



## **ITU's Guidelines on Cost Modelling**

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ITU Workshop on Cost models for data services and International Internet Connectivity

4 October 2023

# ITU work on cost modelling methodologies started long back when ITU's Regulatory Accounting Guide was published in 2009

## ITU's Guide Content

Overview of market analysis and identification of SMP

Definition of objectives for cost accounting

Key methodological choices to define a cost accounting model

Overview of differences between top-down and bottom-up models

Weighted Average Cost of Capital

Cost Allocation

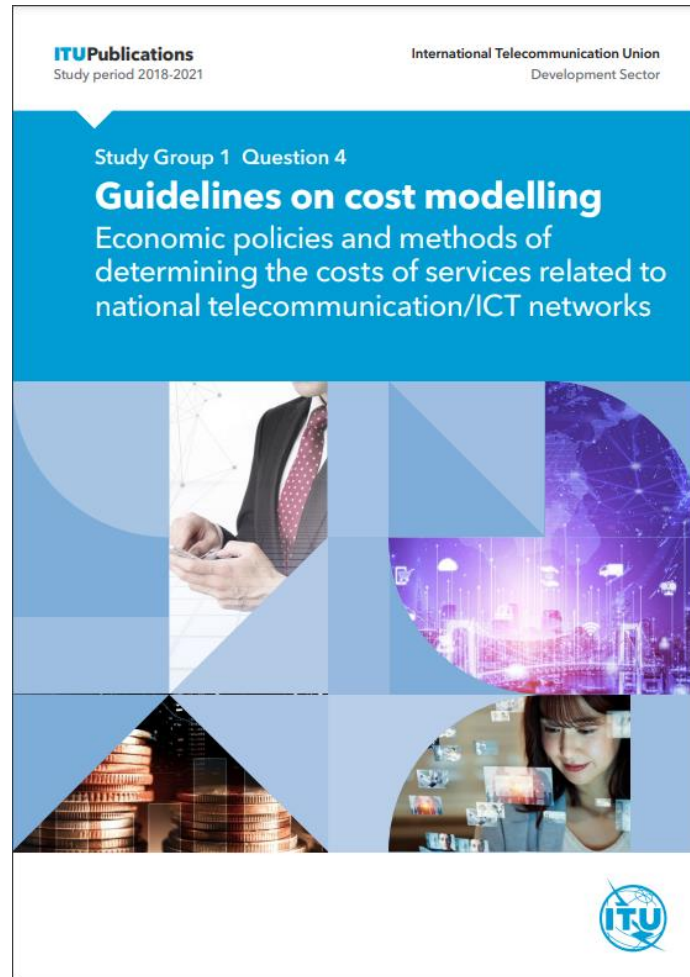
Using cost accounting

Conclusions and recommendations

- ▶ This guide is very useful for the definition of Regulatory Cost Accounting or Accounting Separation models\*
- ▶ It provide the main basics for such kind of models
- ▶ It also introduces some general terminology about cost modelling
- ▶ However, this guide provides little guidance on other types of cost models or how to implement them

Note (\*): These kind of models are a very common imposed on incumbents and sometimes other operators as a result of a market analysis.

Therefore, in 2021, our ITU-D Q4/1 team published the ITU's [Guidelines on cost modelling](#) to complement the 2009 guide

