

**Regional Seminar on the economic and financial
aspects of telecommunications Study Group 3
Regional Group for Latin America and the Caribbean
(SG3RG-LAC)**

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***Tariff regulation: pricing in a
converged environment***

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Contents



1. Introduction
2. Understanding the regulatory model
3. Where we are?
4. Alternative regulation of tariffs
5. Nature of services
6. Benchmark
7. Summary and conclusions

Contents



1. Introduction
2. Understanding the regulatory model
3. Where we are?
4. Alternative regulation of tariffs
5. Nature of services
6. Benchmark
7. Summary and conclusions

- **GENERAL MARKET TRENDS**

- decreasing revenue from traditional services
- significantly shortened product life cycle
- innovative materials and applications
- economic globalization
- concentration of players
- economy of scale

- **MANAGERIAL CREATIVITY**

- unconventional ways to create innovative products for niche markets applied by small start-up companies
- enhanced service intelligence
- reduced time to market for new services
- option for consumers to customize their services

- **GOVERNMENTAL LIBERALIZATION AND DEREGULATION**

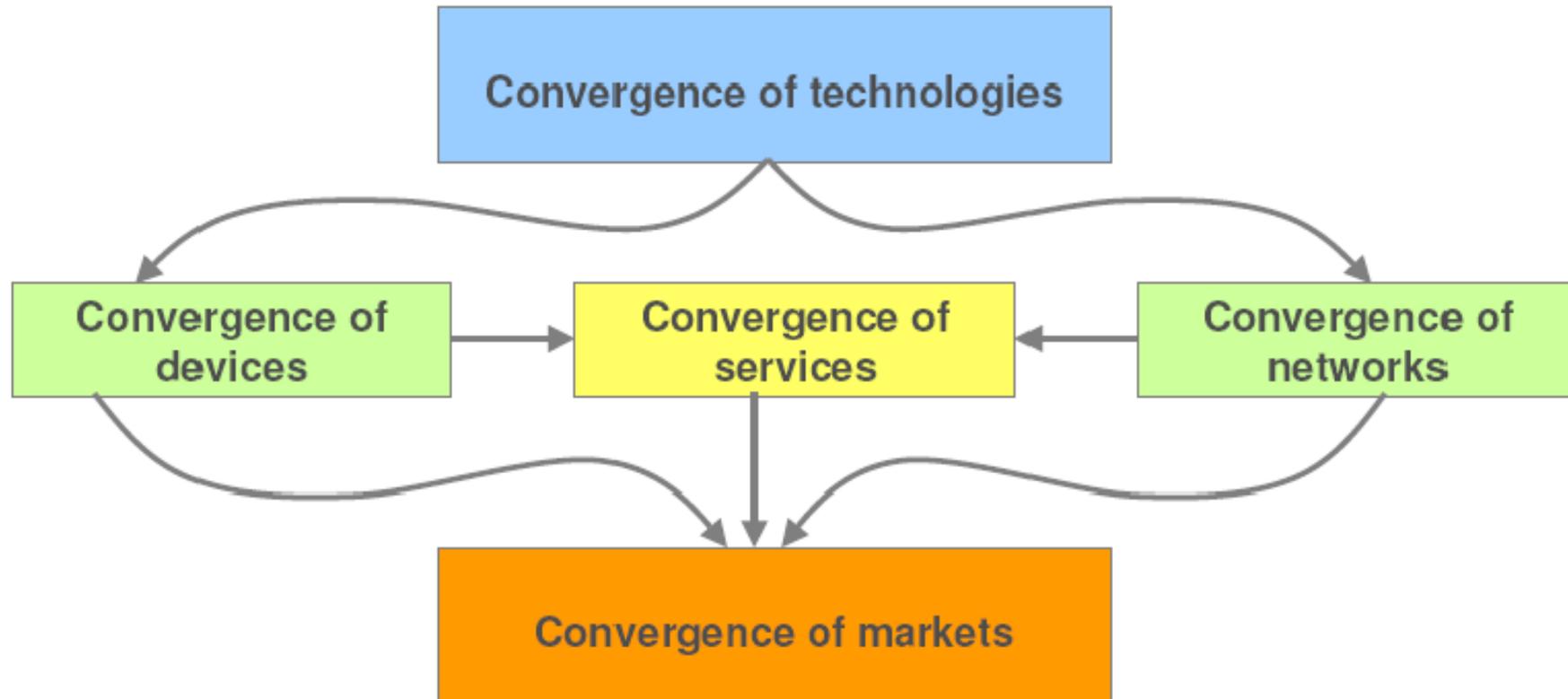
- 1984 in USA, a decade later in EU

1. Introduction.



- *The technologic convergence could be understood as:*
 - a process by which the telecommunications, broadcasting and information technologies merge, including the merge of fixed, mobile, terrestrial and satellite communications and including the merge of location systems and systems of establishment of places and liaisons – **technology convergence**;
- *Is it only technology ?*
 - Technological convergence from the other side is meant that any type of terminal can access any type of data (which in turn can be transmitted through any kind of a pipe), and this side of technological convergence might be called a terminal equipment convergence or **convergence of devices** and
 - while an existing network, one optimized to provide a single service, can now be upgraded to carry multiple services, there is **convergence of networks**.
 - ... if the same services are delivered, transmitted and so on over the any of networks – mobile, fixed, telecommunications lines, cable TV networks, terrestrial and satellite networks and the same devices, we should talk about **service convergence**;
 - ...if any of the existing networks could provide any of the information and communication services, that are not within limits of one separate traditional market or a distinct industry of an economy, we are talking about **convergence of markets**.

