

ITU - HIPSSA G-5 (s) project

Regulatory auditing and cost modeling in sub-Saharan Africa

Common questionnaire

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To be read in parallel/conjunction with the attached briefing note.

This Questionnaire should be returned no later than 12 January 2012 to:

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With copy to Ms. Saida Ouederni saida.ouederni@steer.fr

Person completing the Questionnaire:

Name: _____

Title: _____

Organization: _____

Country: _____

E-mail Address: _____

Tel: _____ Fax: _____

Website: _____

1. PRELIMINARY NOTE

NRAs are kindly requested to respond to the questionnaire in the context of mobile voice termination rate (MTR) unless explicitly stated otherwise. All acronyms used are specified in section 5 page 17.

The present questionnaire is to be read in conjunction with the attached briefing note.

2. LEGAL AND REGULATORY FRAMEWORK FOR TARIFF REGULATION

Kindly note that for all questions pertaining to the underlying legal and regulatory basis (Q1b, Q2a, Q3a) responses need to be detailed in order to have the correct reference to the law/articles and supported by the actual documents (if public).

2.1. Strategy for regulatory intervention

Q1. Please indicate for the considered service (MTR):

- a. the type of price control used: cost orientation (cost accounting approaches); benchmark; price cap; retail minus; other (please specify)

Answer:

- b. the underlying legal and regulatory basis : license, law, relevant market analysis (SMP) ...

Answer:

- c. the underlying strategy and outcome of imposing a price control on the considered service: purpose, goal, outcome and achievements ...

Answer:

Q2. Please indicate if cost accounting obligation is imposed.

Answer: Yes No

- a. If cost accounting obligation is imposed, please indicate :

- i. The underlying legal and regulatory basis : license, law, relevant market analysis (SMP) ...

Answer:

- ii. The operators concerned: all operators, only operators with SMP, incumbent ...

Answer:

- b. If cost accounting obligations is not yet imposed, please indicate if you are planning to impose it

Answer: Yes No

- i. If not, please indicate why (lack of legal basis, insufficient resources ...)

Answer:

Q3. Please indicate if data requested from the operators is/can be audited

Answer: Yes No

a. If regulatory auditing can be conducted, please indicate :

i. The underlying legal and regulatory basis : license, law ...

Answer:

ii. The operators concerned: all operators; only operators with SMP; incumbent ...

Answer:

b. If data is not currently being audited please indicate why: lack of audit framework; lack of resources; insufficient scope/detail of submitted data ...

Answer:

Q4. Do you have any difficulties in collecting data from operators?

Answer: Yes No

a. If so, please specify for what reasons: Lack of legal basis, Difficulties for operators to provide relevant data; lack of will from operators; other (please specify).

Answer:

Q5. Please indicate if you are using or developing a costing tool to establish the cost of providing the service.

Answer: Yes No

Q6. If so, please indicate:

a. The costing tool: benchmark; bottom-up model; top-down model; hybrid model ...

Answer:

b. The level of development of the costing tool: existing; under development; planned

Answer:

c. The operators concerned : all operators; only operators with SMP; incumbent ...

Answer:

Q7. If you are not using, developing or planning to use a cost model (bottom-up or top-down model), please indicate why : lack of resources; lack of financial and/or technological skills; other (please specify)

Answer:

Q8. For this question, please provide, in local currency per minute, the current lowest average price of 1 minute based on a 3 minutes call as per formula (1) below, for:

- a. Mobile voice termination rate

Answer:

- b. Retail off-net national mobile voice service (in local currency per minute)

Answer:

(1) The average price for MTR as well as for retail is calculated as follows:

$$\frac{(\text{Total cost of a 3 mn call during peak hours}) \times (\text{peak ratio}) + (\text{Total cost of a 3 mn call during off-peak hours}) \times (\text{off-peak ratio})}{3}$$

Where:

Peak ratio is the proportion of calls passed during peak hours.

Off-peak ratio is the proportion of call passed during off-peak hours. Off-peak ratio = 1 – peak ratio

In case the peak/off-peak ratio is not known please use the following: peak ratio = 70% and off-peak ratio = 30%

2.2. Challenges

Q9. Have you faced any legal disputes regarding MTR tariff regulation and/or cost modeling?

- a. If so, please indicate:

- i. The nature of the dispute and the concerned parties

Answer:

- ii. The object of the dispute and the date of the dispute

Answer:

- iii. The outcome of the dispute

Answer:

- iv. Did the dispute have any impact on your tariff regulation or cost modeling strategy?

