capital projects, salaries, wages and pension and miscellaneous.

- For all the years analysed, there is excess of expenditure over income. This shows that the revenue generated by WCOS does not cover the cost. Infact the bulk of the money used for payment of salaries and wages is from subvention from the state government.

- Over 50.02 per cent of the cost incurred was on capital expenditure, 25.37 per cent of the expenditure was for payment of salaries and wages, while 16.84 per cent was for procurement of water treatment chemicals.
Empirical Analysis and Discussion

Table 2. Expenditure Pattern of Oyo state Water Corporation (1995, 1996 and 2001)

<table>
<thead>
<tr>
<th>Year</th>
<th>Average %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure %:</td>
<td></td>
</tr>
<tr>
<td>Procurement of Water treatment chemicals</td>
<td>16.84</td>
</tr>
<tr>
<td>Capital Projects</td>
<td>50.02</td>
</tr>
<tr>
<td>Salaries, Wages &amp; Pension</td>
<td>25.37</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>7.77</td>
</tr>
</tbody>
</table>

Source: computed by Authors.
Empirical Analysis and Discussion

• Generally, water is seen as a social service, which should be provided by the government, little wonder that the user charge is less than 15 per cent of the cost of production.

• Even at that low cost, a review of the statement of income and expenditure revealed a long endless list of debtors ranging from government establishments to domestic consumers.

• Beyond subvention from the state government and loans from ADB and The World Bank, there is need to charge economic rate through efficient pricing and collection of user fees while ensuring that the poor are still not denied access to water supply that they need for basic living.
Empirical Analysis and Discussion

• WCOS can also take advantage of the stock market to finance its project by issuing bonds. Bonds can be issued by government agencies like WCOS to finance their operations.

• They can issue general obligation bonds or revenue bonds. General obligation bonds are debt instruments issued and backed by certain revenue source while, revenue bonds are bonds issued after performing a feasibility study for either a particular project or enterprise financing where the issuer pledged to service the debt to the bondholder with the revenue generated by operating the financed project. Bonds can be used to finance investment in new facilities, extension, replacement and modernization of existing assets.
Empirical Analysis and Discussion

- Grant and loan programme can also be used to meet capital expenditures that will yield enough returns to pay back the principal and the interest through appropriate pricing of water services.

- Most water services equipments and chemicals are bought from outside Nigeria and the high level of inflation in the country is affecting the prices of these items, government should therefore embark on programme aimed at reducing inflation and interest rates.

- Another financing option available for efficient and sustainable water services is the use of lease financing of capital equipments.
Empirical Analysis and Discussion

• WCOS could enter into either operating or financial lease. Under operating lease, the organization hire the asset rather than purchase it and pays some money, while the owner still carries out eth maintenance.

• This is a good financing option for asset that is required occasionally. Under financial lease, the potential user identifies an asset in which it wish to invest, negotiates price, delivery and then seek a supplier of finance to buy it.

• Having arranged for the asset to be purchased the user leases it from the purchaser and the lease payment will need be sufficient to justify the owner’s expenditure, in terms of both capital repayment and of interest. This arrangement is only suitable for capital expenditure.
Conclusion and Policy Recommendation

• However, there is need to see water supply as an economic good that must be paid for. There are many ways of attracting funding which matches both public and private repayment ability, however, ultimately it is important to recover all costs from users themselves through user charges and specific taxes and national and international subsidies.

• Basic level of consumption water will need to be subsidized. Water services financing in Oyo State can be sustained through many ways. These include grant and loan programme, efficient pricing and collection of user fees, programme aimed at reducing inflation and interest rates, privatisation of water services, lease / purchase financing and capital market financing through issuance of bonds.
Conclusion and Policy Recommendation

- Local financial market can also be encouraged to yield more funds for the water sector by the government through guidelines on sectoral allocation of credit to favour the water sector.

- However, it is also needful to create an enabling environment in which the financial community, be it public, private, internal or international, can bring more finance into the water sector.

- This will require drastic reforms in the way Water Corporation of Oyo State is organised and delivers services.
Conclusion and Policy Recommendation

- Oyo State water corporation need to be more efficient, responsive to clients, financially solvent and commercially astute.
- These changes are necessary for the corporation to generate and attract increased volume of finance.
- Part of the finance needed for new investment in Oyo state water corporation, as well as recurrent operations will have to come through water charges from the users themselves, through efficient delivery, appropriate pricing and collection of water charges.
- Loans and private equity can ultimately be paid from future cash flow from users.