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Communications for all in East Africa

COSTING METHODOLOGIES FOR REGULATED BASIC POSTAL SERVICES

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1. INTRODUCTION

In most countries regulatory requirements normally intervenes and determine tariff and charges for non-competitive markets to ensure the existence of effective competition and level playing field. Non-competitive markets are normally defined as those markets of which;

(i) there is a dominant operator who control significant market shares hence can manipulate the market by setting prices that are extremely high,

(ii) an operator controls an essential and non-replicated communication infrastructure

(iii) An operators designated to provide Universal Communication Services

Provision of basic postal services is normally assigned to an incumbent postal operator, who in most cases is a government entity. The referred basic postal services are normally those identified in the country's legislations (e.g National Postal Acts and its Regulations) to include;

(i) Countrywide distribution/delivery of letters and packets not exceeding a certain weight for example Tanzania is 500 grams and Kenya 600 grams.

(ii) operations of postal boxes and postal basic offices services.

in this arrangement, the designated postal operator who provide these services becomes a sole provider (also referred to as a dominant operators) as others are not allowed to provide these services.

The tariff charges for these services (e.g. Postal boxes rentals, charges for delivery of letters and packets not exceeding a certain weight e.g.500g) need to be approved by NRAs to ensure that they are cost based, implying that they reflect the cost incurred in service provision and generate a reasonable rate of return from investment.

2. SETTING/APPROVAL TARIFF FOR REGULATED POSTAL SERVICES

Like in all other regulated services where service provider has significant market power and can use such power to manipulate, and unfairly benefit by setting high prices or other unfavorable terms and conditions, regulatory intervention is a must.

There a various approached that can be used to review and approve market prices namely (i) benchmarking with other countries/entities with similar environments (ii) cost-based determination of charges/tariff.

In most cases it is difficult to approve basic postal services tariff through benchmarking due to the limitations associated with this method, as it is difficult to identify markets which has similar characteristics/features to facilitate benchmarking. This leave NRAs with an option of conducting **cost study/review** as most valid to establish appropriate tariff levels when the same is filed for approval.

3. REGULATORY SERVICES COSTING AND COST MODELS

There is various approached for establishing cost-based tariff in markets being regulated. Basically, the choice of the method or approach depends on the main objective of the NRA. Some of the common cost determination standards are listed in Table 1;

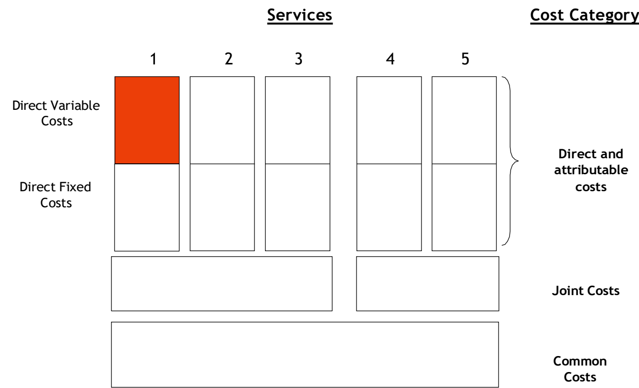
Table 1: Classification of costing standards

S/N	Cost Methodology	Description
1	Pure Long Run Incremental Costing (Pure LRIC)	Costing approach which includes only those costs that are caused by the provision of a defined increment of output, or, alternatively, those costs that are saved when the defined increment of output is no longer provided. A percent is added to enable recover common costs and achieve financial viability.
3	Total Service Long Run Incremental Costing (TSLIRC),	A long run incremental cost (LRIC) in this aspect is a forward-looking cost which measures cost increase of producing additional service. Here an increment being measures is a service itself not units of service (defined increments), i.e incremental costs associated with introduction of new service or product.
4	Stand Alone Costing (SAC)	Stand Alone Costs (SAC) are the theoretical costs an operator would incur if it were producing only a subset of the services provided.
5	Fully Distributed/Allocated Costing (FDC)	Fully distributed cost (FDC) means a methodology that examines all costs of an enterprise in relation to all the goods and services that are produced. Fully distributed cost means a methodology that examines all costs of an enterprise in relation to all the goods and services that are produced.