Answer:

2.3. Foreseen evolutions and challenges

Q10. Please indicate if there is any impending review of the telecom law and regulatory framework (that could impact the regulation of MTR)?

Answer: Yes No

- a. If so, please advise on the main objectives and on the target date for implementation

Answer:

Q11. Please indicate for each of the following services if cost accounting, regulatory auditing and/or costing tools (please specify the costing tool : benchmark, bottom up, top-down...) are implemented or foreseen:

<u>Answer:</u>			
	Cost accounting	Regulatory auditing	Costing tool if used or planned (please specify)
Retail fixed voice	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Retail mobile voice	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Retail fixed data	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Retail mobile data	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Fixed interconnection	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Bitstream access	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Local loop unbundling	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Leased lines	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Access to IGW	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	
Access to IXP	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Planned	

Q12. Please indicate if you are applying or considering to apply specific regulatory models or strategies regarding the following services, and if so on which basis:

a. Roaming

Answer:

b. Broadband infrastructure

Answer:

c. Next generation network

Answer:

d. Mobile payment

Answer:

e. Please feel free to add any other relevant service

Answer:

Q13. If so, what are the challenges and/or opportunities?

Answer:

3. COST ACCOUNTING AND REGULATORY AUDITING

The present section is to be addressed by NRAs only when a cost accounting process is effectively run or foreseen (question Q2 page 2) otherwise please jump to section 4 at page 11.

3.1. Cost Accounting

Q14. Please specify the process of data collection from operators:

- a. Frequency, deadline

Answer:

- b. Actual figures and period covered

Answer:

- c. Forecasted figures and period covered

Answer:

Q15. Please indicate how many times it actually occurred and the date of the latest data collection.

Answer:

Q16. Did you establish beforehand a relevant cost and revenue categorization in consultation with the concerned operators?

Answer: Yes No

Q17. Did you impose specifications on how the concerned operators have to reprocess their internal data so as to comply with regulatory accounting requirements?

Answer: Yes No

Q18. When specifications are imposed, please indicate which of the following are specified:

- a. Principles of cost causality?

Answer: Yes No

- b. Cost preparation methodologies e.g. cost base, valuation and allocation methodologies, treatment of shared and common costs...?

Answer: Yes No

- c. Basis on which assets are valued: asset lives and depreciation methods...?

Answer: Yes No

- d. Attribution methodologies used to attribute revenues, costs, assets, capital employed ...?

Answer: Yes No

- e. Basis used to set internal transfer charges?

Answer: Yes No

- f. Handling of the costs that are not attributed to the

Answer: Yes No

valuated services?

Answer: <input checked="" type="radio"/> Yes <input checked="" type="radio"/> No

g. Other, please specify

If other, please specify:

Q19. What are the main principles used to allocate the following cost categories between voice and data

a. Network costs?

Answer:

b. License costs?

Answer:

c. Other costs?

Answer:

Q20. Which accounting system / allocation methodology do you use for regulatory accounting

a. Long Run (Average) Incremental Costs (LRIC/LRAIC)?

b. Fully Distributed Costs (FDC or Fully Allocated Costs - FAC)?

c. Other (please specify)

Answer: LRIC/LRAIC FDC
 Other allocation methodology **If other, please specify:**

Q21. What is the size of the relevant increment used

a. Marginal i.e. increase in costs following the introduction of a small unit of the service?

b. Service increment i.e. increase in total costs following the introduction of the service?

c. Average increment i.e. increase in costs following the introduction of a group of services?

d. Other (please specify)

Answer: Marginal Service increment Average increment
 Other size of increment **If other, please specify:**

Q22. Which cost base do you use for regulatory cost accounting?

a. **Answer:** Historic Cost Accounting (HCA) Current Cost Accounting (CCA)

b. If your answer is CCA, which capital maintenance concept do you use?

Answer: Operating Capital Maintenance (OCM) Financial Capital Maintenance (FCM)

Q23. If you use CCA as the cost base, which assets valuation (i.e. investments) methodologies do you use and for which type of assets:

- a. Absolute valuation (i.e. current purchase price) and for which type of asset?

Answer:

- b. Indexation (i.e. original prices to which indices are applied) and for which type of asset?

Answer:

- c. Modern Equivalent Asset (MEA) and for which type of asset?

Answer:

Q24. Which depreciation method do you use for regulatory accounting purpose: Straight-line, Tilted straight line, Annuity, Tilted annuity, Other (please specify)?

