

TARRIF POLICIES AND REGULATION OF ICT

Experience of Lithuania

Content:

- What ICT is?
- Why to regulate ICT?
- Why we regulate?
- How we regulate?
- Lessons learnt (our experience)

What ICT is?

Some definitions from public sources say:

- Real-time and non real-time communications and integration of telecommunications, computers, enterprise software, middleware, storage, audio-visual systems which enable users to access, store, transmit and manipulate information (Wikipedia);
- Hardware, software, networks, and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services. Consists of Information and Communication Infrastructure and Information Technologies (The World Bank).
- IT equipment (computers, printers, etc.), components (semiconductors, printed circuits, LCDs, TV tubes, etc.), telecom and multimedia equipment, measurement instruments (sensors), industrial process control equipment, post and telecommunication services, computer services (Statistical Classification of Economic Activities in the European Community)

... so the definition of ICT is quite broad and comprises various sectors of industry – electronic communication networks (fixed and mobile), electronic communication services (voice, SMS, internet, data services), content services, software, equipment for operators of electronic communications networks and service providers, end user equipment, etc. – that participate in exchange of information (or content) .

What ICT is?

Why ICT is important?

Micro view: person	Micro view: business	Macro view:
People like new gadgets and feel satisfaction: get utility	Saves costs	It is a component of GDP via production, or investments or exports
Unlimited way of communications: real time and non real time	Allows to increase productivity	It influences productivity factors
People can express themselves: produce content and goods	May increase revenues and profits	May influence other sectors: education, R&D, employments, foreign investment...
Can earn for a living: selling content and goods	New ideas for businesses	

Why to regulate ICT?

So why to regulate if it is such a good thing from personal, business and government (macro) view...

... to be competitive as a region or a country and improve by learning from mistakes and by solving problems...

...because at the end it is the power of the region or a country that matters (still)...

...but regulation is not straight forward, but delicate process if regulator wants to be as less intrusive as possible.

Why we regulate: EU 2020?

EU 2020

Key targets:

-75 % of population aged 20-64 should be employed;

-3 % of EU's GDP should be invested in R&D;

-The share of early school leavers should be under 10 % and at least 40 % younger generation should have a tertiary degree;

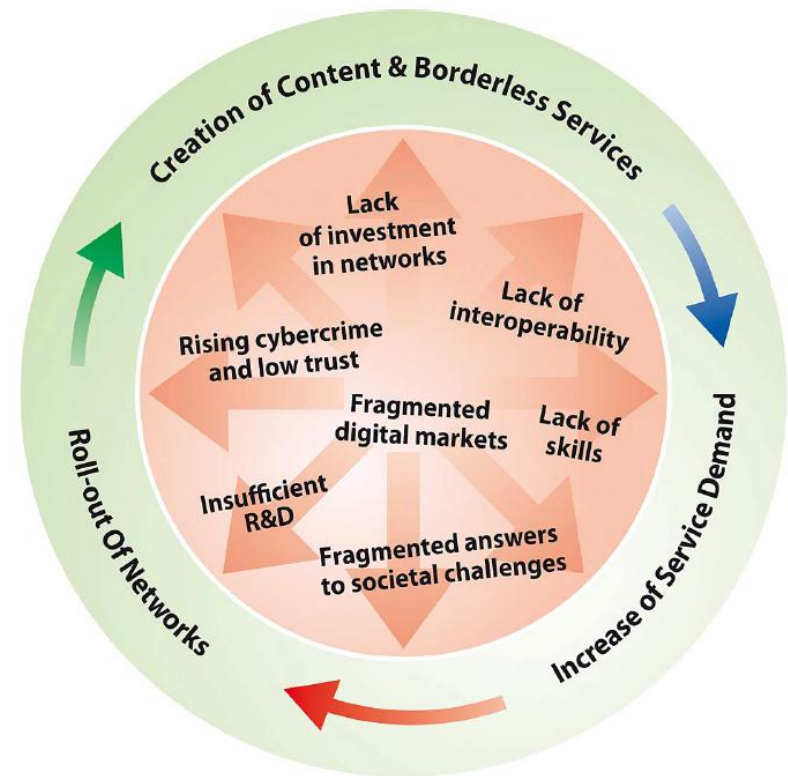
-20 million less people should be at risk of poverty;

-Reduce greenhouse gas emission by 20 %, increase share of renewable energy to 20 %, increase energy efficiency by 20 %

Why we regulate: Digital Agenda for Europe?