1. Introduction.

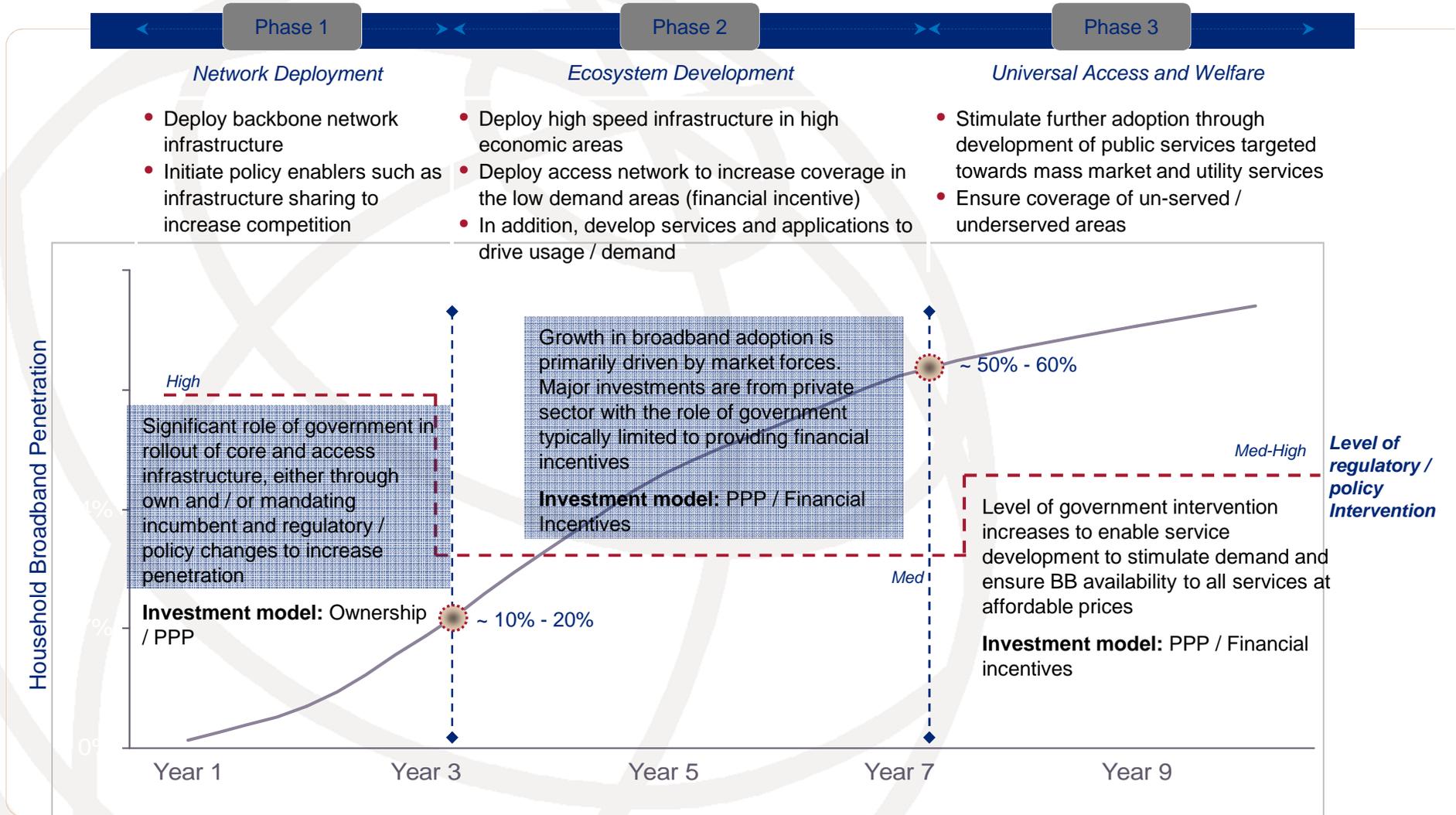


Contents

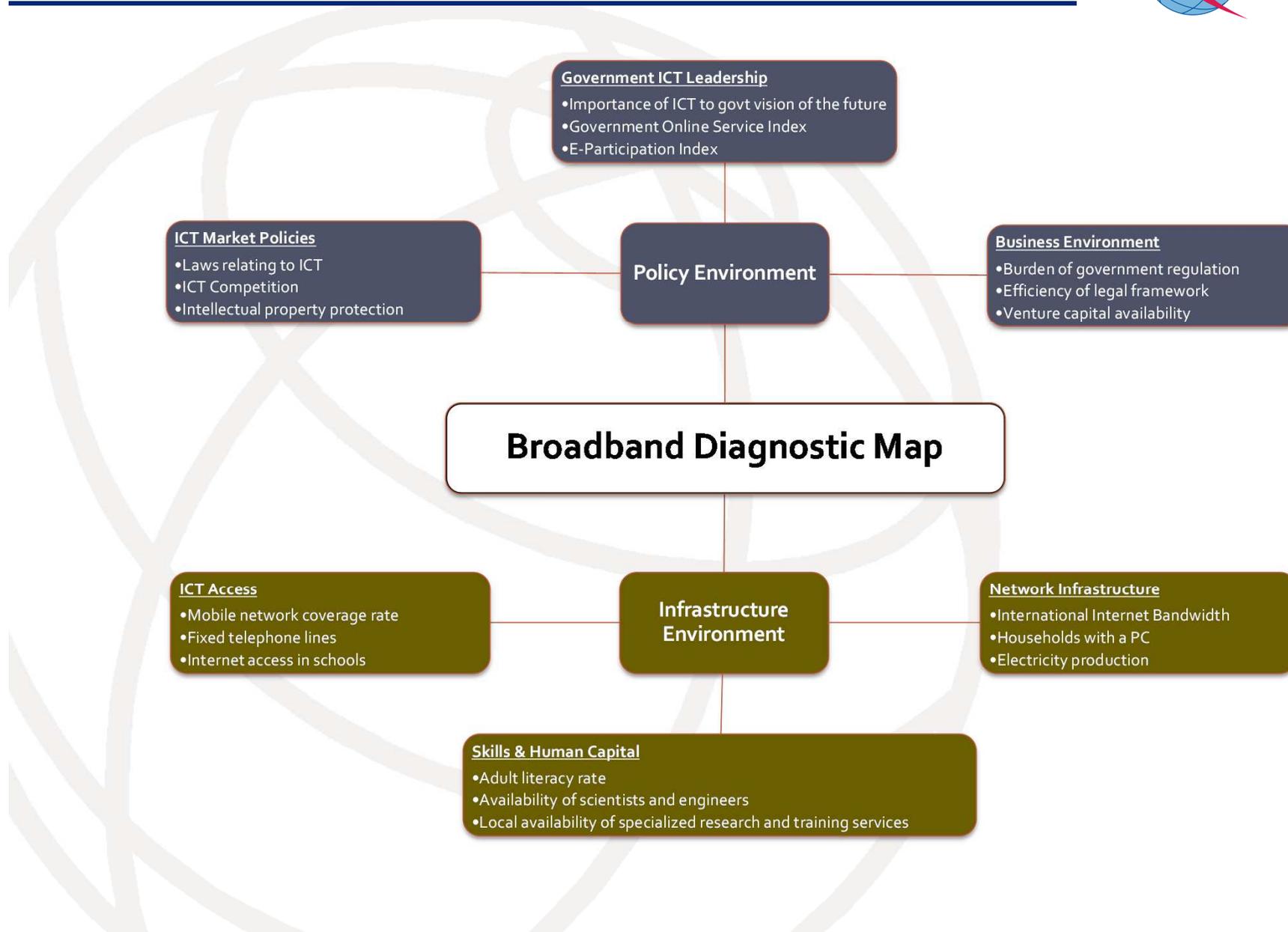


1. Introduction
2. Understanding the regulatory model
3. Where we are?
4. Alternative regulation of tariffs
5. Nature of services
6. Benchmark
7. Summary and conclusions