Answer:

Straight line
 Tilted straight line
 Annuity
 Tilted annuity
 Other depreciation method
 If other, please specify:

Q25. What lifetimes (in years) do you apply for the different assets type

- a. Civil works / buildings?
- b. Power equipments?
- c. Access telecom equipments?
- d. Core network telecom equipments?
- e. Backhaul/backbone transmission equipments?
- f. License?
- g. Other assets (please specify)

Answer (lifetime in years) :

Answer (lifetime in years) :

Answer (lifetime in years) :

Answer (lifetime in years) :

Answer (lifetime in years) :

Answer (lifetime in years) :

Answer (lifetime in years) :

If any other relevant types of asset, please specify the type of asset and the corresponding lifetime:

- Type of asset: _____ lifetime (in years): _____

Q26. Do you allow operators a rate of return on capital employed to deliver the service

Answer: Yes No

- a. If so, please specify the rate of return allowed?

Answer:

- b. What methodology do you use to calculate the appropriate rate of return in (a) above: Weighted Average Cost of Capital (WACC), other (please specify)?

Answer:

- c. In case WACC is used, how do you estimate the cost of equity: Capital asset pricing model (CAPM), other (please specify)?

Answer:

3.2. Regulatory Auditing

The present subsection is to be addressed by countries where regulatory auditing processes are in place and/or legally mandated (question Q3 page 2) otherwise please jump to section 4 at page 11.

Q27. What are the issues covered by the regulatory audit :

a. Reconciliation between the cost model and statutory accounts?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
b. Scope of costs included and scope of costs allocated to the relevant service?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
c. Methodologies used for cost valuation and allocation?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
d. Methodologies used regarding cost capitalization, assets valuation and amortization?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
e. Transfer charges in separated accounts?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
f. Other, please specify?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
<u>If other, please specify:</u>	

Q28. Please specify the obligations to which the operator subject to regulatory auditing is bound:

a. Give access to the auditing body to all internal supporting data and information?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
b. Respond in a predefined timeframe to any question arising during the audit process?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
c. Other please specify?	<u>Answer:</u> <input checked="" type="radio"/> Yes <input type="radio"/> No
<u>If other, please specify:</u>	

Q29. What is the underlying legal and/or regulatory basis of the above obligations?

Answer:

Q30. Please specify how regulatory auditing is implemented:

a. Occurrence: periodic, on demand ...	<u>Answer:</u>
b. The body in charge of conducting the audit (independent auditors, NRA, government body...) and the selection process where relevant	<u>Answer:</u>
c. Who pays for the audit?	<u>Answer:</u>

Q31. Please specify the following regarding the latest audit conducted:

- a. When was the latest audit conducted?

Answer:

- b. What was the outcome of the audit? Please specify any corrective action taken

Answer:

- c. What was the financial impact (cost of the audit) on operators and/or regulators as well as the internal human resources required?

Answer:

- d. Who paid for the cost of the audit

Answer:

4. COSTING TOOLS AND COST MODELING

This last section is to be addressed only by NRAs using or developing a costing tool: bottom-up (subsection 4.1 below), top-down (subsection 4.2 page 13), benchmark (subsection 4.3 page 15).

4.1. Bottom-up

The present sub-section is to be addressed only by NRAs using or developing a bottom up model.

Q32. Please indicate if your model (skeleton, mechanics and associated input dataset) is publicly available.

Answer: Yes No

a. If not, please:

i. Explain why

Answer:

ii. Specify if it is shared with operators or only for internal use

Answer:

iii. Indicate if you are planning to make it publicly available? If so, when?

Answer:

Q33. Regarding the model implementation, please indicate:

a. What was the strategy adopted for the implementation:

i. From the shelf (ITU COSITU, WBG, etc.)

ii. Consultants to develop a bespoke one

iii. Developed internally (from scratch)

iv. Evolution of an existing model, please specify which existing model served as a basis

Answer:

b. In case the model was implemented internally (from scratch or evolution of an existing model) please indicate the internal (NRA) human resources that were required (number of people and duration)

Answer:

c. In case consultants were commissioned please indicate:

i. The budgetary impact (consultants' fees)

Answer:

ii. The name of the consultants

Answer:

iii. the internal (NRA) human resources required (number of people and duration)

Answer:

Q34. Did you use data from operators?

Answer: Yes No

a. If yes, by what means did you collect the data:

- i. Data from cost accounting obligation
- ii. Specific request
- iii. Consultation
- iv. Other, please specify

Answer:

Q35. What operator is modeled: existing operator or a hypothetical efficient operator?

Answer:

Q36. What time horizon do you use in the model for recovering costs and on which basis? Please specify number of years (10, 15 ... 50) and basis (license duration, perpetuity ...).

