

Budget analysis tools: (cascade exercises)

Tool 1: Calculating the share of the total budget

Formula:

$$\frac{\text{Amount allocated}}{\text{total budget amount}} \times 100$$

Exercise:

1. What is the total National Budget for 2001 and for 2002?
2. What percentage of the country's total budget in 2001 and in 2002 is allocated to
 - (a) Health
 - (b) Education
 - (c) Agriculture
 - (d) Water resources
 - (e) Defense

(See 2001 – 2006 Recurrent and Capital Expenditure of some sectors in Nigeria)

3. How much of the health and education allocations are for capital expenditure, respectively in 2001, 2002 and 2006?
4. What share of the health and education budget go to personnel and overhead expenditure, respectively in 2001 and 2002?

- Outline your findings (conclusions)

(Information: Federal Govt. of Nigeria 2006 budget only - total sum of N1, 899.9 trillion)

The Appropriation Act 2006 shows a total sum of N1, 899.9 trillion to be issued out of the Consolidated Revenue Fund of the Federation. The breakdown of these figures is shown in the table below.

	Nbn.	Percentage of total budget
Statutory transfers	91.6	4.8
Debt service	289.5	15.2
MDA expenditure: recurrent	950.3	50
MDA expenditure: capital	568.5	29.9
Total	1.899 trillion	

Tool 2: Identifying trends in the budget

Exercise: Use the table below to compute trends in the budget allocations

	Ministry / Department	2001 Total Budget: N		2002 Total budget: N		2006 Total budget: N	
		Amount	%	Amount	%	Amount	%
1.	Health						
2.	Education						
3.	Agriculture						
4.	Water resources						
5.	Defense						
	Total						

- **Outline your findings (conclusions)**

Note: *Tool 1* formula is used for each of the years before they are compared.

Tool 2 helps in comparing budget years and measuring progress (increase) or decrease in allocation, thus determining whether there is a priority shift.

N – Naira (Federal Government of Nigeria currency – legal tender)

Tool 3: Calculating Nominal Growth Rate in the budget: *(Progress)*

Formula:

$$\frac{\text{Amount allocated in Year 2 minus} \\ \text{Amount allocated in Year 1}}{\text{Amount allocated in Year 1}} \times 100$$

Exercise A: Calculate the nominal growth rate for the following sectors allocations in 2001 and 2002 national budget: Health, Education, Agriculture, Water resources, Defense

Exercise B: Calculate the nominal growth rate for the health and defense sector allocations in 2002 and 2006 national budget, respectively.

Tool 4 A: Converting allocations from Nominal amounts to Real amounts *(Real Value)*

To calculate the real value a *deflector* will be required.

Note: A *deflector* is a ratio (or proportion) of how much prices have increased overtime. Thus, instead of comparing 2002 and 2001 using the *face value* of the amounts (nominal amount), the amount of the current year (in case 2002 amount) is deflected to get its real value before comparing it with 2001 amount.

Example: Calculation for 2002 deflector using 2002 inflation rate of 12.50% and 2001 as the base year with an inflation rate of 6%. Since 2001 (in this case) is the base year, the deflator for 2001 = 1. Therefore, to calculate for 2002 deflator the following computation is carried out using the formula below:

$$\begin{aligned} &1 \times (1 + (12.50 / 100)) \\ &= 1 \times (1 + 0.125) \\ &= 1 \times (1.125) \\ &= \mathbf{1.125 \text{ (deflator for 2002)}} \end{aligned}$$

Exercise: Calculate the deflator for the following years using 2001 as the base year:

Year	2001	2002	2003	2004	2005	2006
Inflation rate	6.0%	12.50%	27.20%	15.50%	20.0%	7.0%
Deflator	1	1.125				

Note: It is important to consider inflation in budgeting because the same amount of money today probably cannot buy as much goods as it could buy some years ago.

Inflation – simply is when the quantity of goods / services a specified amount of money could buy decreases overtime. Therefore, to determine actual increase, the *purchasing power* of the amount for the year should be known i.e. *real value* of the amount.

How much was really allocated or spent on an activity / an area within the period being reviewed?
(*Normal and Real Value*)

Tool 4 B: Calculate the Real Value of the following sector allocations; health, education, agriculture and water resources for the year 2002 and 2006

Formula:

$$\text{Real Value} = \frac{\text{Nominal Value}}{\text{Deflator}}$$