Effects of Quality of Population Data on Budget Formulation in Nyandarua County

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Abstract

This study assessed how population data affects budget formulation in Nyandarua County. The study adopted a descriptive survey research design whose target population was the 1524 staff at the Nyandarua County headquarters. The sample size was 306 staff proportionately distributed between the levels of management in the departments that handle finance and budgets. The main instrument for primary data collection was a structured questionnaire that collected both quantitative and qualitative data. Descriptive statistics was used to analyse quantitative data while qualitative data was used to supplement interpretation of quantitative data. Analysed data was presented in percentages and frequency tables, charts and graphs for easy interpretation and discussion. Regression analysis was used to determine relationship between variables. The study revealed that though population records are maintained by the County Government there is need to improve on the way population records are obtained and maintained. In addition, the study revealed that the overall human population data in use by the county was of poor quality, was out of date and not clear to most staff members, meaning they could not trust its accuracy. The study recommends that Nyandarua County should work with the relevant authorities to improve the quantity and quality of the demographic data it uses for budgeting. It also recommends that the county should organize to conduct baseline surveys on important indicators in the planning of the county development.

Keywords: Population data, budget formulation, County Government

1.0 Introduction

The Kenya's 2010 Constitution together with the Public Finance Management (PFM) Act of 2012provides a very clear basis for revenue sharing predicated on fairly solid principles. Revenue is shared by the commission for revenue allocation (CRA) between the central government and the county governments. The legal framework lays down public finance principles that ensure openness, accountability and promotion of an equitable society and in which the burdens and benefits from the use of public resource are shared equitably. Where the budget estimates exceed the income, the counties are expected to present a detailed financial proposal on how they plan to bridge the funding gap as required by Chapter 12(220) of the constitution (ROK, 2010). However, Commission on Revenue Allocation in August 2013 revealed that 25 out of the 47 counties were still facing serious financial crises due to huge deficits in their budget. According to CRA (2013) 14 counties had a balanced budget while six had surplus budgets. The budget deficit at the county level would mainly be arising from bloated expenditure or non-disclosure of any additional sources of income over and above the minimum 15 per cent it is entitled to from the National government. Nyandarua County approved Budget for the financial year 2013/2014 was Kshs. 4.3 billion which comprised of Kshs. 1.7 billion (39%) for recurrent expenditure and Kshs. 2.6 billion (61%) for development expenditure. To finance the budget, the County expected to receive Kshs. 3.2 billion as shareable revenue from the National Government, Kshs. 284.9 million for the ongoing donor funded projects and to collect Kshs. 156.2 million from local revenue sources. Analysis of the expenditure for the first quarter of FY 2013/2014 shows that 49.4% was spent on personnel emoluments, 50.6% on operations and maintenance while there was no expenditure on development. Despite this, scanty empirical data exists that shows how population data has influenced budget planning in Nyandarua County. This study therefore aimed at determining how availability of county population data affects budget formulation in Nyandarua County Nyandarua County

2.0 Theoretical Review

The study was grounded on Multiple Rationality Model of Budgeting developed by Katherine & Willoughby (2001). The theory attempts to find some middle ground between understanding budgeting as politics and budgeting as management (Alexander, 1999). The model investigates the role and decision behavior of the central budget office (CBO) analyst in state government and is presented in the figure below.
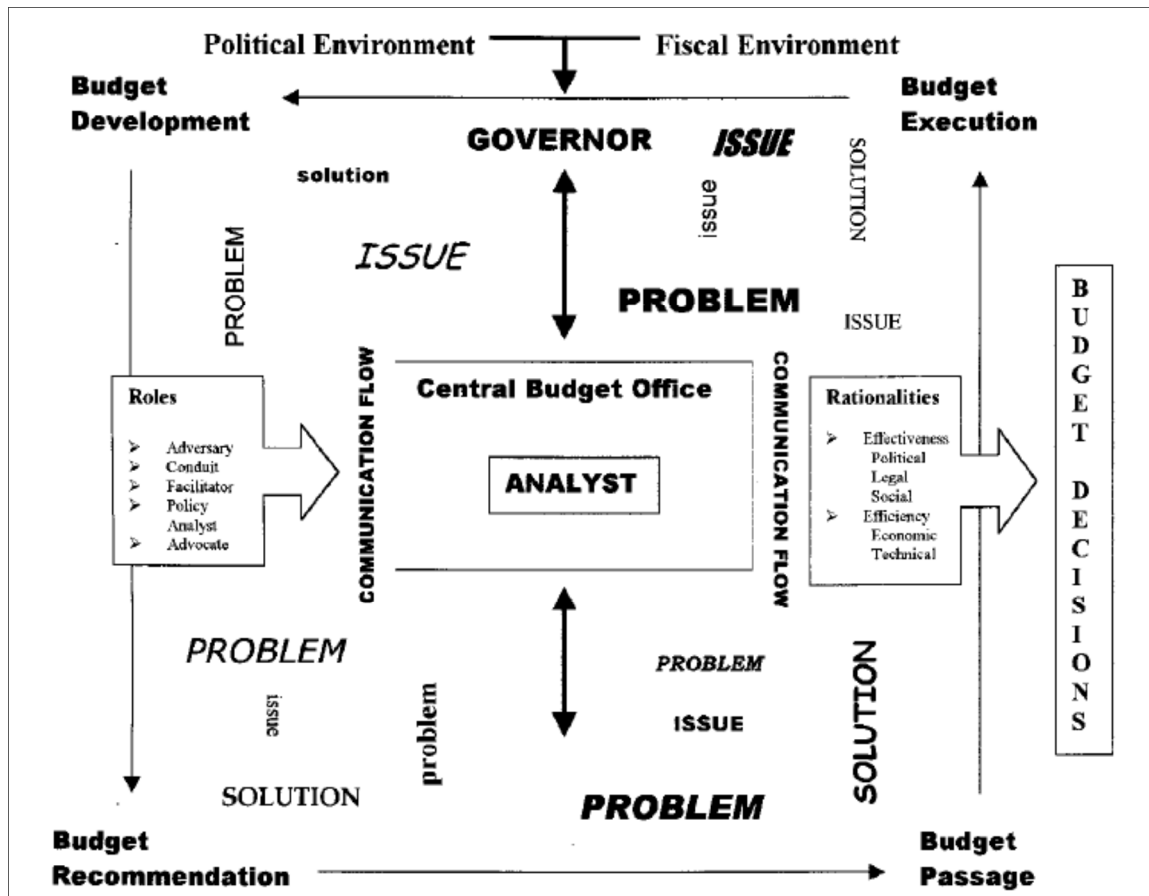
Figure 2.1: Model of Decision Environment of the Central Budget Office Analyst