The following details covers the presentation of various costing methodologies to show costs element which are considered/modelled by each approach, starting with an approach which results into lowest regulated tariff to highest regulated tariff.

3.1 Marginal Cost Approach

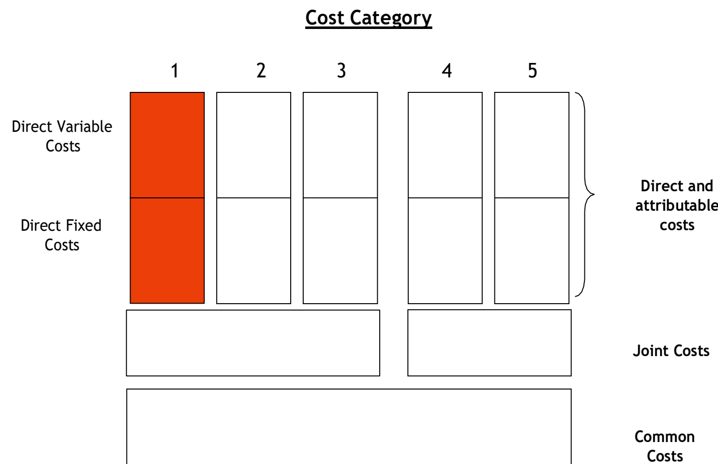
This standard calculates the costs of increasing output by one additional unit. Therefore, the marginal costs include only the direct variable costs excluding any other cost category, such as common and/or joint costs which should be recovered by means of specific mark-ups. MC provides the lowest price limit in the wholesale price regulation, however this method is more of theoretical and not technically applicable.



3.2 LRIC Based Approaches

LRAIC associates a long-term horizon with incremental costs. Incremental cost measures the cost variance when the production output increases or decreases in a discrete increment. In the case where the increment considered is a single unit, incremental costs equal marginal costs. Therefore, as mentioned for Marginal Costs, the LRAIC requires a mark-up to recover the joint and common costs to guarantee financial viability.

When the increment is substantial, not only the volume sensitive costs (direct variable costs) but other directly attributable costs are considered. Some capital and fixed costs are also incorporated into the cost of the service. In the long-term, all costs are treated as variables since the production capacity is no longer a constraint. Therefore, LRAIC include capital and direct variable costs related to substantial change in production.

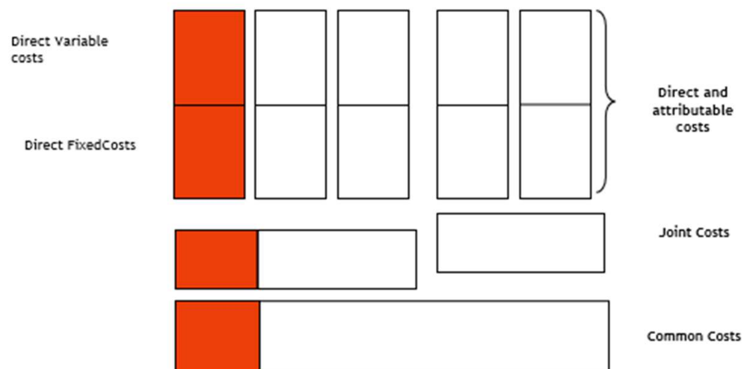


3.3 Fully Allocated/Distributed Costing

This standard consists in allocating categories of costs, which can be directly or indirectly attributed to services. These categories of costs are: direct volume-sensitive costs, or direct variable costs, direct fixed costs, and a share of the joint and common costs (Figure 4).

In this regard, and as referred to in section 7.6, the proportion of joint and common costs must be allocated according to the causality principle. The main limitation of this cost standard is the subjectivity associated to the allocation of unattributable costs.

Direct
Variable



3.4 Stand Alone Costing

SAC is a cost standard that measures the cost of providing a service by the operator in isolation to other services of the company. SAC comprises all directly attributable costs and all shared cost categories related to production of the service, thus it includes direct variable costs, direct fixed costs, common and joint costs. Under this allocation method, the shared costs are totally supported by the service that is to be provided in isolation (Figure 5).

