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Deriving prices from Costs

**Seminar on Tariffs, Regulatory and WTO Issues and
their impact on the trade of telecommunication services
in Central America**

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Deriving prices from Costs

Deriving Tariffs from Costs

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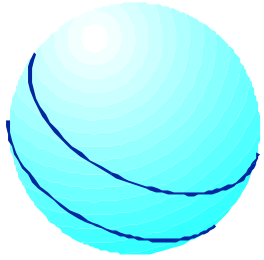


Tariff versus Cost

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- The Tariff is what the end-user should pay for a unit of a given service or product;
- The unit cost is what the service provider incurs to produce a unit of a given service or product

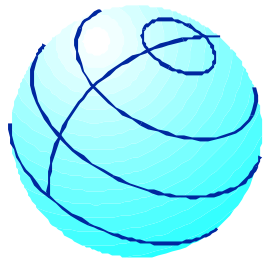


Problematic

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- tariffs are of the policy domain and may include considerations depending on the realities of a local market;
- the competition tends to push tariffs towards cost;
- in the international telecommunication market, the outgoing settlement rate can be a significant cost element;



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- The outgoing settlement rate is a tariff under the sovereign jurisdiction of the country of destination;
- it may include non-cost elements that the call originating operator may wish to be allocated in a fair and transparent manner.

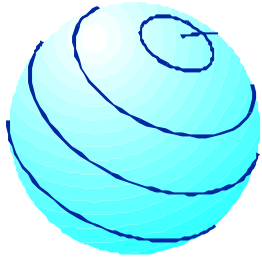


Costs which are accepted as such

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- fixed asset
- network operation and maintenance cost
- Business costs
- common costs
- cost of capital



Cost causation

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- there are costs which can be traceable to a given service (direct cost)
- there are costs which can be allocated to some services using different methods: it is expected that the cost allocation method be as objective as possible
- cost causation is is foundation of transparency



forward looking costs

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- the fixed asset costs are expected to be actual: reflecting the replacement cost of the infrastructure, in consideration of the new and efficient technologies;
- the adjustment to current costs must take into account the monetary erosion;
- there are operators who expect that the other costs be as close as possible to those that an efficient new entrant would incur;



Current Cost Adjustment

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$$CCA = DEP * ((1 + \tau)^{D/2} / (1 - \epsilon)^{D/2} - 1)$$

Where :

CCA=Current Cost Adjustment

DEP=Annual Depreciation

τ =Compound Annual Growth Rate of the cost of telecommunication equipments

ϵ =Compound Annual loss of local currency purchasing power

D=Depreciation/life time



inefficiency costs

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- inappropriate excess capacity costs should be taken out when it comes to establish interconnection or incoming settlement rate;
- the growth rate of a network is a factor to be considered when evaluating inefficiency costs;



inefficiency

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$$K' = \text{Max}(0 ; \Delta K - K_u * [(1+t)^N - 1])$$

où:

K' = the inefficient capacity;

ΔK = the unused capacity;

K_u = the capacity in use;

t = the compound annual growth rate of the capacity in use

N the time needed to add new capacity



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Regional Cost Models characteristics



The TAS Cost Model

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- lack of account separation
- no efficiency consideration
- refinement intended for cost causality



The TAL Cost Model

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- no information about spare capacity
- include USO as a basic cost element without explanation



The TAF Cost Model

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- fulfils the expectation
- practicability to be measured after practical implementation



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Other Elements for tariffs determination

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- corporate tax
- USO fund
- Access deficit



Corporate tax

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- tax on operation profits
- financial profits are not subject to a corporate tax
- the total corporate tax is given by:

$$L_{benefits} = \frac{t_{levy}}{1 - t_{levy}} * r_{capital} * Capital$$



Universal Service Obligation

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A country may impose a levy on the revenues of an operator in order to fund the USO costs.

USO may be combined or not with Access deficit

Where applicable,

Where k_{si} and T_i are the unit cost and the volume of service S_i

$$USO = r_{uso} * \left(L_{benefit} + \sum_{i=1}^n k_{si} * T_i \right)$$



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Access deficit (1/3)

Access deficit arises when a regulation authority opposes the necessary increase of the components hereunder:

- connection fee

- monthly subscription fee

- price of a minute of urban call

- price of a minute of interurban call



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Access deficit (2/3)

- Before reallocating the access deficit, it must be considered that only the local customers are paying the installation rate and the monthly subscription fees.
- The tariff of outgoing communication should be reduced by:

$$\left(\Delta Parc * R_{conn} + msf * Nb_{subscr} * 12 \right) * \frac{k_{si}}{\sum_{j=1}^{n'} T_j k_{sj}}$$



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Access deficit (3/3)

The following relation gives a measure of the access deficit:

$$D = T_{urb} * (k'_{urb} - p_{urb}) + T_{interub} * (k'_{interub} - p_{interub})$$

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Tariffs rebalancing



Objectives of tariffs rebalancing

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- The access deficit reflects the cross subsidisation of domestic communications by international incoming and outgoing communications;
- the tariff are balanced when the access deficit become insignificant.



Rebalancing process

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- An example of process
- In the real life, tariff rebalancing should be a step by step goal setting process to support the pricing policy
- The TAF Model has implemented the rebalancing process (a special session could be organised if needed);
- **END**



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