The European Union periodically compares itself with other regions (USA, Asia) and analyses where it is, where it lags and where it leads. Unfortunately analyses usually show that EU often lags in ICT sector:

- the share of ICT in GDP is lower than in USA and Japan,
- EU spends less on R&D as USA and Japan,
- increase in productivity is lower than in USA,
- people buy less online and abroad,
- people use less eServices.
- As a result EU introduces policies, how to pick the potential benefits of ICT:
 - eEurope 2002 in 1999;
 - eEurope 2005 in 2002;
 - i2010 in 2005;
 - Digital Agenda 2010-2020 in 2010
- Policies transfer into directives, recommendations, initiatives or other legal acts:
- The idea of all policies is not just to regulate (do this or that and do not do this or that). The idea of the policies is involvement of Business, Society and Governments to maximize social and economical potential of ICT.
- Policy documents are binding for member states.
- Member states have right to look more closely into its own problems, but decisions have to be consulted with European Commission.



Why we regulate?

We are involved here

Pillar	Bricks
Vibrant digital single market	<ul style="list-style-type: none">-open access to content;-ease of online cross border transactions;digital confidence (customer rights all over EU);-single market for telecommunication services (spectrum and numbering harmonization)
Interoperability and standards	<ul style="list-style-type: none">-improving ICT standardization policy in EU;-promotion of better usage of standards;-interoperability through coordination.
Trust and security	<ul style="list-style-type: none">-network, information and personal security.
Fast and ultrafast internet access	<ul style="list-style-type: none">-universal broadband coverage with increasing speeds;-development of NGA networks;-open and neutral internet.
Research and innovation	<ul style="list-style-type: none">-setting of innovation and efficiency targets;-coordination of actions of public sector;-promotion of industry led open innovations.
Enhancement of digital literacy, skills and inclusion	<ul style="list-style-type: none">-digital literacy and skills (education);-ICT is available to all (universal services and services for persons with disabilities);
ICT enabled benefits for EU society	<ul style="list-style-type: none">-ICT for environment;-sustainable healthcare (eHealth, Ambient Assisted Living, etc.);-promoting cultural diversity and creative content;-eGovernment;-Intelligent Transport System;

How we regulate

- The background of regulation: implement EU policy in the field of electronic communications (Directives of Regulatory Framework and specific Recommendations).
- The purpose of regulation: to promote competition in the provisions of electronic communication networks, services and associated facilities. The idea is to step in before particular service provider takes anticompetitive actions, i. e. to “cure” the cause, not the outcome.
- The regulation concentrates on regulation of Operators having Significant Market Power (SMP) in Particular Market.
- “Particular Markets” are set by EC and those are key markets that influence competition in electronic communication market. RRT has to review these market and decide whether regulation is necessary.
- RRT may “invent” new markets if it is necessary to solve national problems, but this should be consulted with EC.
- Where is no single remedy for each SMP as problems and objective vary. So every market has its own remedies.

How we regulate?

Markets susceptible to ex-ante regulation: 2003

- Retail:
 - access to fixed network for natural and legal persons;
 - national calls for natural and legal persons;
 - international calls for legal and natural persons;
 - retail leased lines.
- Wholesale:
 - Fixed origination, transit and termination;
 - Wholesale LLU;
 - ~~Wholesale BBA;~~
 - Wholesale terminating and trunk segments of Leased lines;
 - ~~Mobile origination and~~ termination;
 - Wholesale roaming market;
 - Transmission of TV and radio.

