Spectrum Management: Strategic Planning and Policies for Wireless Innovation"

Spectrum policies for wireless Innovation Regulatory impact analysis
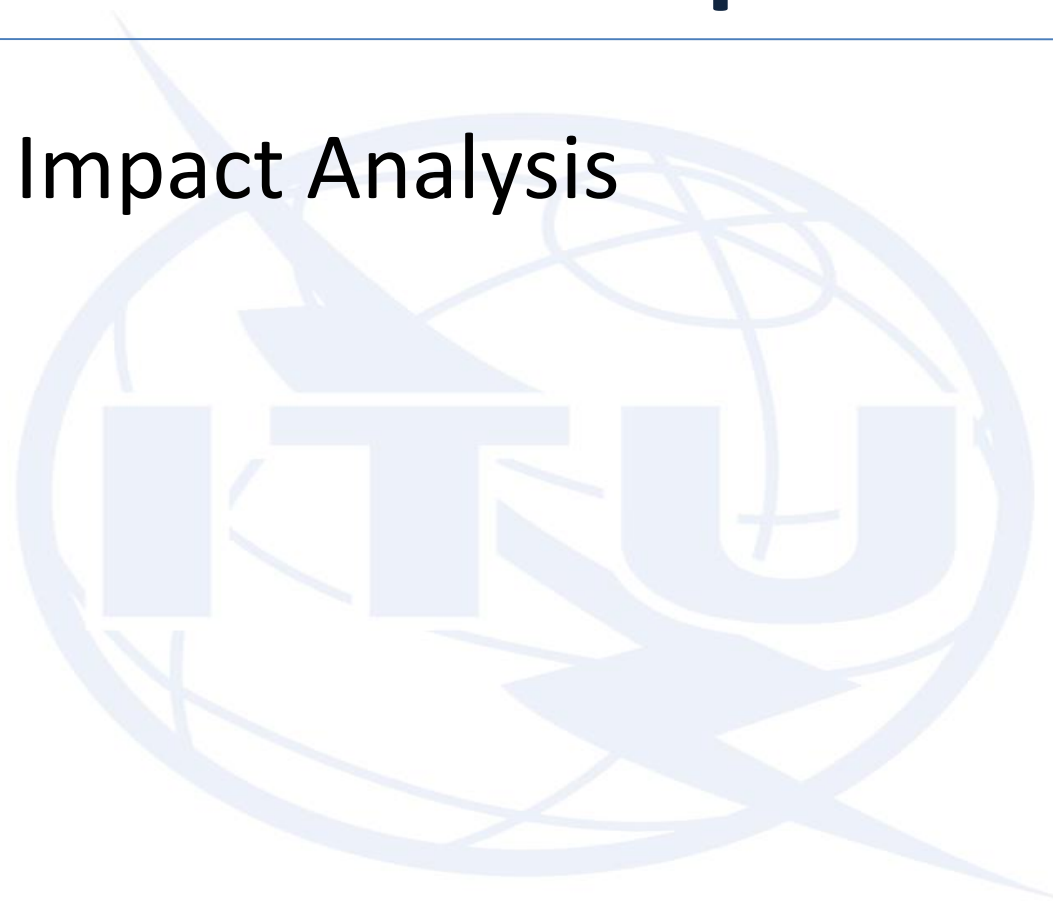
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Module Topics

