

TAF Model Application: Tariff trends

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Note - The views expressed in this presentation belong to the author and do not necessarily reflect the opinions of ITU or its membership.

Case Studies



- More than twenty cases were studied in 2001 based on the TAF model;
- Most significant cases consolidated and a typology established with a view to providing similar countries with tools for comparison;
- A fictive country created by combination of data from a panel of 8 countries;
- The results provided by the fictive country case may represent average benchmarks for the region.



Individual Case Studies

- Typology based on:
 Population density GDP
- Types identified:
 - High density and low GDP
 - High density and middle GDP
 - Middle density and low GDP
 - Middle density and middle GDP
 - -Low density and low GDP
 - -Low density and high GDP
- For further information on these cases consult the following publication:
 - « Cost, Tariff and Interconnection rate calculation Methodology Application to case studies »

Consolidated case study



• This presentation focuses on the results given by the case study applied to the fictive country created by a consolidation of the data provided by the panel of eight countries;



OPEX Structure

Purchases and inventories variations	6.335334E+07	
Transports	9,235,580	
Services received from external providers:	118,560,900	
levies and taxes	16,804,730	
Salaries and wages	161,700,300	
Other costs	59,244,910	
Financial and assimilated	99,483,820	
Annual amortisation:	117,224,600	
Annial provisions	61,600,670	
TOTAL 70	7,208,850	

96% 31% 5,76% 38% 2,86% 38% 4,07% 5,58% 71%

CAPEX Structure



Cost structure of the network ? × Distribution of the cost of the network equipments NEXT... 4.95% Cancel International Transmission International Switching(%): 3.9% National Switching(%): 27.25% **International network** costs National Transmission (%): 20.56% Acess Network (%): 33.39% Access still Other assets (%) 0.0995 predominant TOTAL 100.%



Traffic Structure and Specific costs

? X Data collection for cost calculations International Transit Traffic Terminal trafic data Costs of marketing and sales Urban traffic: 53,000 Service 1,219,654 4,320,013,000 Int->Sreg development Interurban Traffic: 17,693 4,068,392 1,137,646,000 Int->Int Sales 23,211,050 0 4,842,600 Outgoing Sub-reg Trafic SReg->SReg Advertisement 11,757 23,316,020 Incomming Sub-reg. Trafic: SReg -> Int 3,100,871 Outgoing Internation. Traffic: 216,190,500 Billing Interconnection Traffic 3,093,792 Customer Care 338,192,900 Incoming Internation. Traffic: Nat, Incoming Simple 48,445,870 Transit Nat. Incoming 20,759,060 Share of the capital in the urban traffic 63% Net. Planning and engineering Double Transit International outgoing 74,263,020 Planning and 15,851,240 Share of the Capital in the Engineering 64% International Traffic: National outgoing 345,409,000 % of the national transmission 0% network used by the international International incomin Other Support Costs 59,184,560 traffic of the Capital city Other support 23,978,880 National Transit 31,174,050 costs

Fixed-to-mobile traffic volume much higher than Mobile-to-Fixed



Network, Capital and Inefficiency Costs

? × Data collection for cost calculations Network cost data TOTAL Depreciation Current Cost Operation and Cost Depreciation delay Adjustment maintenance costs CAGR Real Convened International 5 455 621 15 640 329 21 095 950 % 10 10 n Transmission: International 4 298 368 0 12 322 683 16 621 051 % 10 10 Switchnig: National 22 660 115 64 962 658 87 622 774 10 10 % 0 Transmission: National 30 033 470 86 100 799 116 134 269 % 10 10 Switching: 10 Access 142 301 771 % 10 36 800 645 105 501 126 0 Network 99 248 219 284 527 596 383 775 815 0 TOTAL: Other depreciations Capital Employed **Reasonable Financial structure** 807 946 200 10 966 350 Other cost data Installed Extension delay 406 731 200 250 560 Interconnection 0 Financial Debt capacity 2 charges: 6,% 1 401 215 000 Capacity in 895 781 Weighted Average Equity Validate Use Average annual interest rate (%) monetary Lines in use annual growth rate (%): erosion Expected Return on Next 38,% 11,% 14,61% % Corporation Tax (%) Equity (RoE):