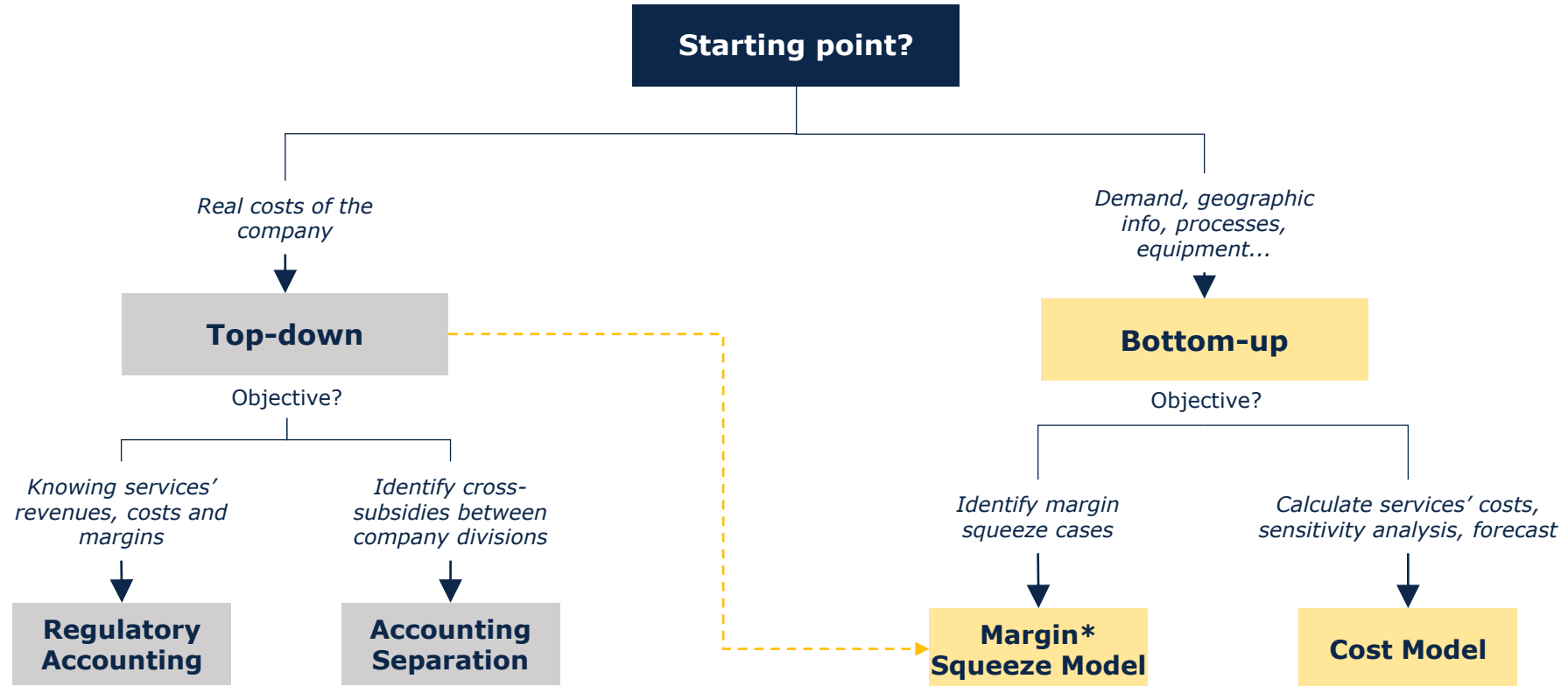


**These guidelines dig deeper into cost modelling methodologies**

**Detailed descriptions of all methodological choices to define any kind of cost models and most common options used**

**Description of the phases required to implement any kind of cost model**

# The first methodological aspect is the general approach



Note (\*): These kind of models are not discussed in the Guidelines, being their problematic more about regulation than modelling issues.

# Once the approach is selected, it is important to define several methodological aspects

	Relevant topics and options			Bottom-Up	Top-Down
<b>Cost Standard</b>	▶ Fully Distributed (FAC/FDC)	▶ Pure Incremental (LRIC)	▶ Incremental+ (LRIC+)	✓	✓
<b>Cost elements to consider</b>	▶ Network ▶ Licenses and spectrum	▶ Retail ▶ General and Admin.	▶ Cost of Capital	✓	✓
<b>Treatment of capital</b>	▶ Assets valuation	▶ Modern Equivalent Assets	▶ Annualisation method	✓	✓
<b>Treatment of revenues</b>	▶ Financial information and granularity		▶ Treatment of bundles	-	✓
<b>Reference operator</b>	▶ Real Operators	▶ Hypothetical operator	▶ Hypothetical new entrant	✓	-
<b>Services and increments</b>	▶ Services to include	▶ Definition of increments (only for LRIC/LRIC+)		✓	✓
<b>Geographical modelling</b>	▶ Geotypes definition	▶ Modelling based the information available		✓	-
<b>Network topology design</b>	▶ Scorched node	▶ Modified Scorched Node	▶ Scorched earth	✓	-

Legend:



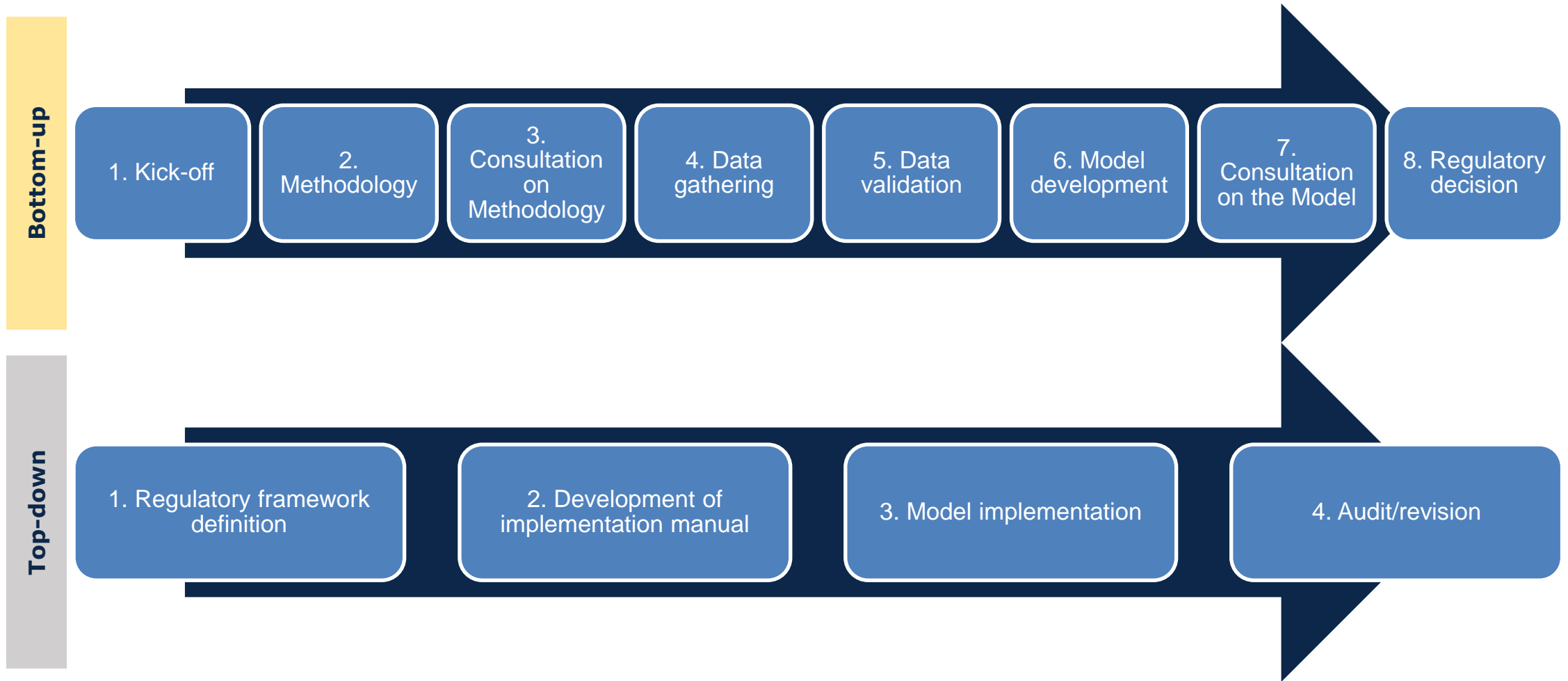
Applicable



Not applicable

Note: All these aspects are described in detail in the Guidelines

# It is crucial to define properly the process to implement cost models



# But... For what can a cost model be used?

## Wholesale Markets

 Price setting

 Reference Offers


## Retail Markets


 Price floors

 Price ceilings

 Tariff approval

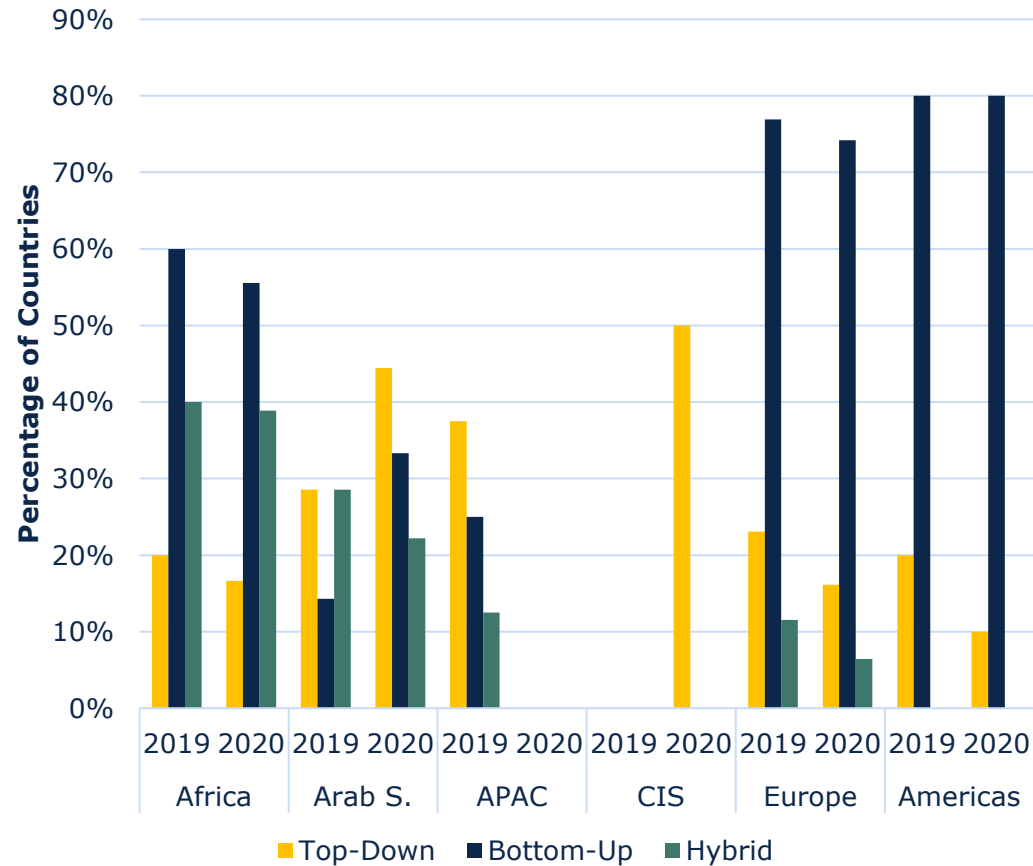
 Tariff replicability

