



TOOLS FOR E-BUSINESS

SECOND EDITION

# **Telecoms liberalization**

An international business guide  
for policymakers

SECOND EDITION published in October 2007 by

**INTERNATIONAL CHAMBER OF COMMERCE**

*The world business organization*

38, Cours Albert 1er  
75008 Paris, France

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**International Chamber of Commerce**

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## FOREWORD

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**By**

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ICC, with its members from around the world; from the developing to the most developed countries, is uniquely placed to provide balanced and insightful input to governments, and other interested parties, as they consider or continue the process of liberalizing their communications infrastructure. ICC members include both telecommunication providers, and users from a broad range of sectors and of all sizes.

Investment can help to create the infrastructures that are essential for overall economic growth, and putting in place the necessary conditions and incentives is what will create these opportunities. We are pleased to present the second edition of *Telecoms Liberalization; an international business guide for policymakers* that builds on the first edition and provides helpful guidance to governments and other interested parties as they seek to unleash the potential of ICTs in their own countries. Its key message is that telecoms liberalization, done properly, will boost essential communications infrastructure and benefit the entire economy.

This second edition draws upon updated case studies and members' expertise in telecoms liberalization throughout the world, to highlight key lessons from past liberalization efforts. We hope that sharing best practices in this way will help countries avoid the pitfalls involved in telecoms liberalization and take advantage of others' experiences.

We recognize that the process towards an open and competitive telecoms market can be an arduous one. It requires vision and commitment at the highest levels of government, and the courage to forego short-term gains for long-term benefits to society as a whole. We hope this second edition of *Telecoms Liberalization; an international business guide for policymakers* will help governments worldwide to do what is needed to provide the infrastructure for improved communications, e-commerce and all the opportunities that go with them.

## PREFACE

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**By**

**Gordon Moir**

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In 1992, ICC produced the *Business Guide to Telecommunications Liberalization in the European Community*, recognizing that the consequences of European telecoms liberalization went far beyond Europe's borders. That guide showed how to maximize the benefits of competition for the telecoms sector and the business community at large.

The last decade has seen another wave of telecoms liberalization with commitments taken by over seventy WTO member countries on value-added and basic services. Telecoms liberalization has brought more, better and innovative communication services, job growth, entirely new ways to communicate (mobile and wireless), a boost to overall economic growth and the runaway success of the Internet. The economic benefits of telecoms liberalization are clear, but the social benefits of better communications go much further.

There are still however many countries that have yet to enjoy these benefits. To encourage those countries to begin or re-start a stalled liberalization process, ICC telecoms experts have re-visited the subject of telecoms liberalization in the light of over two decades' experience and produced this guide.

*Telecoms Liberalization; an international business guide for policy-makers (2<sup>nd</sup> edition)* lays out the proven benefits of liberalization without shirking from the challenges. It is written clearly and without policy jargon because we believe the benefits are clear cut and the difficulties can be overcome.

It sets out a path to liberalization, acknowledging that each country's situation is unique, and concludes with the six key lessons we have learnt in the last decade of global telecoms reform, and this latest version notes some of the very recent developments in liberalization policy.

We gratefully acknowledge the drafting work for the first edition of this guide released in 2004 by Winston Maxwell (Partner, Hogan & Hartson, United States), Michael Hancock (Partner, Salans, France) and Maria Farrell (ICC International Secretariat, Paris). The original drafting work was also greatly helped by the expertise of Yann Burtin (World Bank).

The previous version of this ICC Telecoms Liberalization guide was largely driven by the sterling effort of the previous chair of this task force, and our friend, Philippe Wintrebert.



# I. INTRODUCTION

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## **What is telecommunication liberalization?**

Telecommunications liberalization means introducing competition into the telecoms sector by allowing commercial enterprises to set up new telecoms businesses as long as they comply with certain government-defined policies, rules and regulations. It is a fundamental shift in the way a government, at the national level and through international treaty agreements, regulates the provision and use of public telecoms resources.