Cost elements to be allocated to services



Adjusted Costs		
International Transmission:	21 095 950	Costs specific to International incoming Traffic
International Switching	16 621 051	
National Switching	116 134 269	The Whole Internat Traffic
National Transmission	87 622 774	1 338 386
Access Network	142 301 771	Far internat. Traffic
Invested Capital Cost	159 142 060	33482580 My Customers
Other Common Costs	41 007 484	10 263 055
Inefficiency Cost	15 271 498	ICX Customers
	×T	Incoming Traffic
	Ineffici	ency costs

×

Service Costs



Cost calculation resu	ults					
Services	Opérateur m 1999	oyenAverages of the TAF Group	Averages of the best 10	Cost range of th Minimum	ne best 10 of each Maximum	
Urban	,07		-	·		
Interurban	,13					Compare with the results of the other TAF Group members
Incoming International	,18	*	·	<u>, </u>	*	-
Outgoing International:	,19	·	/	·	/	
Incoming Sub-regional:	,14	*	×	·	*	
Outgoing Sub-regional:	.14	×		·	/	
Interconnection		Double trans MeTolo ,12 ,08	x IntTolcx	lcxToInt ,13	Transit O <u>oLoc</u> ,05	
Cost of transit	Int -> Int : 	Int -> SReg: ,19	SReg->Int: ,19	SReg -> SRég:		Į
Cost of network elements	IntTrans ,05	IntSwitch	NatTransm .04	NatSwitch ,03	AccessNet	NEXT

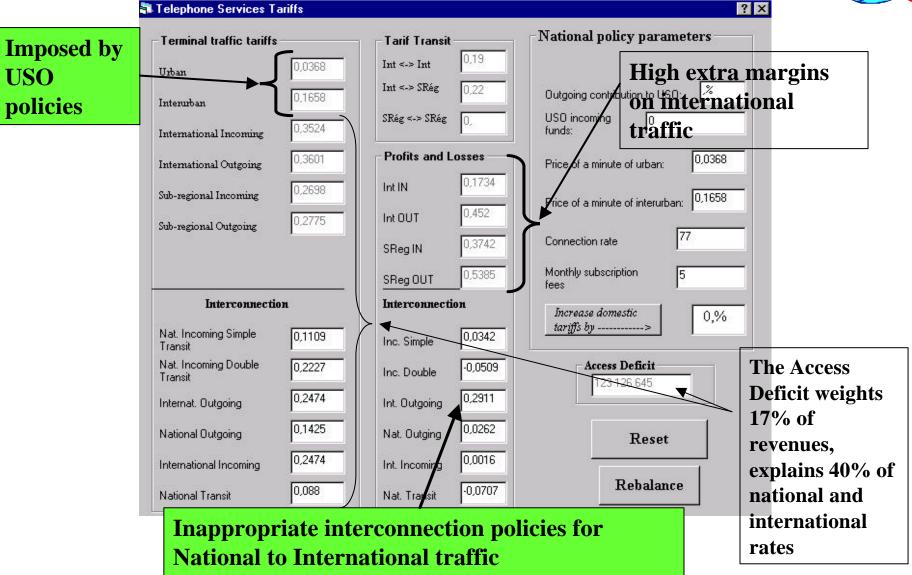
Actual endogenous price of services



Supplementary data for tariff ca	alculations		
Corporate tax rate	38,%	Icx To Me Simple Transit	0,15
Universal Services Oblization rate (%):	예	Icx To Me Double Transit	0,17
Incoming USO funds:		Me Tolcx	0,17
Price of a minute of urban communication:	0,04	Icx To the Whole international	0,54
Price of a minute of interurban communication:	0,1658	The Whole international To Icx	0,25
Installation fee:	76,78	Transit between Local Operators Via Me	0,02
Monthly subscription fee:	5		
Average price of a minute of incoming international traffic:	0,53	1	
Average price of a minute of outgoing international traffic:	0,81		NEXT
Average price of a minute of incoming sub-regional traffic:	0,64		
Price of a minute of outgpoing sub-rezional traffic:	0,82		Cancel