2. Understanding the regulatory model



2. Understanding the regulatory model



Contents



1. Introduction

2. Trends and challenges

3. Where we are?

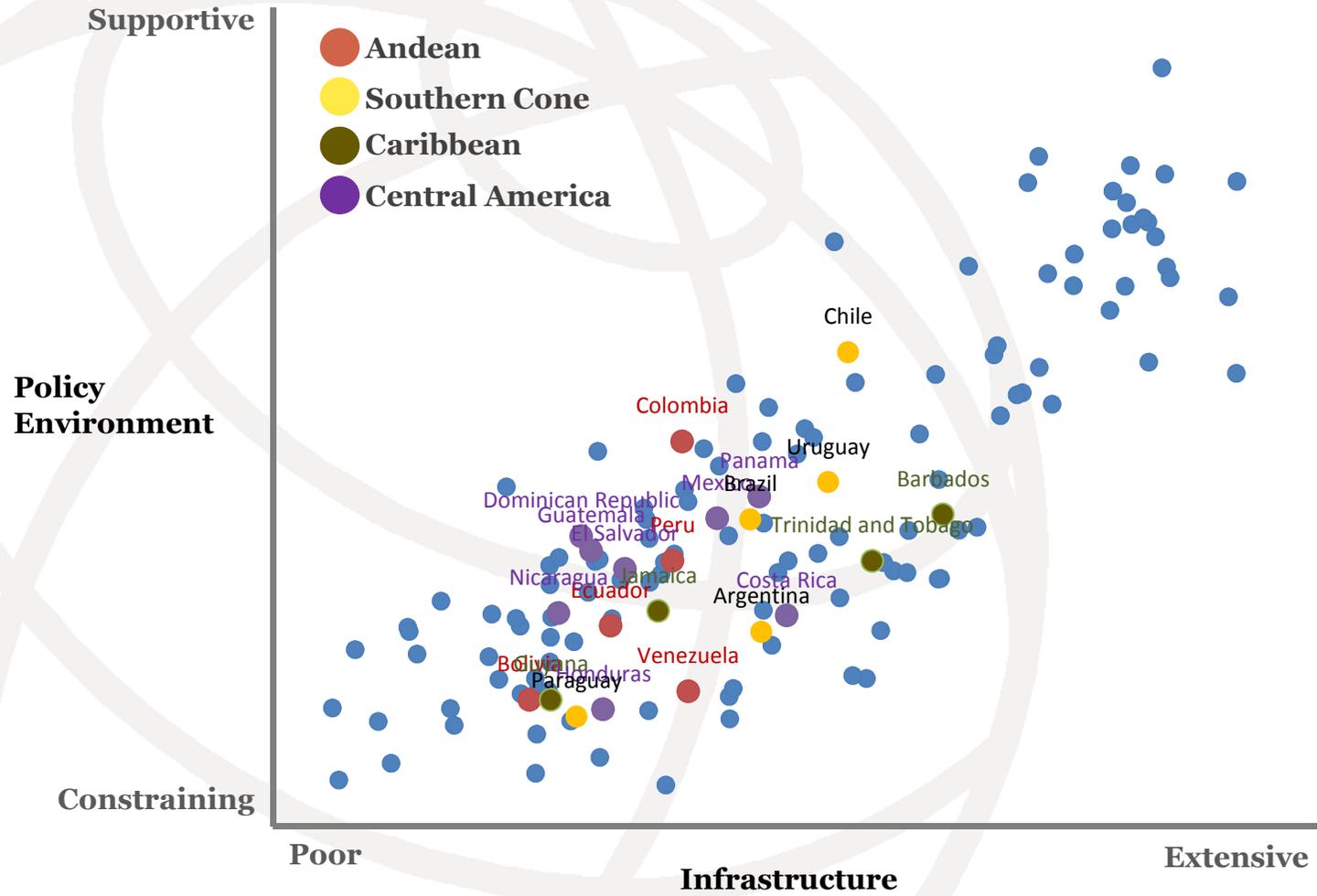
4. Alternative regulation of tariffs

5. Nature of services

6. Benchmark

7. Summary and conclusions

3. Where we are?



3. Where we are?



Market included in the “old” Recommendation (February 2003)

1. Access to the public telephone network at a fixed location for residential customers
2. Access to the public telephone network at a fixed location for non residential customers
3. Publicly available local and/or national telephone services at a fixed location for residential
4. Publicly international telephone services available at a fixed location for residential users
5. Publicly available local and/or national telephone services at a fixed location for non-resid.
6. International telephone services publicly available at a fixed location for non-residential
7. Minimum set of leased lines
8. Call origination in the public telephone network at a fixed location
9. Call termination in individual public telephone networks at a fixed location
10. Transit services in the public fixed telephone network
11. Wholesale provision of unbundled access to provide broadband and voice services
12. Wholesale provision of broadband access
13. Wholesale market for leased line terminal segments
14. Wholesale market for leased line transit segments
15. Call access and origination in public mobile telephone networks
16. Voice call termination in individual mobile networks
17. Roaming
18. Broadcasting services for the delivery of content transmitted to final users

Markets considered in the “new” Recommendation (December 2007)

1. Access to the public telephone network at a fixed location for residential and non residential customers
- Three criteria test:**

 1. Presence of high and non transitory barriers to entry.
 2. market structure which does not tend towards effective competition within the relevant time horizon .
 3. insufficiency of competition law alone to adequately address the market failure(s) concerned.
