Despite their role in teaching, undertaking research and training of skilled manpower for economic development, public universities in developing nations especially those in Africa are facing financing crises. Over the past decade or so, these institutions have continued to receive less financial allocations from their governments than their estimated expenditure. Given the prevailing unfavorable economic conditions in developing countries, governments are unable to adequately finance the provision of public services including education. This means that trend of under funding public education sector especially the university sub-sector is expected to persist in the foreseeable future.

Pressed by the severity of inadequate government funding, Kenya's public universities have been making efforts to diversify their sources of revenue. These institutions are reportedly carrying out a number of revenue diversification initiatives to supplement government funds. The significance of these initiatives in the financing of public universities in Kenya, however, has not been well documented. The potential of these self-financing initiatives in overall financing of these institutions, therefore, remains a matter of speculation.

The Purpose of the Study

The purpose of this study was to examine the financing of public universities in Kenya given the changing socio-economic and policy environment in Kenya. By conducting an analysis of all sources of revenue for public universities, an attempt has been made to assess their relative contribution towards overall financing of public universities in Kenya. In addition to identifying problems affecting revenue diversification initiatives and suggesting some remedial measures, the study also sought the main factors that make revenue diversification in public universities sustainable. Finally, the study makes intuitive inferences on the implication of revenue diversification on institutional efficiency and equity in admissions.

Research Questions

This study sought answers to the following specific research questions:

1. What has been the planned recurrent and development expenditure for each public university?

2. What percentage of recurrent and development revenue does each public university receive from the government each year?

3. What have been the non-governmental sources of revenue in each university?

4. How much revenue in terms of percentages, has been generated from non-government sources by each public university and under what terms and conditions, if any?

5. How much, in terms of percentages, is the financing deficit has been met by the revenue from non-government sources?

6. What have been the major constraints facing financial diversification initiatives?

7. What have been the policy measures that are undertaken to ensure sustainable financing of Kenya's public universities (to ensure equity and efficiency)?

8. In what directions should the financial diversification initiatives be improved to enhance revenue generation?

9. What is the optimal level and mode of financing public universities for enhanced efficiency and equity?

Theoretical Framework

Because various aspects of economics and finance are involved, an analysis of educational finance draws upon principles from the economics of education and public finance (Monk 1990). This is the main reason that the human capital theory, initially developed by T. Schultz in the late 1950's (Schultz 1959) and further developed by G.S. Becker (Becker 1964), and the theory of public expenditures articulated by Musgrave and Musgrave (1989) were helpful in informing this study.

Design and Methodology of the Study

The study uses a descriptive survey design for exploratory purposes because little information was available on the specific research problem under investigation. To be able to conduct an in-depth analysis of revenue diversification initiatives and generate required data for answering the stated research questions, a case study of the University of Nairobi's revenue diversification initiatives was conducted and findings compared with data from Makerere University and the University of Dar es Salaam as well as those in other public universities in Kenya.

Organization of the Study

The study consists of seven chapters, a bibliography and related appendices. Chapter 1 includes an introduction to the study, the statement of the problem, the specific objectives of the study, the research questions, significance of the study, definition of significant terms, procedure and methodology, data analysis and the organization of the study. Chapter II contains the review of literature, Chapter III outlines the national context of Kenya's national education and Chapter IV contains analysis of the financing of education in Kenya. Chapter V universities. The sustainability of revenue diversification in public universities is discussed in Chapter VI. Chapter VII contains the implications of revenue diversification initiatives on the development of public universities, while Chapter VIII includes a summary of the research findings, recommendations, the conclusions and the limitations of the study.

Major Findings of the Study

Significance of Revenue Diversification Initiatives in the Financing of Public Universities.

The proportion of revenue from nongovernmental sources increased during the sample period for all the universities due to their revenue diversification initiatives. Contributing between 10 percent and 40 percent of the recurrent expenditure budgets, revenue diversification initiatives that include tuition fees and revenue income generating activities have increased the amount of disposable incomes of Kenyan public universities thus enabling them to meet part of the rising budgetary deficits in these institutions.