According to the model, analysts' budget decisions reflect their role(s) and decision rationalities. Political, fiscal and organizational factors will characterize the analyst's environment as constrained or slack. Organizational factors illustrated here include the chain of command and communication flow involving agencies, the CBO, and the governor. Issues, problems, and solutions swirl around the analyst at any given time in the budget cycle; some of these are big issues or big problems, and some are not. The lack of boundaries in the model illustrates the fluidity of budget decision making at any point during a typical cycle, reminiscent of Rubin's (1997) model of "real-time" budgeting.

For the analyst, understanding issues, problems, and solutions involves framing them in terms of effectiveness and efficiency. Effectiveness rationalities involve political focus that implies understanding what is important to whom in the process and when. Legal rationality considers the law related to a problem. Social framing considers the cultural reasons behind a problem or issue.

3.0 Role of Population Data in Budget formulation

Demographic data provide an essential evidence base for the development and evaluation of public policies. The bottom line is that a country cannot develop without data. It is in part through the collection and analysis of data that countries and communities have defined themselves, identified inequities, challenged misconceptions, and justified their claims upon resources (Baldwin & Diers, 2009). A study conducted in Uganda to assess demographic data adopted in development revealed that variables of universal interest were general population size, population characteristics, as well as poverty indices. Other variables of interest were those related to social services, health indices, education statistics, sanitation and safe water coverage. This data is important because in participatory budgeting, the budgeting framework requires that poverty and population be considered in arriving at budget allocations. According to the Commission for Revenue Allocation (CRA) (2013) county governments rely on statistics developed out of the Kenya Demographic and Health Survey of 2009 of which the county government were not in existence. Nyandarua County is not exceptional. The statistical estimates however may not reflect the exact situation at the county level. Further, between 2009 and 2015 there is a duration gap of six year therefore the population estimates may not represent the real scenario (CRA, 2013).

4.0 Research Design

This study employed a descriptive survey research design. Descriptive survey research design according to Kombo

& Tromp (2006) is used in collecting information by administering questionnaires to a sample of individuals and is suitable when collecting information on people's attitudes, opinions, habits or any variety of educational or social issues.

4.1 Target population

The study was carried out in Nyandarua County among the county staff. Nyandarua County has five sub counties. To improve on the quality of the research findings the study purposively targeted staff from departments handling finance and economic issues. These included finance and economic planning, health services, education, agriculture, trade and cooperatives, public service, county assembly and county public service board. In total these departments have 1524 staff grouped into three categories: senior managers, middle level managers and operations staff. These staff members participate in the drafting of sectoral budget estimates and in compiling and refining the overall county budget.

4.2 Sampling Procedure and Sample Size

The sample size for the study was determined using the Cochran's (1977) formula for categorical data as shown below.

$$n_0 = \frac{t^2 * (p)(q)}{d^2}$$

Where t = value for selected alpha level of .025 in each tail = 1.96.