2. Call origination in the public telephone network at a fixed location
 3. Call termination in individual public telephone networks at a fixed location
- Three criteria test**
4. Wholesale network infrastructure access at a fixed location
 5. Wholesale broadband access
 6. Wholesale market for leased line terminal segments
- Three criteria test**
7. Voice call termination in individual mobile networks
- EC Regulation**
- Three criteria test**

NGaN

Contents



1. Introduction
2. Trends and challenges
3. What are the major problems in the Region
4. Alternative regulation of tariffs
5. Nature of services
6. Benchmark
7. Summary and conclusions

4. Alternative regulation of tariffs

1. No policy change

In this case the option of 'no policy change' would mean no regulatory intervention i.e. allowing market forces to work. By taking these option the problems related with transparency and high wholesale charges would likely remain.

2. Transparency regulation only

Transparency measures will help to address the problem of 'bill shock' by increasing consumer awareness of the retail charges and by giving consumers the tools to control expenditure.

3. Wholesale regulation

High wholesale charges combined with traffic steering difficulties for roaming, are causing difficulties with providing transparent retail offers and clear information to consumers. The problem is caused by the ineffectiveness of traffic steering which results in operators having to pay exorbitant rates for the remaining traffic. A wholesale cap combined with transparency measures would eliminate these excessive charges.

4. Retail regulation only

The imposition of price ceilings for roaming services at the retail level would be effective in ensuring price reductions. However the imposition of such a cap would require a corresponding reduction at wholesale level if all operators are to be in a position to offer the service without suffering a loss. Therefore, this solution could prevent even efficient smaller operators from being able to provide these services.