The SAC cost standard does not lead to economic efficiency if used for pricing and resource allocation decisions. Clients of this service bear the burden of the total cost of resources that are used in the production of other services, thus creating cost discrimination among services and therefore among customers. However, it provides useful information about the highest costs that NRAs might consider in the wholesale price regulation, since the cost obtained by means of this standard will define the upper limit of the attributable costs.

4. APPROACH TO ESTABLISH/REVIEW REGULATED POSTAL CHARGES

The NRA approval of tariff for provision of basic postal services requires a justification that the filed tariff are cost based or have been benchmarked with other market of similar nature. Appropriate methodology should be related to the stage of market development. Example if the market is at infant stage, the costing approach should be the one that enable basic postal operator to recover costs and enough free cashflows/profit to invest for expansion or increased coverage. If the market is well matured an appropriate costing methodology would be to recover additional/incremental cost of producing the service which is normally lower.

Tariff approval for basic postal services normally considered two scenarios.

(i) Periodic adjustments to compensate for inflation rate
(ii) Complete tariff review when there are major changes in the cost structure

4.1 Periodic adjustments to compensate for inflation effects

In this approach tariff are adjusted by the rate of inflation to ensure that basic postal operators is able to recover cost of operation which are normally affected by annual inflation in a particular country. Basically, in this aspect tariff are adjusted by inflation rate using the formular **Adjusted Tariff(x) = Current Tariff x (1+Inflation Rate).**

4.2 Complete Tariff Review

This approach is undertaken when there are major changes in the business model or cost structure for delivery of basic postal services in a certain country. It entails review of all associated costs classified into Capital Expenditures (CAPEX) Operating Expenditures (OPEX) and weighted average cost of capital (WACC) and forecasting demand of postal services to establish service unit tariff. The key cost standards as well as its advantages and disadvantages are presented in Table 2 and 3.

Table 2: key costs components considered in services costing

Cost Category	Details	Purpose	Formular
Capital Expenditures (CAPEX)	Investments made in equipment's and facilities to be used for several years (Assets/equipment).	To recover the cost committed in CAPEX including its opportunity cost by writing off a certain amount each year such that to facilitate replacement of the same at the end of life.	$\text{Annualized costs} = \text{CAPEX} \times \frac{i(1+i)^n}{(1+i)^n - 1}$ *Where i = weighted average cost of capital (WACC) calculated as:*

			WACC = Cd x D/(D+E) + Ce x E/(D+E) where, Cd is the pre-tax cost of debt Ce is the cost of equity D is the value of the Postal Licensee Debt E is the value of the Postal Licensee Equity
OPEX	These are direct annual operational costs used for basic postal services (salaries &wages, utilities, operational costs for delivery vehicles&fuel charges,	To recover operational costs associated with provision of basic postal services. All individual operational costs items should be identified, as well as total volume of postal mails/letters.	Proportion of Total annual operational costs used for delivery of basic postal services. i.e = Total annual operational costs/Total volume of mails per annum[1]
Common Costs	These are costs incurred in provision of more than one service. i.e cannot be directly traced to aparticular service (e.g costs associated with management, auditing, insurance & compliance, marketing etc.	To recover common costs through charges for basic postal services	Normally expressed as a percentage ranging from 10%-20% of OPEX. Preferred Allocation method equi-proportionate mark-up (EPMU) for the recovery of common costs. (i.e common costs allocated on the basis of revenue or traffic.
WACC	This is an opportunity cost of capital (or minimum rate of return) required to compensate investors for put their fund in specific project.	To ensure recovery of minimum returns to compensate for the cost of raising funds.	WACC = Cd x D/(D+E) + Ce x E/(D+E) where, Cd is the pre-tax cost of debt Ce is the cost of equity D is the value of the Postal Licensee Debt E is the value of the Postal Licensee Equity
Normal Return on Investment	Normal return (ROI) is considered as a part of costs which need to be recovered through pricing.	Investment needs to generate profit as an incentive for investors	Placed on top of total costs e.g around 10% as mark up