- Regulatory Impact Analysis
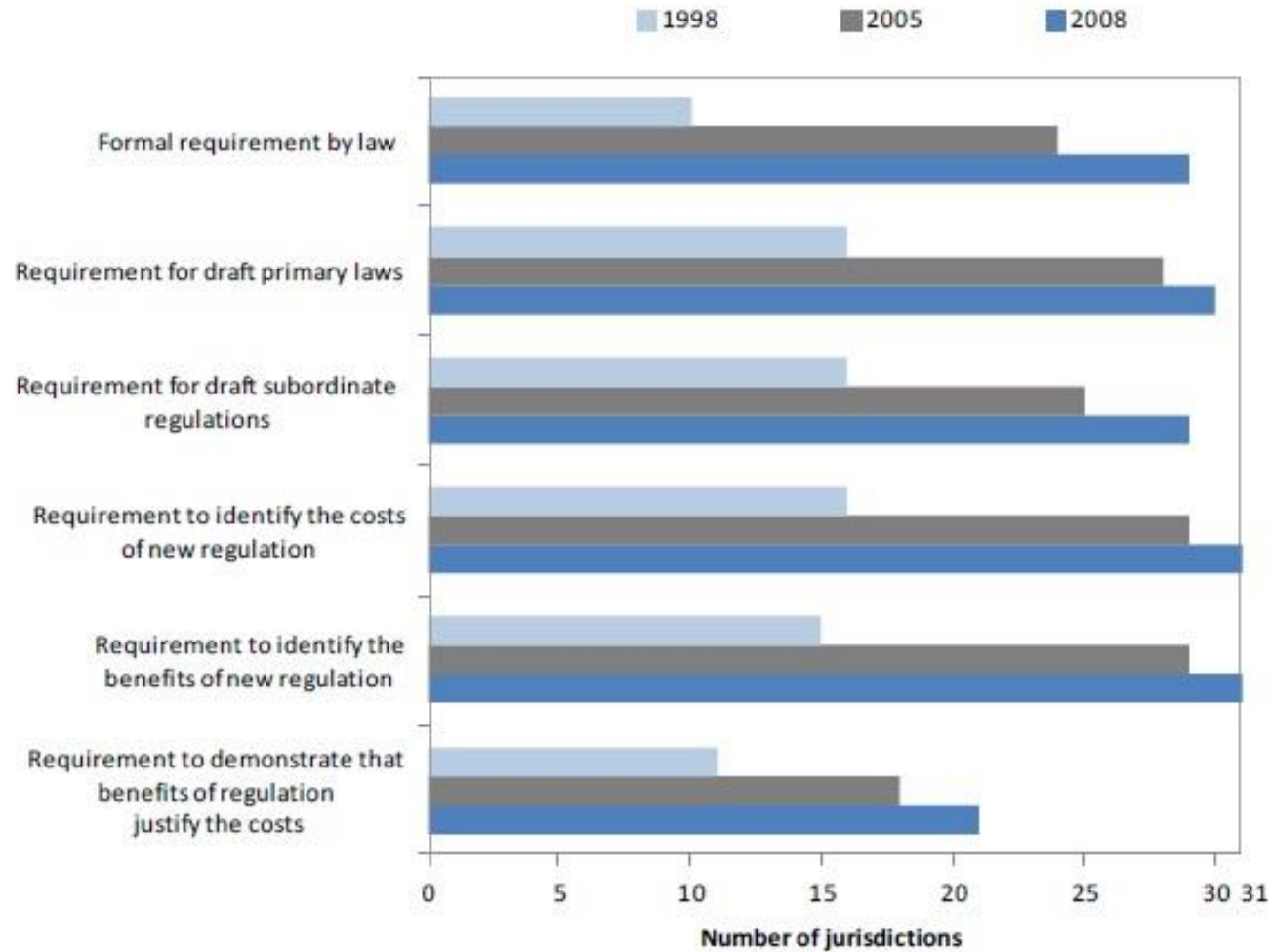
Policy and Regulation Acting as Constraints

- The development of a regulation, policy or program proposal is often a complicated undertaking where senior decision-makers must be assured that their organizations have proceeded with rigour in examining potential implications for in the case of spectrum policy and regulation – spectrum users. Since, in the case of some types of regulation, implementation may mean the curtailing of individual rights and impairment in the smooth functioning of the market

Regulatory Impact Analysis (RIA)

- Regulatory Impact Analysis is a systemic approach to critically assessing the positive and negative effects of proposed and existing regulations and non-regulatory alternatives.[1]

- RIA is valuable as a collaborative multidisciplinary approach consisting of natural and social assessments, legal and policy considerations, communications, public consultation, economic impacts, and decision analysis tools.