5. Wholesale and retail regulation

Wholesale and retail regulation may be necessary if there is lack of competition at both levels. However, action to reduce the level of the wholesale charges is likely to have a positive effect on retail prices given that current levels of wholesale prices constrain market players (particularly smaller players) from competing at retail level.

4. Alternative regulation of tariffs



The steps (if it is fulfilled with the three criteria test) to be taken prior to intervention can be summarized as follows:

- Step 1: Define the relevant market** from a product point of view as well as from a geographic perspective.
- Step 2: Identify the Significant Market Power Operator/s**
- Step 3: Valuate the conduct** followed by the SMP operator/s
- Step 4: Impose the obligation** (ex ante/ex post) to stop that behavior and if needed fine the behavior of the SMP operator/s.

Only by carrying out these steps the NRA would be able to identify, at sight of the possible anticompetitive behaviors, the type of remedies to be imposed.

Among others, the NRAs could decide to make the wholesale prices become cost based, or publish a reference offer to guarantee the transparency and non discrimination

4. Alternative regulation of tariffs



**Access Based
Competition**

vs

**Infrastructure
Based
Competition**



4. Alternative regulation of tariffs

Price Caps

- Step 1: Identification of the regulatory period
- Step 2: Identification of the services included in the baskets and sub-baskets
- Step 3: Specification of weights according to the calling pattern
- Step 4: Specification of the unitary price in homogenous term

$$\text{Price of a standard call} = C_0 + C_p \cdot \frac{e^{\left(\frac{-T_0}{T_m}\right)}}{1 - e^{\left(\frac{-T_p}{T_m}\right)}}$$

- Step 5: Specification of the productivity parameter X
- Step 6: Verification of the fulfillment of the limit

RPI - X

This model was mainly used for regulating retail and wholesale prices. Particularly important was its application to reduce the access deficit.

Glide paths

- Step 1: Specification of timeframe
- Step 2: Specification of the objective prices: Previously it requires a cost model which supports the objective
- Step 3: Specification of the price variation path
- Step 4: Discussion on Symmetry vs asymmetry prices
- Step 5: Adjustment and verification process (semesterly, annually, etc)
- Step 6: Category of costs to be included (Ex. 3G)

This model was mainly used for regulating MTR and wholesale Roaming services.

Contents



1. Introduction
2. Trends and challenges
3. What are the major problems in the Region
4. Alternative regulation of tariffs
5. Nature of services
6. Regulation of bundles
7. Summary and conclusions

5. Nature of services

- Fixed termination rates (FTR) and Mobile Termination Rates (MTR)
 - Co-location
 - Leased lines
- Wholesale line rental (WLR)
 - Bitstream
- Unbundling local loop (totally and shared)
 - Intelligent network
- Wholesale broadband services
 - Transit
 - etc

Current debate on...