Cost-Orientated Tariff Basis



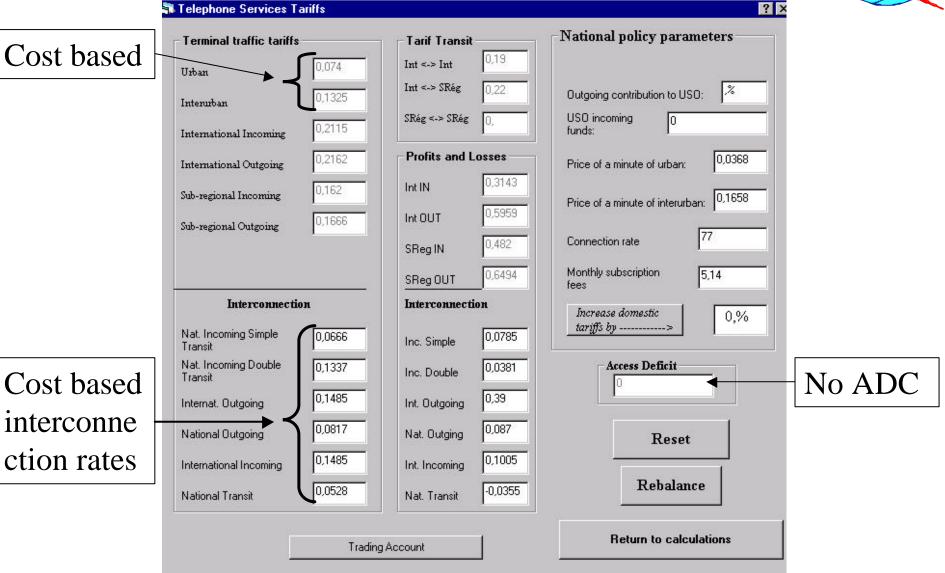
Cost-Orientated Revenues Distribution



Revenues	Expenses	Results	Ratios
	CACULATED	ACTUAL	
Urban	158 760 478	158 760	478
Interurban	188 621 707	188 621	707
International Outgoing	84 284 467	194 508	522
National Outgoing	49 220 363	58 270 4	98
International Incoming	140 104 432	207 574	299
National Incoming	28 372 907	50 586 5	39
Transit:	2 760 170	2 760 17	0
Installation	8 767 538	8 767 53	8
Subscription fees	51 730 141	51 730 1	41
TOTAL 712	622 201	921 579 891	

Demandprice elasticity not considered

Tariff rebalancing, given the actual MRF





Cost based Revenues Distribution

Transfer of revenues from international incoming and outgoing to domestic services.

But the effect of demand-price elasticity may change the figures and their distribution

Revenues	Expenses	Results	Ratios
	CACULATED	ACTUAL	
ban	319 784 219	158 760	478
erurban	150 724 610	188 621	707
ernational Outgoing	50 597 639	194 508	522
tional Outgoing	28 213 663	58 270 4	98
ernational Incoming	84 107 473	207 574	299
ional Incoming	17 032 820	50 586 5	39
nsit:	1 664 100	1 664 10	0
allation	8 767 538	8 767 53	8
oscription fees	51 730 141	51 730 1	41
ral 712	2 622 201	920 483 821	