- RIA has been strengthened through the use of evidence-based tools for policy and regulatory analysis including techniques such as risk assessment, benefit-cost analysis, cost-effectiveness analysis and stakeholder engagement processes.
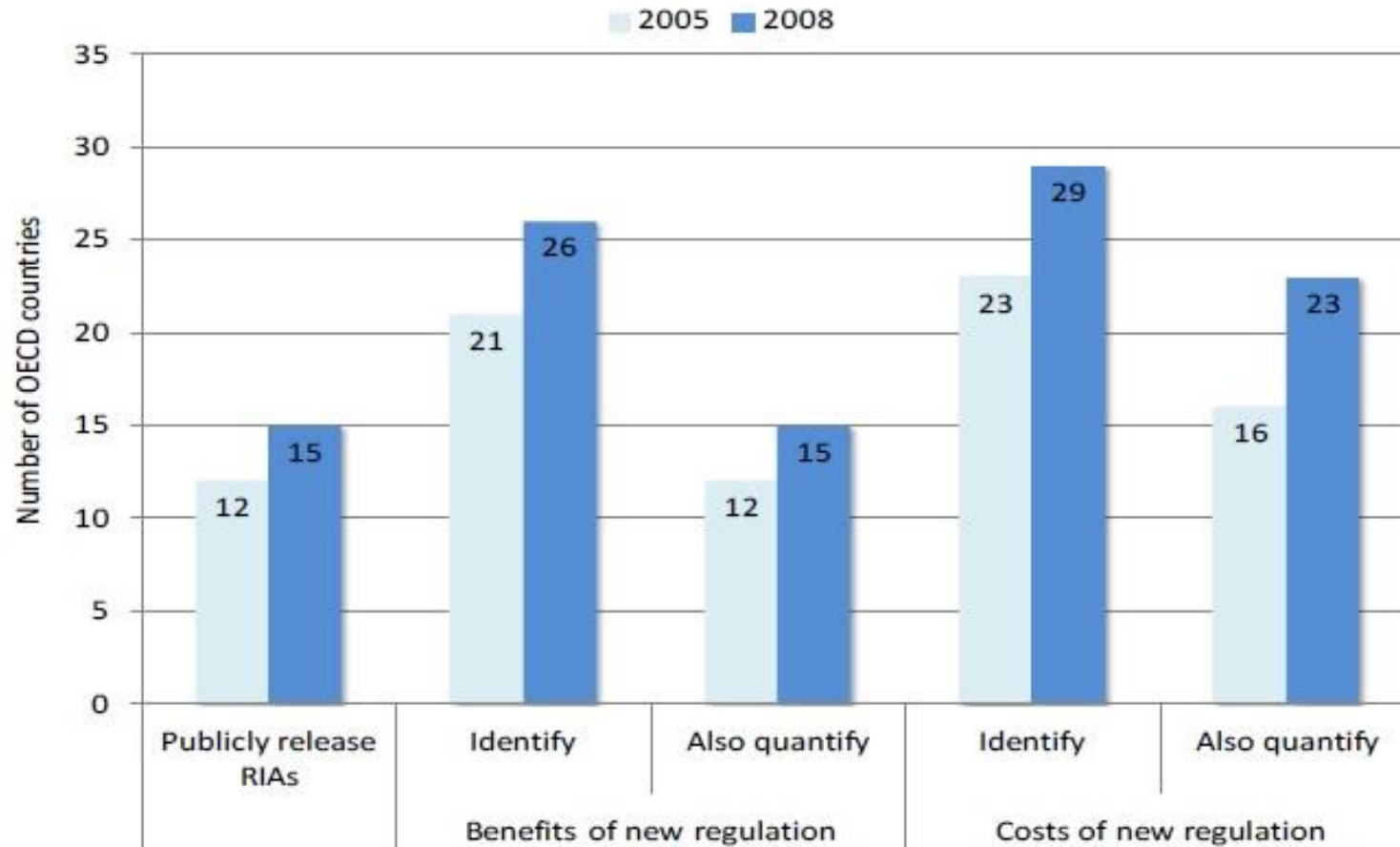
1. OECD Reviews of Regulatory Reform Regulatory Impact Analysis – A Tool for Policy Coherence http://www.oecd.org/regreform/regulatory-policy/ria.htm