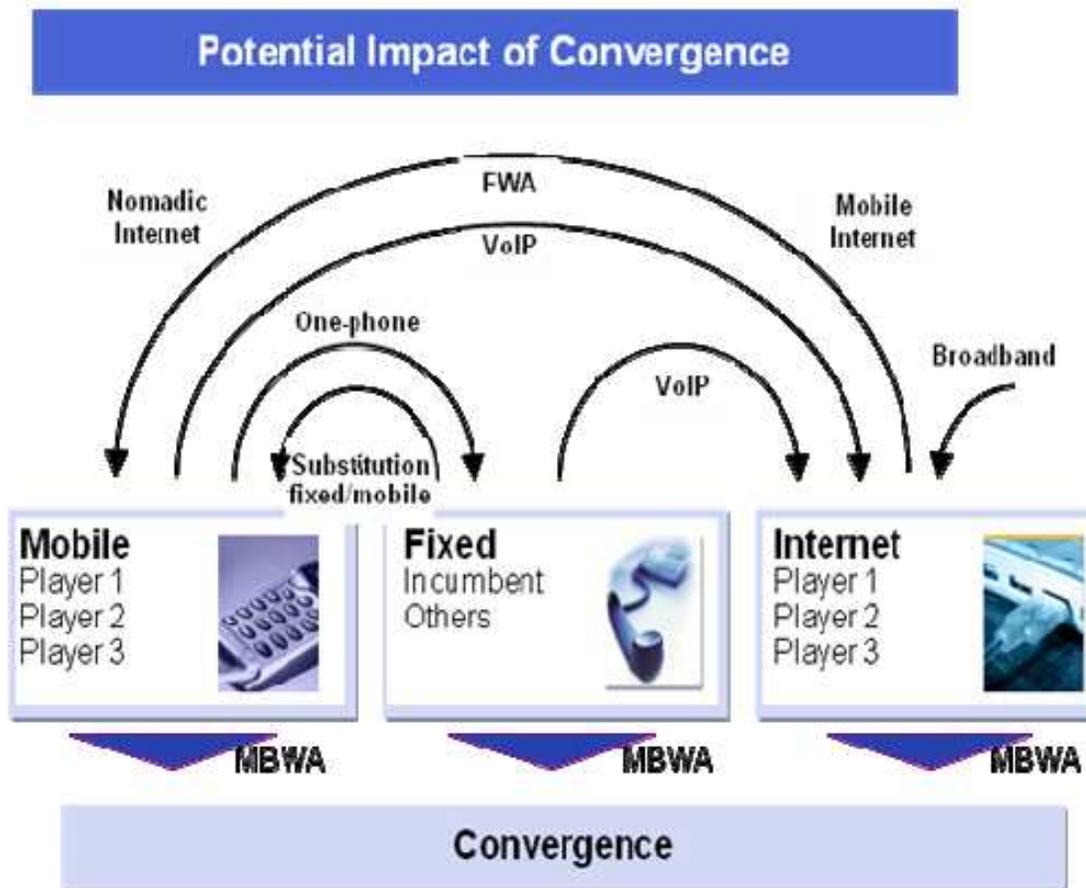
1. Symmetry vs asymmetry in FTR/MTR
2. Costing model to be applied to NGN
3. Recognition of additional risk premium for wholesale services provided under a NGN
4. Removal of the existing regulatory policy on the existing infrastructure

Contents



1. Introduction
2. Trends and challenges
3. What are the major problems in the Region
4. Alternative regulation of tariffs
5. Nature of services
6. Regulation of bundles
7. Summary and conclusions