🖥 Telephone Services Tariffs

- Terminal traffic tariffs	·	Tarif Transit		National policy parameters		
Urban	0,0368	Int <-> Int),19		l c	
Interurban	0,1658	Int <-> SRég 0,),22	Outgoing contribution to USO:		The actual MRF
International Incoming	0,2115	SRég <-> SRég 0,	L	USO incoming 0 funds:		re too low for the
International Outgoing	0,2162	Profits and Loss	ses	Price of a minute of urban: 0,0368		ocal price
Sub-regional Incoming	0,162	Int IN 0,),3143	Price of a minute of interurban: 0,1658		mposed by USO policies
Sub-regional Outgoing	0,1666	Int OUT),5959	77	H I	Juncies
	3:	SReg IN),482	Connection rate		
		SReg OUT),6494	Monthly subscription 18,0886235		
Interconnecti	on	Interconnection		Increase domestic 0,%		
Nat. Incoming Simple Transit	0,0666	Inc. Simple),0785	tariffs by>	\backslash	More flexibility
Nat. Incoming Double Transit	0,1337	Inc. Double),0381	Access Deficit		in the Monthly
Internat. Outgoing	0,1485	Int. Outgoing 0,),39			Rental Fee
National Outgoing	0,0609	Nat. Outging 0,),1078	Reset		policy may lead
International Incoming	0,1485	Int. Incoming 0,),1005			to tariff
National Transit	0,0528	Nat. Transit	0,0355	Rebalance		rebalancing

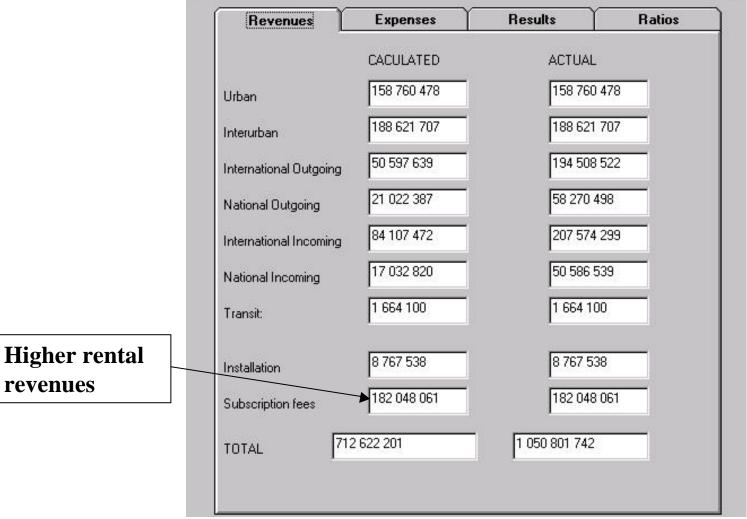


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Revenue Distribution

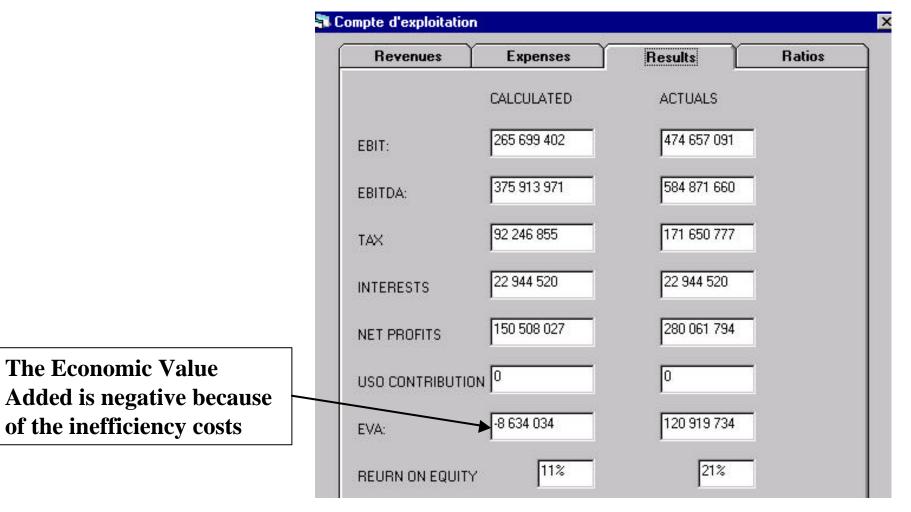


Compte d'exploitation





Performances



http://www.itu.int/ITU-D/finance/