Recent Trends in RIA Implementation

Legend: 1998, 2005, 2008

Categories (top to bottom):
- Formal requirement by law
- Requirement for draft primary laws
- Requirement for draft subordinate regulations
- Requirement to identify the costs of new regulation
- Requirement to identify the benefits of new regulation
- Requirement to demonstrate that benefits of regulation justify the costs

X-axis: Number of jurisdictions (0, 5, 10, 15, 20, 25, 30 31)

Source: Requirements for RIA at central government level (1998 – 2005 – 2008), OECD, 2013

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Recent Trends in RIA Implementation

Source: RIA Trends, Publication of Analysis by Governments, OECD, 2013

Critical Success Factors for RIA

- The key parts that are critical for the successful completion of a RIA include:
  - Leadership through-out the organization endorsing and supporting stages of development of an RIA programme.
  - Leadership is characterized by pragmatism and the ability to communicate within the NRA, the private sector and the broad public,
  - Inclusive of divergent viewpoints;
  - Excellent project management plans and capabilities
  - Expertise and technical skills in understanding the state-of-the-art in respective disciplines - spectrum planning, engineering, etc.
  - An ability and willingness to draw upon work available from others in the private sector, academia and governments, domestically and internationally.

Recent Trends in RIA Implementation

- Within OECD jurisdictions, the adoption of RIA is now widespread although design and application varies significantly. In 1980 only three countries were using RIA. The 2005 OECD survey of *Indicators of Regulatory Management Systems (OECD, 2007)2* (subsequently updated in 2008) revealed that all OECD jurisdictions now routinely carry out some form of RIA on new regulations before finalising and implementing them.

Key Steps in Implementing RIA

- Despite existing differences in the purpose, scope and methods of RIA systems around the world, RIA documents tend to follow a similar structure. The key steps of an ex ante RIA are the following:

  1. ***Problem definition.*** Administrations wishing to propose a new regulation are asked to identify and describe in detail the problem and its drivers.

  2. ***Identification of alternative regulatory options.*** In this phase, the need for intervention has to be translated into concrete policy options.

  3. ***Data collection.*** This is a crucial phase, which may entail (besides desk research) a variety of empirical methods, from telephone and face-to-face interviews to the distribution of questionnaires, organization of online surveys and consultations, cooperation between regulatory authorities (*e.g. ministries, custom authorities, police,* etc.), focus groups, Delphi methods, stopwatch methods (especially in administrative burdens measurement), etc.

  4. ***Assessment of alternative options.*** This is a core phase of the RIA, and can be carried out through different techniques – the most common being cost-effectiveness analysis (CEA), cost-benefit analysis (CBA), and risk analysis.

Key Steps in Implementing RIA

- The key steps of an ex ante RIA continued:

  5. ***Identification of the preferred policy option.*** Once the available options have been carefully scrutinized, the comparison leads to the identification of the most preferred options.

  6. ***Provisions for monitoring and evaluation.*** As increasingly required in national RIA systems, the RIA document should also specify the ways in which the impact of the selected policy action can be monitored overtime, and a clear and efficient time horizon for revision of the action in the future.

Expected Benefits of RIA

- RIA can be a time-consuming exercise and normally requires changes in the institutional setting and in the behavior of civil servants, away from procedure-oriented and towards a more performance oriented, results-based mindset. The expected benefits of implementing a RIA system are of three main types:
  - **Efficiency.** When RIA makes use of methods such as CBA and CEA, its use should help administration decide in favor of more efficient policy options, discarding less efficient alternatives. Over time, is correctly implemented, this should lead to greater social welfare through an increase in the net benefits of public policies;
  - **Transparency.** RIA can increase the transparency of public policy since it forces public administrations to motivate their actions in writing, and by explaining why the proposed course of action is more desirable than available alternatives, including the option of doing nothing.
  - **Accountability.** The use of RIA also promotes the accountability of governments, i.e. Their responsibility for the outcomes generated by policy. This occurs in particular when administrations that propose new regulations or legislation draft their own RIA, and the latter becomes a key input for the drafting of the rules.