 Non-discrimination

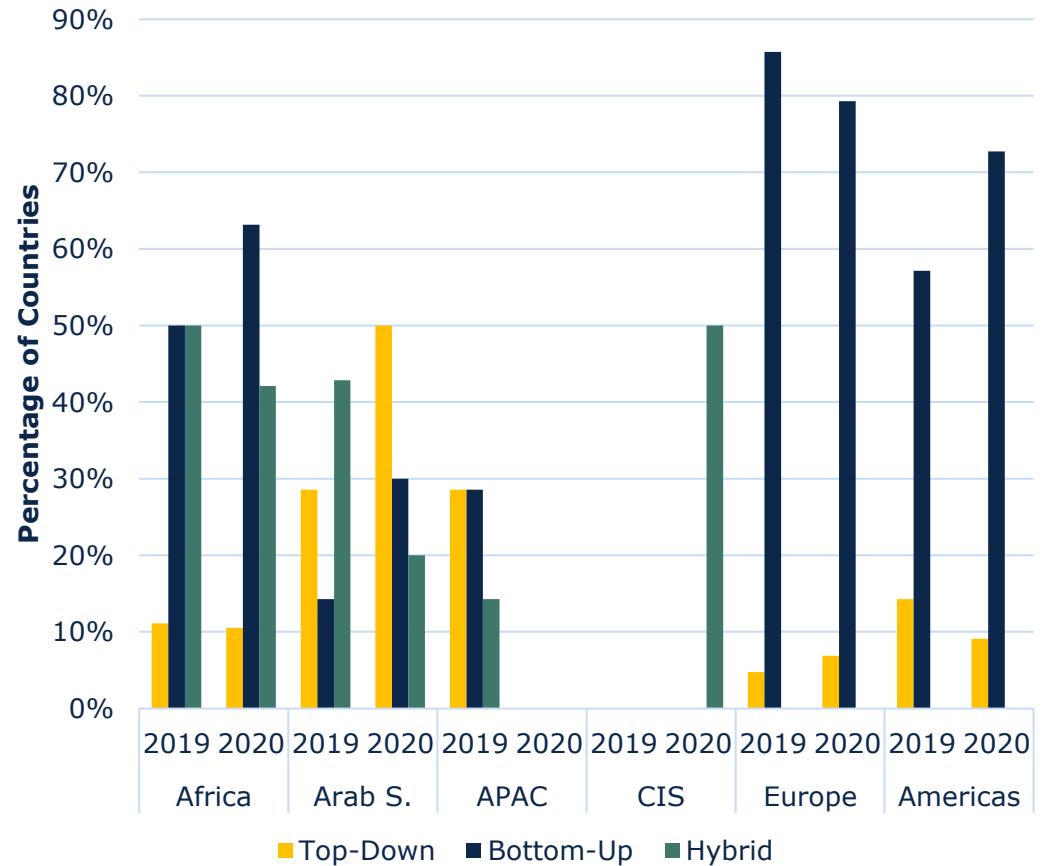
 Supervision of other anticompetitive practices

# In the period 2018-2021, ITU-D Q4/1 studied the methodologies used all around the world to regulate different services

**General approach for fixed services**



**General approach for mobile services**



Note: Details on other methodological choices are included in the [final report](#)'s annexes.



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