(p)(q) = estimate of variance = .25.

d = Acceptable margin of error for proportion being estimated = .05

$n_0 = \frac{1.96^2 * (0.5)(0.5)}{0.05^2} = 384$

Applying Cochran's (1977) correlation formula to calculate the final sample size yielded the sample size as follows:

$$n_1 = \frac{n_0}{1 + \frac{n_0}{N}}$$

Where:

N = population size of 1524

n_0 = required return sample size accordingto Cochran's formula= 384

n_1 = required return sample size becausesample > 5% of population

Therefore:

$$n_1 = \frac{384}{1 + \frac{384}{1524}}$$

$n_1 = \frac{384}{1.252} = 306.$

Sample Size = 306

Table 1: Sample Distribution Matrix

Sample category	Population	Sample size
Senior Managers	32	7
Middle Level Mangers	117	24
Operations Staff	1375	275
Total	1524	306

The study adopted stratified random sampling technique to select staff from the three levels of administration. This design was appropriate since significant homogeneity existed within the sample sub-populations (Adams, Khan, Raeside, & White, 2007).

4.3 Data Collection Instruments

The main instrument for primary data collection was a questionnaire. This tool was systematic and structured and good at obtaining information from a large population of respondents concurrently, in a direct, open and confidential manner (Kothari, 2004). Questionnaires were considered appropriate because they would cover a large sample of respondents, thereby allowing a reasonable degree of generalization of the findings. Both open and closed-ended questions were used. Questionnaire items were designed in such a way as to elicit information on the county budgeting process applied and the factors affecting it. The questionnaire was based on themes drawn from research objectives.

4.4 Validity of the Instruments

To increase content validity the researcher incorporated professional advice from the supervisor in judging and sampling content items used in measuring the effectiveness of coping mechanisms. Questionnaires were constructed using simple language in order to avoid ambiguity and misinterpretation by respondents.

4.5 Reliability of the Instruments

To ensure reliability of the study instruments, questionnaires were subjected to a pre-test in the Laikipia East Sub-County in Laikipia County. Instruments were pretested among 10 selected staff. Questionnaires were then analysed for any inconsistencies and revised accordingly. Reliability of the data collection tools was calculated using the Cronbach reliability coefficient (α). A reliability coefficient of 0.80 is considered adequate for the instruments to be adopted for that study according to (Gay & Airasian, 2004).

4.6 Methods of Data Collection

The study used self administered questionnaires to collect data from the county staff. This was because the county staffs are able to read, understand and respond to the issues raised in the questionnaires. Questionnaires were hand delivered to the sampled respondents to fill. Introduction letter was first obtained from the university to obtain a research permit from the county secretary Nyandarua County. The researcher then sought permission from the county executive committee member -finance and economic planning to conduct the study. Questionnaires were then administered to the sampled respondents. The researcher delivered the questionnaires in person and gave allowance of one week for respondents to fill them.

4.7 Methods of Data Analysis

The data collection questionnaires from the field were checked for completeness, cleaned and coded to transform it into numerical data for ease of analysis. The coded data was then entered into the computer and analyzed with the aid of the computer programme, the Statistical Package for Social Scientists (SPSS). Analysis of data was done based on the study objectives, discussion of findings, conclusions and recommendations. To analyze quantitative data descriptive statistics that included frequencies and percentages were used. Analyzed data was presented in frequency and percentage tables. Charts and graphs were included for easy interpretation and discussion.

Regression analysis was used to establish the relationships between variables. The regression model used is shown below:

$(y = c + \beta_1 X_1 ... \beta_n X_n + \varepsilon)$ which produced:

Where y is the dependent variable (county budget formulation), c is a constant, X_1 is population data and $...X_n$ represents other n factors while ε is the error term.

4.8 Ethical Considerations

The researcher sought permission from is the county secretary and county executive committee member- finance and economic planning before doing the study. Further, the researcher sought prior consent from all respondents before they participated in the study. Finally participants were assured of anonymity and confidentiality of information disclosed and allowed to drop at any point they felt uncomfortable.

5.0 Results and Discussion

Majority (59.7%) of the respondents indicated that the county did not have up to date demographic data. The study further showed that (46.9%) of the respondents indicated that the county's population data was not updated at all while among those who believed that the data was updated, the highest frequency (17.9%) indicated that the data was updated on a monthly basis. Furthermore (46.9%) of the respondents were not sure if the population data used in the data was accurate in accordance with boundaries of the county. while majority (57.3%) of the respondents were not sure of the accuracy of Nyandarua County's morbidity rates data. Furthermore, majority (48%) of the respondents expressed confidence in the reliability of Nyandarua County's employment statistics while majority (40.3%) of the respondents were not sure that the county government had reliable systems for establishing migration and settlement information for its residents.

5.1 Conclusion

The study concluded that on availability of county population data, employment records are maintained by the County Government but there is need to improve on the way employment records are obtained and maintained. In addition the overall human population data in use by the county was of poor quality, as it was out of date and not clear to most staff members, meaning they could not trust its accuracy.

5.2 Recommendation

The study recommends that Nyandarua County need to work with the relevant authorities to improve the quantity and quality of the demographic data it uses for budgeting and should conduct baseline surveys on important indicators that are important in the planning of the county development

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