6. Regulation of bundles



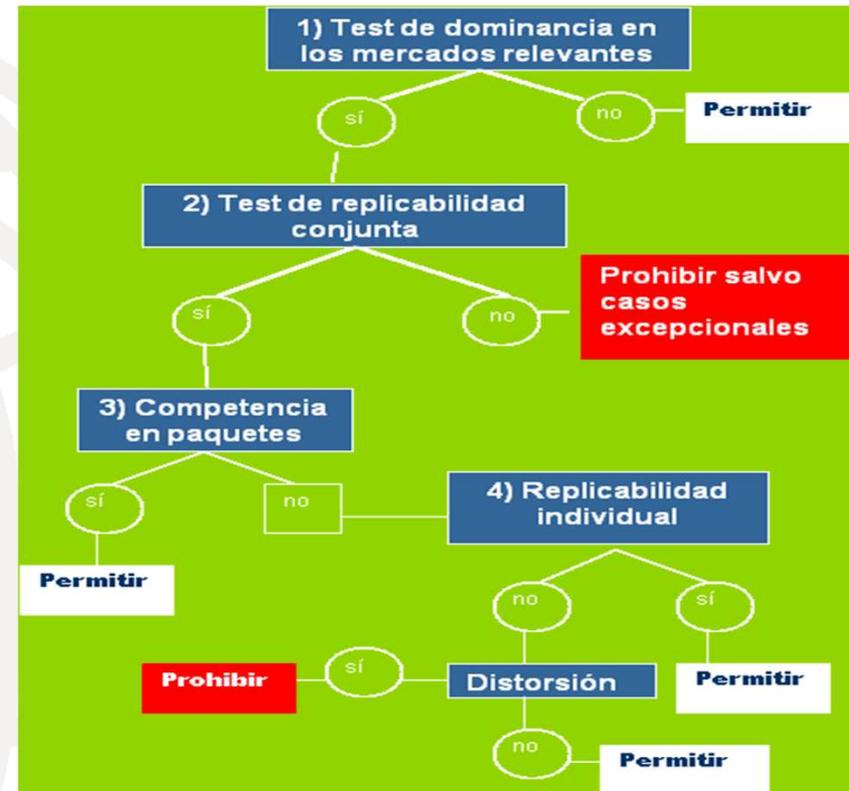
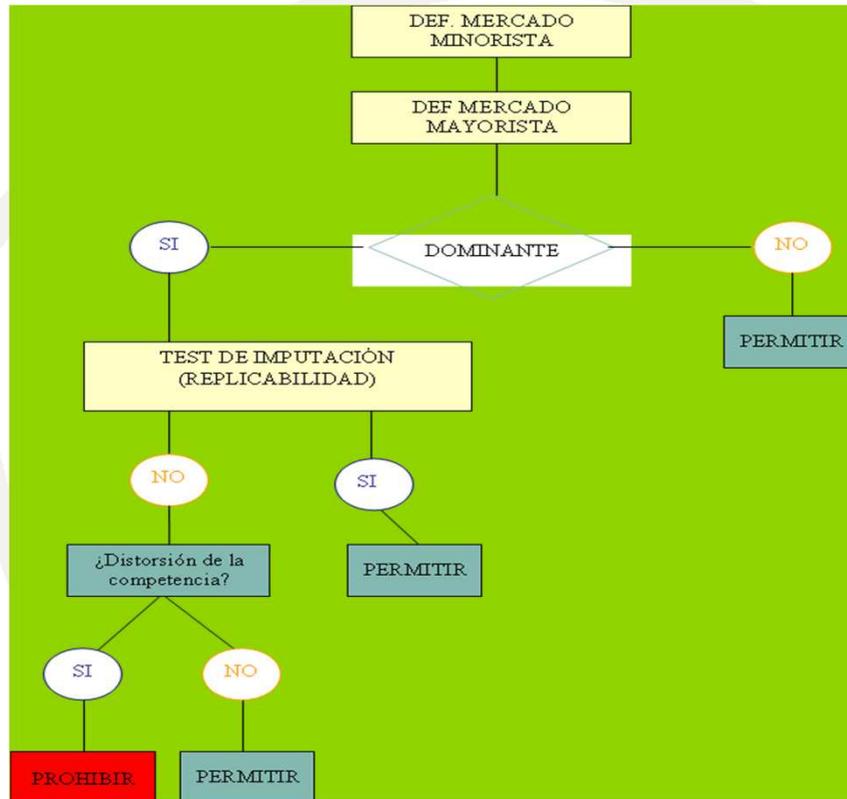
Network and service **convergence is changing the scope** of the telecom sector from different perspectives: (i) competition, (iii) regulation, and (iv) customer demand.

In this regard, NRAs should adjust their regulatory framework and revise the boundaries of the defined markets since there is not anymore a direct relationship between the services provided and the markets in which they are commercialized.

Static vs **Dynamic**

How the existing regulatory framework should evolve to guarantee the level playing field competition despite changes in the pricing policy of both the incumbent and the entrants operators?

6. Regulation of bundles



The **imputation test** requires the fulfillment of the following expression:

$$p \geq w + C_{net} + C_{retail}$$

Other aspects to consider:

- Difference between offer and promotion
- Specification of a methodology of analysis and information requirements to periodically check the possibility for other operators to retort the SMP offers/promotions

Contents



1. Introduction
2. Trends and challenges
3. What are the major problems in the Region
4. Alternative regulation of tariffs
5. Nature of services
6. Regulation of bundles
7. Summary and conclusions

7. Recommendations



1. Having **costing models is key** to at least have an understanding on what the costs of termination are.
2. **Sometimes NRAs**, as it has happened in the case of the European Commission, have designed and **implemented retail and wholesale caps** and also a particular **glide path** for setting the evolution of both, retail and wholesale throughout the regulatory period.
3. In this regard, having a proper **costing model**, either a bottom up or a top down will be key **to at least get a proxy of the costs** and the way in which the retail cap and wholesale cap should eventually evolve.
4. It is important to take in account that **convergence is becoming a reality**, so that the pricing policies that customers have at home (bundles of services) might not be replicated taking in account the existing regulatory framework. In addition, the model could evolve towards a situation where voice is just a mere commodity (flat rates) having a clear impact on the price of services.