Markets susceptible to ex-ante regulation: 2008

- Retail:
 - access to fixed network for natural and legal persons;
- Wholesale:
 - Fixed origination and termination;
 - Wholesale (physical) infrastructure access;
 - Wholesale BBA;
 - Mobile termination;
 - Wholesale terminating segments of Leased lines.

How we regulate: tariff policies available

- Number of price control methods available is a combination of type of price control and valuation of particular price (prices), but particular instrument to be applied must be defined clearly, i.e. statements like “reasonable prices”, “cost oriented prices” are not justified.
- Price regulation is applied only to SMP operator (operators) after market analyzes.
- Type of price control :

Type of price control	Variations of “type”	Short description
Price Cap	Fixed price ceiling	Limits possibility to set extremely high prices (excessive pricing) – good for customers
	Fixed price floor	Limits possibility to set extremely low prices (predatory pricing) to squeeze competitors – good for service providers
	Fixed price	Not higher, not lower, but equal.
	Floating price	Allows increase/decrease in prices but to limited extend: by inflation, with limits of RPI-X
Cost orientation	Equal costs	Prices should be equal costs.
	Not lower than costs	Prices should not be lower than costs. Works similar to “price floor”
	Not higher than costs	Prices should not be higher than costs. Works similar to “price ceiling”.
Combination of methods above	Combination of methods above	...

How we regulate: tariff policies available

Price evaluation method:

Method	Variation	Short description
Reference to costs	Fully distributed costs (FDC): Historical Cost Accounting (HCA) or Current Cost Accounting (CCA)	Based on costs presented in Profit/Loss accounts, but costs should be distributed according to causality principles (in general it is ABC method).
	Pure Long Run Average Incremental Costs (LRAIC costs): Bottom-Up (BU) or Top-Down, Hybrid (HY)	Recommended by EC in mobile and fixed termination. Equals marginal or incremental costs
	LRAIC+/LRAIC++ with variation BU, TD or HY	Includes not only marginal/incremental costs but also part of shared and common costs.
Reference to particular price	Benchmark	Refers to price of same or similar products in other countries
	Retail-minus	Applied in wholesale price regulation and needs information about retail prices and wholesale costs.

How we regulate: tariff policies applied

Service type	Service	Price remedy applied	Operator regulated	Objective of price remedy
Retail	Access to fixed network for natural and legal persons (copper lines, ISDN PRA/BRA and alternative technologies)	-Prices should not be lower than FDC -Fixed price ceiling for universal services	TEO LT, AB (historical operator)	-Limits predatory pricing and squeeze of potential competitors, -ceiling protects customers in case of price increase, -FDC mimics costs actually incurred and informs market whether to enter or not
Retail	National calls for natural and legal persons (PSTN, VoIP)	-Prices should not be higher than FDC -Fixed price ceiling for universal services -price to other fixed networks not higher than prices of on net calls.	TEO LT, AB (historical operator)	-Same as above and -limits excessive pricing for calls to other networks and lock in effects
Retail	Leased lines (analogue and digital up to 2 Mbps)	-Prices should not be higher than FDC -Fixed price ceiling for particular services	TEO LT, AB (historical operator)	-protects customers from excessive pricing; - FDC mimics costs actually incurred and informs market whether to enter or not
Wholesale	Wholesale Line Rental (resale of access lines)	-Prices should not be higher than FDC	TEO LT, AB (historical operator)	-protects customers from excessive pricing;

How we regulate: tariff policies applied (continued)