Levels of Analysis

- The RIA Guidelines issued by the UK Government include various levels of qualitative and quantitative analysis which can be carried out. The following levels relate to quantitative analysis:
  - Level 1: description of who will be affected by the proposals. The main groups affected will include business, public sector and consumers;
  - Level 2: full description of the impacts (i.e. positive or negative impacts on any group) and order of magnitude (e.g. low, medium, high);
  - Level 3: quantify the effect (e.g. 100 spectrum applications per year, 500 hours of management and staff time, 50 new assignments per year);
  - Level 4: put a value on the scale of impacts by monetising the effect. It may be the case that the costs but not benefits can be monetised. The use of indicators may help further qualify non-monetised costs and benefits;
  - Level 5: monetise fully all costs and benefits

Analysis and Policy Development

- The table below illustrates the level of analysis which might be undertaken as policy development progresses, assuming full quantification is possible and proportionate

Policy Development Stage	Progression of Quantitative Analysis – Assuming Full Quantification is Possible and Proportionate				
	1: Identify	2: Describe	3: Quantify	4: Partially monetise	5: Fully monetise
Development	✓	✓	?	?	×
Options	✓	✓	?	?	×
Consultation	✓	✓	?	?	?
Final	✓	✓	✓	✓	✓
Enactment	✓	✓	✓	✓	✓

RIA Toolkit, How to do a Regulatory Impact Assessment, UK Government, 2011

Estimating Policy Costs

Cost	Technique
Labour costs	Full time equivalent (FTE) costs should be used to estimate the costs of employees' time to the employer and should include pensions, national insurance contributions and allowances as well as basic salaries. ASHE is a useful source.
Costs of new equipment or new production processes	Formal / informal consultation with those likely to be affected might provide the best data.
Collecting information and providing proof of compliance	Use labour costs, plus the cost of new equipment required to do this.
Costs of getting licences	Estimate the fees plus administrative burdens. Enforcement authorities should be able to help with providing estimates.
Costs of extra legal, accountancy or other consultancy advice	Consultation or colleagues' experience might be informative.