Historically, telecoms infrastructure and services were provided on a monopoly basis with the plain old telephone service the main offering, and the government-owned PTT administration<sup>1</sup> combining multiple roles as policy-maker, regulator and operator. Technological advances in computers and digital technology in the 1980's and 1990's, and flowing into our converging environment of the new millennium, has and will continue to radically change the telecoms sector, creating opportunities for market entry by a range of competitors. "What were once plain old voice networks are now seen as the central conduit of the information society, analogous to the canals and railways of the industrial society".<sup>2</sup>

Governments have realized that monopoly networks and services were limiting the development of new markets and services. A legal or *de facto* monopolist will traditionally not be incentivized to introduce and offer new technologies or services as this increases operational cost and risk, which is typically not profit maximising for the monopolist.<sup>3</sup> The goal of furthering economic growth in the national market place and the desire to attract investment in the telecoms infrastructure became the catalyst for governments to start the telecommunication liberalization process.

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<sup>1</sup> PTT means "Post, Telegraph and Telephone" administration.

<sup>2</sup> Samarajiva and Goddard, 1990.

<sup>3</sup> Cf. page 48 <http://www.ebrd.com/pubs/legal/lit041h.pdf>

The successful transformation of a monopolistic telecom market to a competitive one requires effective and independent regulators coupled with fair and efficient judicial appeal systems. This is particularly important when the incumbent enters competitive markets and is the monopoly provider of the essential facilities upon which competitive services depend. These include access services and cable landing stations for example (for international services), upon which competitive services depend. Without effective regulatory authorities and fair judicial systems, viable competition is unlikely to emerge and the sought after economic and investment benefits of liberalization will not emerge and the sought after economic and investment benefits of liberalization will not be achieved.

Regulatory frameworks are a means to authorize new operators' or service providers' market entry; ensure fair and non-discriminatory access to essential facilities; facilitate the roll-out of universal access; and provide for wholesale interconnection offerings. It is essential that regulations be transparently formulated and clear to all market players.

### **Liberalization is not de-regulation**

Liberalization requires the establishment of a market-driven policy framework and pro-competitive regulations, or rules of the game, that will apply to all market players. Down the road, when a truly competitive market exists, policy-makers should aim to roll back sector-specific regulation and replace it with the application of general competition law. But in the early stages of liberalizing the telecoms sector, policy-makers need to work with market stakeholders and take a 'hands on' approach to creating the right environment for investment and competition.

### **Liberalization is not privatization**

"Liberalization" and "privatization" mean two different things, but the terms are often confused. A country that liberalizes its telecoms market need not privatize its incumbent operator. Privatization has been found to grant "regulators and policy-makers greater freedom to focus on the interests of end users, and accelerate the reform process."<sup>4</sup>

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<sup>4</sup> Trends in Telecommunication reform 2006 – Regulating in the Broadband world (ITU, 2006) page 6

Governments may decide that selling a stake in the incumbent operator to outside investors (privatization) is a good idea to raise revenues, or to strengthen the incumbent's balance sheet for future investments, or to help the incumbent become a more robust competitor. But privatization is one of many options, not an essential obligation for purposes of achieving liberalization. A government can decide to maintain ownership of the incumbent operator, as long as the operator is effectively and transparently separated from the government agencies that regulate the telecoms sector. Leaving the incumbent as an integrated part of the government is a bad idea, as it creates a conflict of interest between the government's policy role and its role as an operator. This conflict of interest, rather than the actual ownership of the incumbent, is incompatible with liberalization.

Governments should be aware that, if not done carefully, privatization can create its own set of problems. Investors in the incumbent may request the extension of monopoly rights which can create an obstacle to liberalization.