It was found that about 50 percent of the total nongovernmental revenues for Kenyan public universities accrue from academic related income generating initiatives. External sources of revenue for these institutions, which include donor grants and university linkage programmes, account for over 90 percent of the development expenditure budgets and form a substantial proportion of funds for research activities in Kenyan public universities.

Main Constraints Facing Revenue Diversification Initiatives

It was noted that most of the problems affecting revenue-generating initiatives are attributed to the existing management structure of public universities, which are managed as government parastatals. The specific constraints affecting revenue diversification initiatives in these institutions include inadequate operational capital, using unskilled management, lack of internal autonomy due to centralized management systems, shortage of skilled manpower in areas such as information technology, lack of direct access to the revenue generated and low staff morale.

Possible Remedies to the Constraints and Future Directions of Revenue Diversification Initiatives in Public Universities

a. To address these problems, public universities, like other non-profit organizations, should restructure their management practices in order to adopt innovative strategies in their activities and programmes. Such innovations should involve measures to separate the management of the income-generating activities from their conventional educational and research function, and encourage the spirit of entrepreurship to thrive.

b. Where feasible, prospective investors should be invited by public universities for joint investment ventures using available institutional resources such as land and skilled manpower as in the case of the University of Dar es Salaam in Tanzania.

c. Further revenue diversification ought to be undertaken to include other sources of revenue that, hitherto, have not been exploited such as Alumni associations.

Important Factors Associated with Successful Revenue Diversification

The following important factors are associated with successful revenue diversification in public universities:

a. Adoption of innovative management strategies.
b. Educating all stakeholders and consensus building.
c. Governmental support of the revenue diversification process.
d. The ability of public universities to exploit their natural strengths, specific expertise and comparative advantage for revenue generation.

Efficiency Implications of Revenue Diversification Initiatives

In order to overcome the challenges brought about by revenue diversification, Kenya's public universities are becoming innovative in the overall management of their activities with significant implications on their internal and external efficiency:

a. Public universities are creating a provider-client relationship and a greater student voice in the affairs of these institutions with implications on internal efficiency and external efficiency.

b. In response to the needs of their clients who are becoming sensitive to changes in the labour market, public universities are diversifying their academic programmes that are part of these institutions' revenue diversification initiatives.

c. With reference to universities in Zimbabwe, a pattern is emerging where public universities are developing into centres of specialization indicating areas of specialization by these institutions to avoid dispersion of resources, diversify their academic programmes, attract more donor funding and tap economies of scale in addition to generating more revenue.

d. The introduction of Module II academic programmes in public universities has made it possible efficient use of both human and physical resources including space.

e. The introduction of Module II academic programmes and the flexible semester system in public universities have reportedly led to reduced wastage through fewer drop-outs, re-sits and failures in addition to making students accelerate their studies.

f. Through Module II programmes, public universities are giving qualified students opportunities to pursue career programmes of their choice.

g. By opening up new university campuses/colleges and developing new modes of delivery to increase access to university education to people in rural areas, public universities are creating opportunities for qualified students including those from historically excluded communities to access higher education.

Equity Implications of Revenue Diversification

Whereas there is evidence that revenue diversification initiatives in the institutions studied has led to institutional development, equity in student admissions is an issue that has not been given due attention considering that the privately sponsored students joining Module II academic programmes are mainly from the socio-economically well-off segments of society.

Recommendations

On Revenue Diversification Efforts in Public Universities

1. In addition to enabling public universities to import (duty-free) the necessary ICT equipment, there should be appropriate ICT policies for developing the necessary infrastructure needed in delivering education to grassroots communities.

2. Governments and university authorities should ensure that pressures in favour of revenue generation do not accumulate to the point where they can distract university employees and resources from their main mission of teaching and research.

On Funding Mechanism of Public Universities for Efficiency and Equity

1. Instead of recommending a single optimal mixture of public and private financing, governments and universities in Africa should step up experimentation with and analysis of different combinations of tuition fees, and subsidies in addition to revenue diversification.

2. For effective financing of public universities, African countries should consider performance factors such as enrolments, graduate throughput, research output, and staffing ratios to promote accountability, cost-efficiency, and innovation in these institutions.