Answer:

Q37. What level of demand (customers, volume of traffic) do you use: current level, future level based on extrapolation, other (please specify)...

Answer:

Q38. What market share do you assume for the modeled operator and why?

Answer:

Q39. What are the key cost drivers of your model: number of subscribers, traffic, coverage, other (please specify)

Answer:

Q40. What coverage did you model

- a. Average of current coverage of existing networks?
- b. Current coverage of largest network?
- c. Theoretical coverage? (as derived from efficiency considerations)
- d. Prescribed coverage? (as specified in the licences)
- e. Other (please specify)

Answer:

Q41. What is the corresponding coverage in % of population and in % of territory?

Answer: % of population: % of territory:

Q42. Which methodology did you adopt in order to design the topology of the optimal efficient network:

a. Scorched node or Scorched earth?

Answer: Scorched node Scorched earth

b. What is the rationale behind your choice?

Answer:

Q43. How are operating expenditure (OPEX) modeled?

a. By using a mark up on network assets?

b. Other, please specify

Answer:

Q44. If you use a mark-up on network assets for modeling OPEX:

a. Do you use the same mark-up for all network assets?

b. Do you use different mark-up depending on the type of asset?

c. Do you use different mark-up depending on the technology i.e. 2G or 3G?

Answer:

Q45. How did you derive the figure (mark-up or other) you used to model OPEX: benchmark, operators' data, vendors' data ...?

Answer:

4.2. Top-down

The present section is to be addressed by NRAs using or developing a top-down model.

Q46. Please indicate if your model and its associated input dataset is publicly available

Answer: Yes No

a. If not,

i. Please explain why

Answer:

ii. Please specify if it is shared with all operators or shared only with the concerned operators or only for internal use (not shared with any operator)

Answer:

iii. Are you planning to make it publicly available? If so, when?

Answer:

Q47. How did you get operators' accounting information?

- a. Published information (investors, financial reports, ...)?
- b. Data from cost accounting obligation?
- c. Specific request?
- d. Consultation?
- e. Other, please specify

Answer:

Q48. Do you check MNOs data in order to eliminate potential inefficiencies?

Answer: Yes No

Q49. If your answer is yes,

a. What key data are checked in order to identify potential inefficiencies: network topology, capital expenditures, operational expenditures, business overhead, Other (please specify)?

Answer:

b. How do you ensure that only efficiently incurred costs are accounted for: Cross-check between MNOs, Benchmark with international operators, other (please specify)

Answer:

Q50. If your answer is no, please explain why? (i.e. reasons why you do not check MNO data to eliminate inefficiencies?)

Answer:

Q51. What are the key cost drivers of your model: number of subscribers, traffic, coverage, other (please specify)?

Answer:

Q52. If you use a LRIC accounting data in your top-down model, how do you derive cost/volume relationships (CVRs)?

Answer:

Q53. What are the principles underlying your determination of the relative usage of network by the different services (i.e. routing/apportionment factors)?

Answer:

4.3. Benchmark

The present section is to be addressed by NRAs using a benchmark.

Q54. Do you use benchmarking as the primary costing tool or as a complementary tool to check the outcome of another costing tool?

Answer:

Q55. How many countries did you include in your benchmark?

Answer:

Q56. On what basis do you choose the benchmarked countries and why?

- a. Similar countries? If so, how do you define 'similar': size of the population, density of the population, topography, similar mobile market ... (or any combination)?
- b. Do you choose only countries that have developed a cost model (bottom-up or top-down)
- c. Other (please specify)

Answer:

Q57. On what basis do you set the price and why

- a. Average of selected prices? Please specify which prices are selected to calculate the average: all, best 5, best 3 excluding rank 1 (1st) price ...
- b. Best rank 'n' price? Please specify 'n' (1st, 2nd, 3rd ...)
- c. Other (please specify)

Answer:

Q58. What method do you use when converting to national currency (latest rate, average over 1 year, average over 3 years ...)?

Answer:

5. GLOSSARY

CAPEX	Capital expenditure
CAPM	Capital asset pricing model
CCA	Current cost accounting
CVR	Cost/volume relationships
FCM	Financial capital maintenance
FDC	Fully Distributed Costs (also referred to as Fully Allocated Costs – FAC)
HCA	Historical cost accounting
IGW	International gateway
IXP	Internet exchange point
LRIC	Long run incremental costs
MEA	Modern equivalent asset
MNO	Mobile network operator
MTR	Mobile termination rate
NRA	National regulatory authority
OCM	Operational capital maintenance
OPEX	Operating expenditure
SMP	Significant market power
WACC	Weighted Average Cost of Capital