### **The goals of liberalization**

Liberalization and the competition it brings are means, not ends. Governments should consult the relevant stakeholders to decide and articulate at the outset what their objectives are. These objectives may differ from country to country and can include:

- Attracting new investment
- Upgrading national infrastructure
- Improving national efficiency in an increasingly global market place
- Delivering macro- economic benefits such as creating jobs
- Contributing to improving universal access
- Improving services, pricing and choice for the end-user community
- Encouraging innovation and differentiation of services

Some of the goals of liberalization can initially be achieved by amending the national legislation on entry barriers or foreign direct investment (FDI) limits. Other long term goals need to be realized by the creation of a longer term framework that provides the tools for regulatory intervention to deal with failures to achieve competition.

The fundamental need is for policies to develop and foster choices in the marketplace for mass market and business users of services. Different markets have different needs, requiring different solutions to develop and foster such choice, but all markets should strive for:

- Existence of competition among the diverse platforms that are increasingly available (e.g., wireline, wireless, fixed wireless, satellite, cable);
- Effective implementation of regulations creating an enabling environment. This can be done by:
  - Fostering open market conditions that create a level playing field for all actors in the market place;
  - Establishing a fair and independent regulator which stimulates free competition;
  - Acting consistently and creating stable government telecom policies which ensure a smooth flow of investments;
  - Creating an agile regulatory environment where governmental actions, when needed, are not unduly delayed;
  - Promoting compliance with global technology standards and globally harmonized frequency bands;
  - Delivering a regulatory framework that facilitates convergence and builds conditions for an inclusive information society; and
  - Governments must also be very careful about imposing taxes on telecommunications players which can have materially detrimental effect on investment - these include rights of way taxes, import duties, universal service obligations.
- An independent regulator; and
- Transparent regulatory processes, procedures and decision-making.

A case study of the Federal Republic of Nigeria conducted by the ITU concluded that the Nigerian Communications Commission (NCC) had adopted a clear policy for the development of the telecommunications sector, supported with a flexible regulatory framework. Nigeria was selected because of its rapid development of the telecommunications sector through the implementation of a private sector participation policy including innovative approaches. The case study looks at Nigeria's progress from a monopolistic telecommunications market towards a fully liberalized market.

The following table contains the highlights of the ITU case study, which was showcased at the 5<sup>th</sup> annual Global Symposium for Regulators in December 2004:

### **Case Study of the Federal Republic of Nigeria<sup>5</sup>**

- The implementation of reforms has transformed Nigeria's telecommunications market from one of the least developed in Africa to a dynamic market.
- The Nigerian Communications Commission (NCC) established clear policy and a flexible regulatory framework.
- The NCC utilized a competitive and transparent process to offer three GSM mobile licenses attracting big investments and increasing the level of competition.
- The NCC continues to encourage the development of the fixed telephone market because it recognizes the contribution that fixed telephony can make to the achievement of its communications goals, because of fixed telephony's versatility in application services.
- Although legislation gives the NCC extensive powers over tariff regulation, the current level of competition allows a shift from specific approval of tariffs of non-dominant operators to issuing guidelines and monitoring.

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<sup>5</sup> The Case Study of the Federal Republic of Nigeria; Licensing in the Era of Liberalization and Convergence, International Telecommunications Union, 2004

### **Case Study of the Federal Republic of Nigeria** *(continued)*

- The two national carriers, NITEL and Globacom, are taking action within their respective capabilities to discharge their license obligations of providing infrastructure to other operators. This will require a concerted effort of the Commission and operators to design and implement a backbone transmission infrastructure that will satisfy the needs of the country.
- The former monopoly operator, NITEL and its mobile subsidiary, MTEL are yet to be privatized. Although privatization is a good strategy, the experience of Nigeria shows that liberalizing without first privatizing state-owned telecommunications enterprises can be effective in achieving development goal if appropriate license approaches are used.
- The experience of Nigeria underlines the accepted principle that successful telecommunications sector development strategies must be tailored to a country's conditions.