3. With inbuilt *positive discrimation,* cost sharing should continue in the provision of public university education whereby effective funding sources for students from poor social backgrounds are created. The funding sources that include special government bursaries and a special fund set aside from internally generated resources will enable qualified students who fail to get admitted into their preferred programmes to receive *partial fellowships or tuition discounts* to pursue these programmes in the Module II programmes where they exist.

Implications of the Study Findings on Theory

The fact that Module II academic programmes are attracting increasing numbers of privately sponsored students who include working class people confirms their investment motive as they expect to receive satisfaction from the consumption of the "good" (university education) and/or higher earnings as a result of this "good".

Revenue diversification initiatives that include academic programmes for fees-paying students (i.e. cost sharing), therefore, support the theory of human capital's argument of profitability that, since (higher) education enables students to earn more after graduation, they should contribute towards financing of their education. Hence, with measures in place to cushion the effects of cost sharing on the provision of higher education to all citizens of a developing nation, a suitable mix between private and public financing would make public universities attain both equity of admissions and institutional efficiency.

With governments shifting resources away from higher education, it is possible that revenue diversification in public universities has facilitated the reallocation of government funding across levels of the education sector. This is consistent with Musgrave and Musgrave (1989: 6) who, in articulating the theory of public finance, point out that the wealth to ensure conformity with what society considers a 'fair' and 'just' state of distribution.

Major Conclusions

Based on the findings of this study, the major conclusions include the following:

> Despite reduced government funding to national universities, total revenues for these institutions does not decline. This means that it is possible for these public higher education institutions to survive in the face of scarce and declining resources.

> Availability of funds from non-governmental sources has enabled these universities to move from a situation of hand-to-mouth dependency on public funding to one where autonomous initiative, planning and allocation are becoming possible.

> Diversification of revenue sources appears to have a stabilizing effect on universities by reducing their vulnerability to fluctuations in government funding and by broadening the range of stakeholders so that the influence of any single interest group is being lessened.

> Despite some of the arguments raised against revenue diversification initiatives in public universities, if carefully implemented, revenue diversification initiatives have the potential to increase efficiency in the management systems of African universities, enhance greater autonomy, responsibility, accountability and self-reliance.

> By generating their own funds, these institutions of higher learning are able to increase the capacity of the higher education sub-sector to accommodate more students including those from disadvantaged backgrounds. This enhanced access to higher education in countries where public financing is declining is essential for sustainable development.

> If public universities in developing nations could be encouraged to step up their revenue diversification efforts, it is possible for governments to raise the share of total recurrent revenue for other sub-sectors of education, thus facilitating the reallocation of government funding across levels of the education sector. The resultant reallocation of resources would enable developing nations to meet educational priorities and enhance fair distribution of available resources.

> Considering the significant role of donor funding in national educational systems and the individual public universities, external support is still necessary.

> Ultimately, though a worldwide phenomenon, revenue diversification is almost certainly an imperative for African public universities. Without seeking alternative sources of revenue, public universities will not be able to effectively conduct their core functions. The failure of these institutions to diversify their revenue sources is virtually certain to diminish both the quality and capacity of higher education on the African continent.

Limitations of the Study and Implications for Further Research

1. The use of cross-sectional data to locate differences between institutions, and time series data to examine changes within institutions did not make it possible to infer causation. Instead this

study used intuitive reasoning for suggesting the existence of a relationship between revenue diversification on one hand and equity in admissions and institutional efficiency on the other.

2. Without relevant statistical analyses, adequate control of other variables was not possible because such analyses require more detailed data that could not be made available by public universities especially those in Kenya. Consequently, it was not possible to distinguish all changes in efficiency and/or equity of admissions that could be attributable to revenue diversification.

3. Owing to a large number of factors that make public universities different from each other, a comparison of some of parameters across institutions was quite difficult.

4. Given the kind of data available for this study, it was not possible to show whether the level of institutional dependence on government funding determined the level of institutional efficiency of the universities as shown in other studies such as Robst (2001).