[1] Demand projections involve techniques for establishing current and potential demand for services under consideration. The costs are therefore spread over the forecasted demand to establish unit cost of services

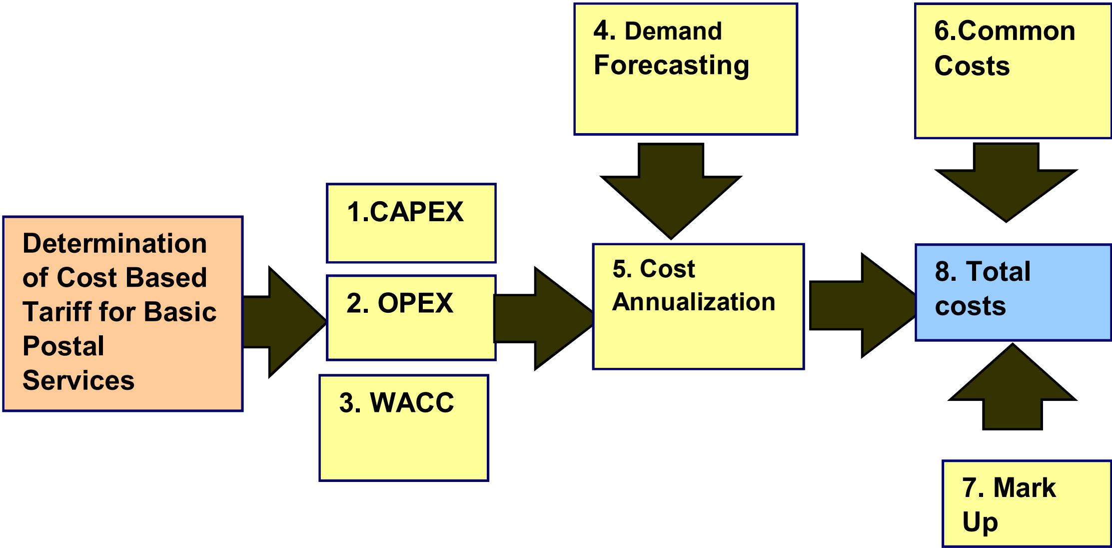
Table 3: Advantages and Disadvantages of costing standard

Cost Standard	Advantages	Disadvantage
Marginal cost pricing	Suitable in understanding of theoretical application of marginal cost pricing	(i) It focuses on cost associated with marginal increase of one unit of service/product. (ii) Need costs breakdown to a single unit of service/products. (iii) Not realistic to implement
Total Service Long Ru Incremental Costing (TSLIRC),	(i) It seeks to establish cost of additional service/product line. (ii) It is realistically straight forward to apply. (iii) Ensure the operators recovers all efficiently incurred costs (iv) Positive contribution to universal services communication access obligations as fees can be collected from revenue.	(i) Resulted into high tariff recovery hence only suitable for sectors that need more investment/coverage. (ii) Need additional measure to ensure that operators invest to excess profit allowed by this pricing method
Fully Distributed/Allocated Costing (FDC)	(i) It considers all cost components which occurs in a business (variable& fixed direct attributable, common costs and joint costs. (ii) Ensures that all efficient incurred costs are recovered by service provider.	Generally, lead to higher cost recovery by an operator than TSLIRC
Stand Alone Costing (SAC)	Beneficial when the decision is to generate maximum return to operators to undertake other social obligations.	(i) It leads to double cost recovery as a specific services/product is allowed to recover all common and joint cost of the organization (ii) It tends to overcompensate operators at the expense of

		consumer due to high regulated tariff outcomes

Cost Model Flowchart for Basic Postal Services

The above approach can be presented in the following flowchart.



5. RECOMMENDATIONS

Partner states are urged to adopt the regulatory costing principles that best suit the state of their regulated sector (i.e whether the sector need additional investments, provision of social services etc, UCSAF obligations etc)

The choice of a certain regulated costing standard is driven by overall regulatory objective