## II. BENEFITS AND CHALLENGES OF TELECOMS LIBERALIZATION

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### **Economic growth**

Along with road systems, airports and electricity, a modern telecoms system is an essential pre-requisite for economic growth. Indigenous industries and home-grown companies of all sizes need the basic, and increasingly complex, infrastructure of business to thrive at home, compete internationally, and contribute to overall economic growth. ICTs plays an ever increasingly important role in both the developed and developing countries overall economic growth.<sup>6</sup> As liberalization enables the provision of more, better and innovative communication services, it is an essential pre-condition for countries looking to make the most of ICTs.<sup>7</sup>

Good telecoms infrastructure can facilitate overall economic growth where it is needed the most. Studies have shown that developing countries with higher levels of connectivity significantly out-performed others during the 1980s and 1990s.<sup>8</sup> Improvements in telecommunications infrastructure result in better trade and market opportunities, reduced unemployment, improved health care delivery and higher quality of life.<sup>9</sup>

The greatest economic and employment<sup>10</sup> benefits, and growth opportunities, are achieved when improved communications are extended throughout the entire country. Achieving universal access should be a vitally important part of any country's economic development strategy.

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<sup>6</sup> World telecommunications / ICT development report 2006 (ITU, 2006) page 35

<sup>7</sup> Information and communication technologies

<sup>8</sup> World Bank- R2002 623-646, 2002. Can Information and communication technologies be pro-poor?

<sup>9</sup> ITU 1998a

<sup>10</sup> Overwhelmingly, employment in the ICT sector appears to be unaffected by the 'dot com' crash. Cf World telecommunications / ICT development report 2006 (ITU, 2006) page 31

## **Importance of Foreign Direct Investment (FDI)**

Telecommunications is a capital intensive industry and access to capital is key to ensuring the deployment and expansion of a robust network. Countries that have eliminated barriers to FDI have benefited from greater commitment and longer-term engagement by foreign investors as well as new management approaches, technology, and skills transfer to the host country. FDI has typically been the driver of telecom sector growth in liberalizing economies. Over the last two decades, most countries have taken significant steps to allow the flow of FDI in their telecom sectors, but many still limit foreign ownership to less than 100%. Between 1990 and 2003, 122 of 154 developing countries financed telecommunications projects with foreign investment.<sup>11</sup> Significantly, however, many investors have either limited their investments in or kept away from countries that have placed restrictive caps on the level of FDI in the telecom sector, particularly where foreign investment is restricted to a minority share and foreign suppliers are unable to exercise operational control of their affiliates. Countries should therefore remove FDI restrictions for non-incumbent operators even if they maintain them for the incumbent. Any restrictions, however, should be carefully assessed as they will have a chilling effect on investment, e.g. the cost of paying a local partner can destroy business case, especially as margins continue to erode in this sector.

Therefore, it is important that developing countries consider the factors for success in attracting telecommunications FDI. In addition to eliminating any restrictions on the level of FDI permitted, the following contributing factors should also be considered:

- Healthy general business environment – An overall environment that is business friendly, for example, in areas such as tax policies and enforceability of commercial contracts.
- Liberalized telecommunication market – A successful track record in opening up the telecommunications sector to local and foreign investors and fostering competition.
- Consistent regulatory framework – Stable and predictable regulatory frameworks.

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<sup>11</sup> *Information and Communications for Development 2006*, The World Bank.



- Dispute resolution mechanisms – Clear and well established dispute resolution mechanisms.
- International agreements – Participation in existing and future international trade agreements, such as the WTO General Agreement on Trade and Services, which demonstrate an openness to foreign investors in telecommunications and a willingness to abide by globally-recognized approaches.

## **New investment**

Between 1990 and 2001, telecoms drew more investment in developing countries than any other sector, totalling 331 billion dollars. Half of this investment went to the Latin America and the Caribbean regions, which led the charge towards liberalization in the 1990s. But Sub-Saharan Africa, which had no private telecoms investment at all in 1993, managed to account for 5% of the global total in the sector by 2001. The ability to attract private investment in telecoms is not confined to any one part of the globe. When investment figures are adjusted to reflect investment per head of population, countries as far flung as Panama and Estonia are included in the top five countries worldwide.