RIA Toolkit, How to do a Regulatory Impact Assessment, UK Government, 2011
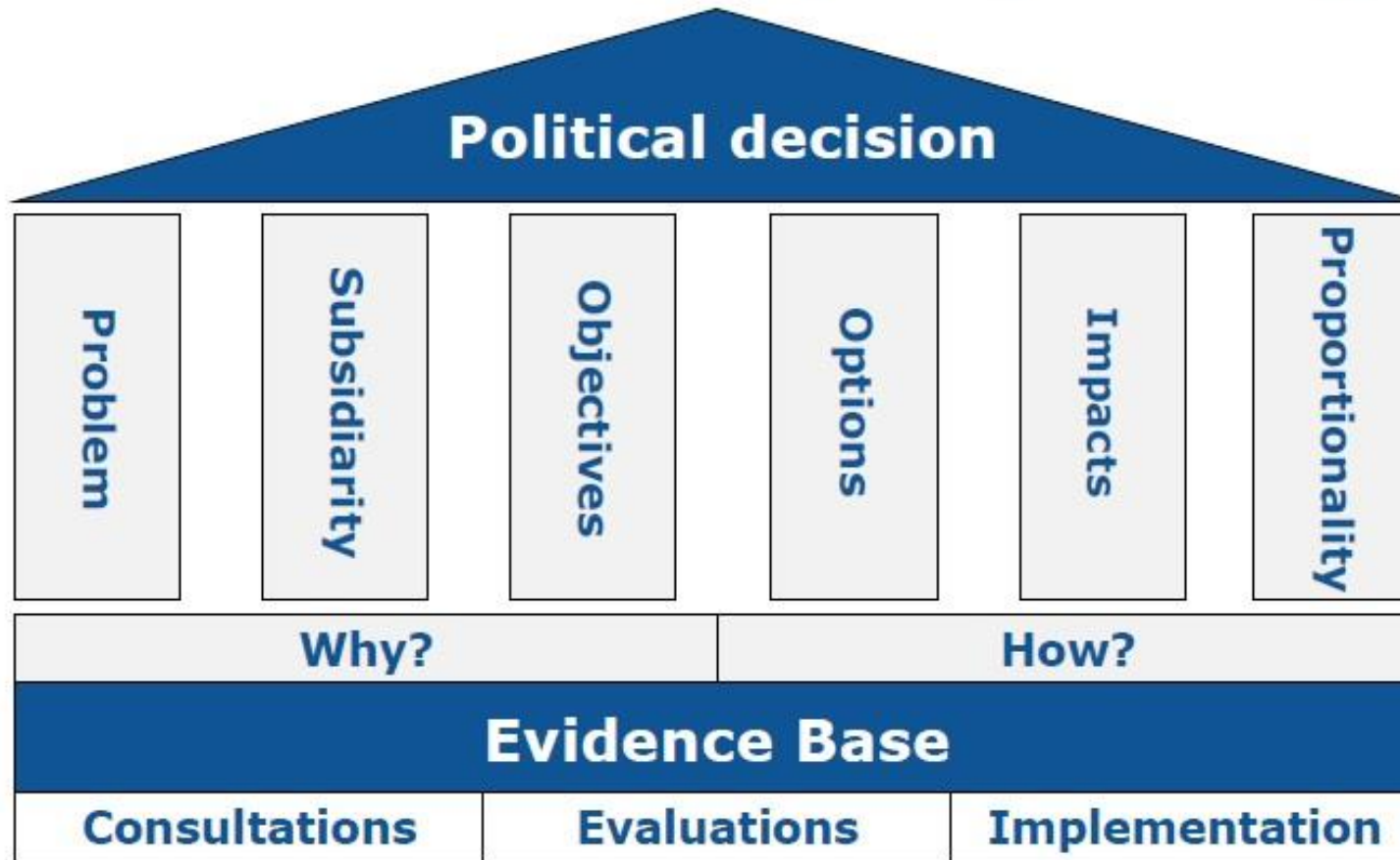
EU Commission RIA Board

Established in 2002 – Its key features are:

- Wide scope All initiatives with significant impacts, from policy defining proposals to implementing measures
- Integrated approach
  - All benefits and costs
  - Economic, social and environmental impacts
  - Collaborative efforts of all relevant Commission services
- Transparency
- Roadmaps, stakeholders input and publication of IAs and IAB opinions

EU Commission RIA Framework

Use of RIA in Setting ICT Policy

- RIA can be a useful support to the quality of policymaking in the ICT sector, and in particular in the policy fields that are most often subject to regulation. Compared to other sectors, ICT policy has been less exposed to the debate on RIA, mostly since in many countries ICT policy is dealt with by regulatory authorities that are independent of government, which means that RIA is not an obligation for telecom regulators.

- Against this background, regulators such as FCC in the US, Ofcom in the UK and AGCOM in Italy have adopted own methodologies to carry out RIA of major regulatory decisions. In countries like Jordan and Qatar the telecommunications regulators perform RIA in support of major regulatory decisions.

- Several examples follow:

Qatar's RIA on the Quality of Service for telecommunications

- On March 6, 2014 the Communications Regulatory Authority (CRA) of Qatar issued two draft documents which aim at better regulating QoS in Qatar36:

  1. A QoS Policy which sets out the basis upon which the QoS offered by Service Providers will be measured and regulated by CRA. Its goal is to set policies, objectives and general principles to regulate QoS in Qatar.

  2. A QoS Regulatory Framework which sets how CRA is going to regulate QoS offered by Service Providers. Its goal is to define Key Performance Indicators (KPIs), targets, measurements methods, reporting and publication procedures, validation and audit approaches and enforcement procedures.

- These two documents, once adopted, are expected to significantly impact the telecommunications market in Qatar. As a consequence, CRA published a consultation document which includes a RIA - termed "Impact Assessment".