Service type	Service	Price remedy applied	Operator regulated	Objective of price remedy
Wholesale	Fixed call origination, transit, termination	-Prices not higher than HY-LRAIC costs	TEO LT, AB (historical operator) and 9 alternative operators in fixed termination	-mimics efficiently incurred costs of a competitive operator and eliminates investment inefficiencies incurred during monopoly
Wholesale	Wholesale trunk and terminating segments of leased lines	-Prices should not be higher than FDC	TEO LT, AB (historical operator)	-protects customers from excessive pricing; -is in line with retail regulation (information is comparable)
Wholesale	Mobile termination	-Prices not higher than BU-LRAIC costs	UAB Bitė Lietuva, UAB Omnitel, UAB Tele2	-mimics efficiently incurred costs of a competitive operator
Wholesale	Transmission of analogue and digital TV and radio broadcasts	-Prices not higher than FDC	TEO LT, AB, AB Lietuvos radijo ir televizijos centras	-protects customers from excessive pricing
Wholesale	Access to network elements for provision of analogue and digital TV and Radio broadcasts	-Prices not higher than FDC	AB Lietuvos radijo ir televizijos centras	-protects customers (broadcasters) from excessive pricing
Wholesale	Access to (physical) infrastructure	-Prices not higher than FDC	TEO LT, AB	-protects customers from excessive pricing and limits excessive pricing; -mimics actually incurred costs

How we regulate: supervision

- Fixed origination, transit, termination and mobile termination:
 - prices shall be published publicly (RIO);
 - costs are calculated by RRT using LRAIC cost models, so RRT does not need information from operators about costs;
 - RRT periodically calculates average revenues and compares with price level set;
 - Once a year we compare prices from RIO with price level set by RRT.
- Price control remedies of services, where prices should not be below or above FDC costs:
 - Prices should be publicly available
 - Operator has to implement cost accounting system according to requirements of RRT;
 - Operator has to prepare and submit report about costs and revenues for regulated and non regulated services. We receive data on revenues and costs six months after end of financial year;
 - We compare revenues from particular market with costs calculated. Prices of particular service are compared on request from other operators on case by case.
- Price control remedies of services, where fixed price cap is applied:
 - Prices of services should be publicly available;
 - On quarterly bases publicly available prices are compared with price caps set
- In case of breach, RRT sends a formal letter to operator about violation of remedies imposed and sets the date for corrections. Operator may disagree with RRT, but has to justify its position, but it does not mean, that RRT will agree with operator.
- According to EU and National legislation, operators have to prove that their prices do not breach remedies imposed.
- If there is a breach, RRT may take appropriate measures, that should be proportional . The lists of measures is not exhaustive and one of these measure is penalties.
- According to regulation of Administration, bodies of administrations should not be Punishers, but Advisors to business. So penalties are not favored from practical and legal point of view.

Lessons learnt

- Price regulation of retail access and calls have not increased competition much (market share of historical operator is high: 92 % in terms of customers, 90 % in terms of traffic, 94 % in terms of revenues)... so the answer to competition lies somewhere else.
- Price regulation of retails calls becomes difficult as costs are calculated per minute, but minutes and access is sold in bundles and buckets. So additional instrument of “price squeeze” is need. But this is difficult to maintain due to dynamic market.
- FDC costs is not a good reference for new services: no demand and no economies of scale result in high costs->high prices.
- The regulation of associated services (example – Point of Interconnection services) is also very important.
- Price regulation should be harmonized across all regulated markets in order to have the same conditions for competition in all regulated markets.
- Price regulation should be reviewed more regularly in order to be up to date with the market. Difficult to achieve due to market analyses process (price regulation is linked to market analyses) and limited human resources.