Qatar's RIA on the Quality of Service for telecommunications

- Depending on the type of option undertaken, three types of costs might be incurred by Service Providers: the cost of measuring KPIs; the cost of reporting results of the measurements; and the cost of making improvements in their network to meet established targets or paying penalties if targets are not met.

- The new QoS Regulatory Framework should increase QoS provided in Qatar but also provide much better information on QoS to end-users and therefore fill the gap between expected QoS and experienced QoS.

- The consultation closed on April 20, 2014. The results are being reviewed and will be incorporated in the elaboration of the final regulation, which is due later this year. The use of a preliminary impact assessment and extensive consultation ensure that the final decision to be adopted will be shared with the market operators

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Use of RIA In Evaluating Competition Outcomes

- Competition Outcomes. These are objective characteristics of the inputs or the outputs of the telecommunications sector. They include outcomes relating to market structure, to the level of inputs of resources such as spectrum, and to the range, quality and prices of services available. They are subdivided into:
  – General characteristics using two indices developed by the ITU (IDI) using objective measures of service take-up rates including service penetration levels, availability of 3G services, and the number of service options measured by the number of mobile licences;
  – Market concentration measures - Herfindahl-Hirschman Index (HHI). This a summary measure of the size of individual firms in relation to the market, and a possible indicator of the amount of competition among them. Increases in the HHI generally indicate a decrease in competition and an increase of market power whereas decreases indicate the opposite.

Laws and Regulation

- Legislation promoting full and fair competition prohibiting certain behaviour on the part of firms (and establishes a procedure for identifying or punishing it)

- Legislation empowering a regulator to require particular conduct on the part of firms.

- The former is legislation, which proscribes or forbids certain courses of conduct; the latter is legislation which enables a regulator to prescribe or mandate certain courses of conduct.

Metrics for Laws and Regulation

- Focus on two general and two specific forms of regulatory intervention in the mobile telecommunications sector. The two general ones are essentially the work of legislatures, which pass the relevant laws; the two specific ones are regulatory interventions made under those laws.

- The two general characteristics are:

  - competition law, which, if it exists, normally affects all sectors of an economy;

  - sector-specific laws and regulations prohibiting anti-competitive conduct in the telecommunication sector.

Metrics for Laws and Regulation

- Competition Law Outlawing for most or all firms:
  - 1) explicit collusion between firms;
  - 2) certain mergers and acquisitions;
- And for dominant mobile firms:
  - 1) predatory pricing;
  - 2) exploitative prices;
  - 3) discrimination;
  - 4) margin squeeze.
- Sector Specific Laws prohibiting anti-competitive behaviour:
  - The prohibited activities including: margin squeeze, predatory pricing; price control preventing excessive prices; discrimination; cross-ownership; mergers and acquisitions were reviewed, In relation to sector-specific laws and regulations prohibiting anti-competitive conduct

Metrics for Laws and Regulation

- Regulated Access Powers:
  - To ensure inter-operator connectivity existence of regulation requiring that all networks must interconnect.
  - Note there is considerable dispute about the desirability of various forms of unbundling. Some regulators (FCC) have chosen to rely on competition in each area between the mobile operator and the fixed or cable operator without mandating access by competitors to the loops or other network services of either, whereas in other cases (EU), unbundling access components is the rule
- Number Portability
  - Reduces switching costs for consumers and hence Number Portability removes a barrier for consumers and can promote competition.

References for further reading:

- OECD Reviews of Regulatory Reform Regulatory Impact Analysis – A Tool for Policy Coherence

  https://read.oecd-ilibrary.org/governance/regulatory-impact-analysis_9789264067110-en#page6

- GSR14 discussion paper Using Regulatory Impact Analysis to Improve Decision Making in the ICT Sector. ITU.

  http://www.itu.int/en/ITU-D/Conferences/GSR/Documents/GSR2014/Discussion papers and presentations-GSR14/Session7GSR14-Discussion paper- RIA.pdf

- Principles for Spectrum Management – Australian Communications and Media Authority

  https://www.acma.gov.au/sites/default/files/2019-10/Principles%20for%20spectrum%20management%20-%202009.PDF

Thank you