The End

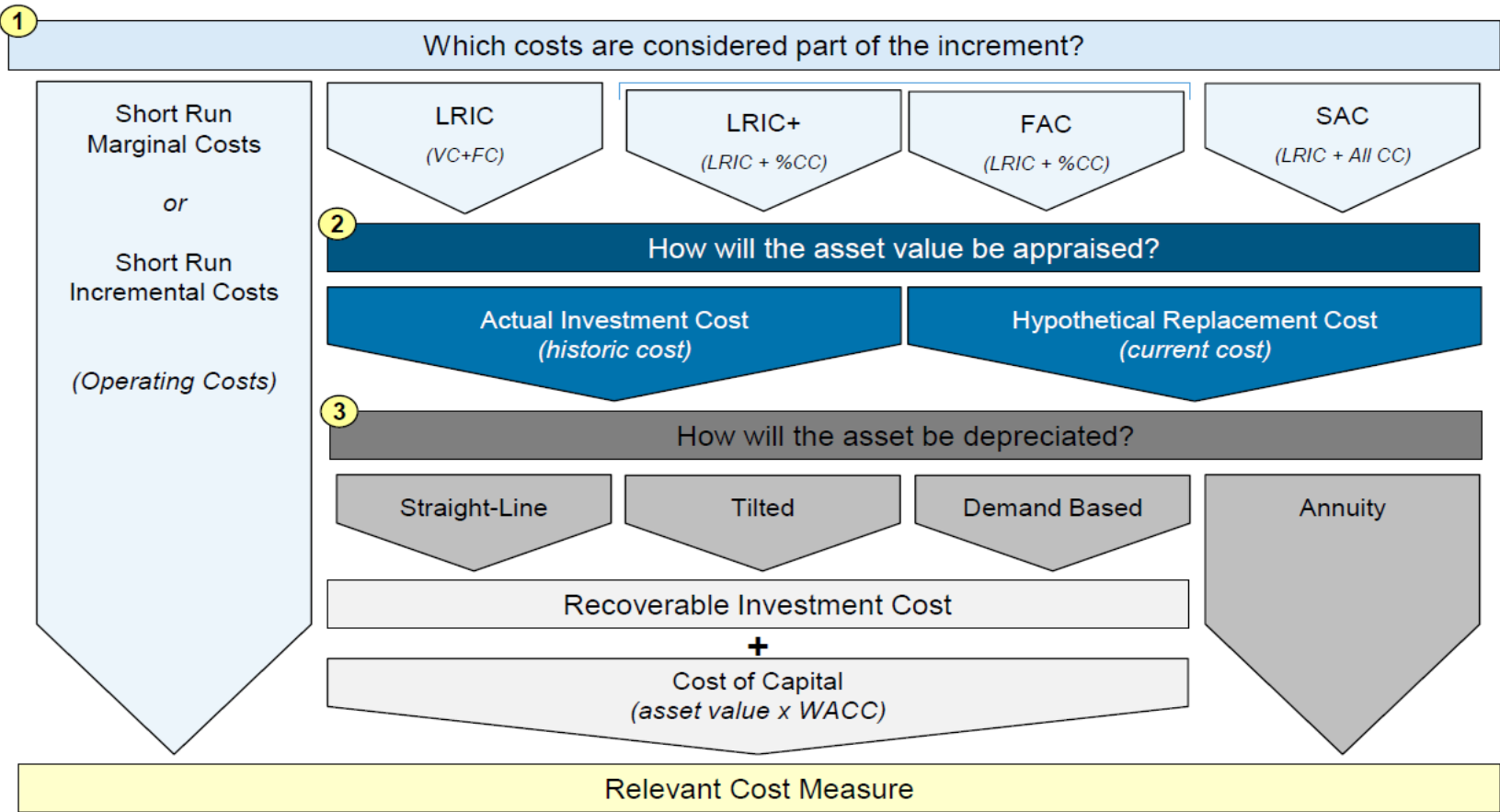
Thank You

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Annex 1: Some links

- Legal Framework of EU on Electronic Communications:
 - http://ec.europa.eu/information_society/policy/ecomm/library/legislation/index_en.htm
- Digital Agenda for Europe 2010-2020:
 - http://ec.europa.eu/information_society/digital-agenda/publications/index_en.htm
- RRT information about price regulation:
 - <http://www.rrt.lt/en/for-business/promotion-of-competition/regulatory-accounting-and-6a63.html>

Annex 2: Elements involved in cost calculation



Source: CRA