### **Success in attracting foreign investment in communications infrastructure – Mongolia**

Mongolia is a large and land-locked country with a very rural population and one of the lowest population densities in the world. Rolling out fixed line communications to its scattered population was proving time-consuming and expensive.

In 1992, Mongolia took the first steps to liberalize its communications infrastructure which was then in the hands of a fully state-owned monopoly. In 1996, new service providers (mobile, fixed and ISPs) numbered fourteen. Significant changes to the regulatory framework were then made.

.../...

**Success in attracting foreign investment in communications infrastructure**  
– Mongolia (*continued*)

In 1999, Mongolia awarded a second mobile licence to a private operator, Skytel that was funded by two Korean communications providers. In the following two years, the number of mobile phone subscribers increased by 400%. Although mobile coverage by Skytel and the incumbent's mobile operator, Mobicom, is still concentrated around urban areas,<sup>12</sup> coverage is rapidly increasing. By 2002, the number of communications service providers overall was over 130.

Mongolia is leap-frogging straight into mobile phone and wireless services. The number of mobile phone subscribers per capita is almost double that of fixed lines<sup>13</sup> and the country is now considering using innovative new technologies such as wireless local loop (WLL) and power line technology to extend broadband deployment across the country. Opening up its telecoms market allowed Mongolia to attract domestic and foreign investment that adapt to the country's unique circumstances.

**Where does the investment money go?**

Telefonica's<sup>14</sup> operations in Latin America spend at least 85% of their purchasing budgets through local suppliers. The benefits of foreign direct investment in telecoms are enjoyed by many local firms, as well as the direct users of new and improved telecoms services.

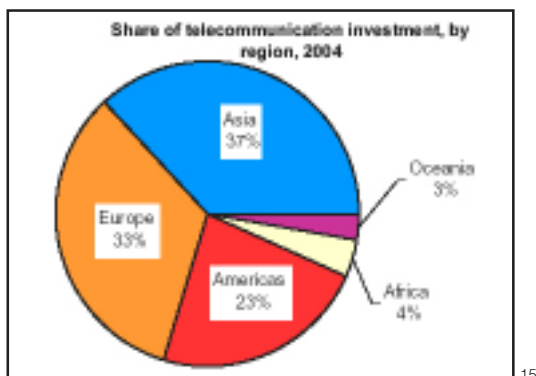
Globally, as seen below, the investment in the telecommunications is relatively evenly distributed amongst 3/5ths of the world, with 2/5ths seeing less investment being made.

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<sup>12</sup> <http://www.cellular-news.com/coverage/mongolia.shtml>

<sup>13</sup> The World Bank Fact Book 2002

<sup>14</sup> Corporate Responsibility Report 2006, Telefonica, [http://www.telefonica.es/rc2006/telefonica/informe\\_rc/docs/corporativo/RC2006\\_ENG.pdf](http://www.telefonica.es/rc2006/telefonica/informe_rc/docs/corporativo/RC2006_ENG.pdf)



Foreign direct investment in telecoms infrastructure brings more than hard currency. Companies investing in national telecoms bring with them new technologies, business processes and methods, and valuable global brands. By far the greatest rewards to countries that have liberalized their telecoms sectors are the indirect revenues; the benefits that are spread throughout the economy and society as a whole as more and better communications services benefit everyone.

This view is echoed by the OECD which notes: *“ICT has had, and will continue to have, significant economic implications. Businesses are transforming their supply and demand chains, as well as their internal organisation to fully exploit ICT. Governments are restructuring their internal functions and the way they deliver services and generally interact with citizens and businesses. People are modifying their consumption and spending patterns, as well as their behaviour. In the process, nearly every economic variable of interest is affected.”*<sup>16</sup>

Liberalization commitments taken in the context of the GATS negotiations on basic services or value-added services have been a significant factor in attracting foreign direct investment in telecoms. The WTO Reference Paper contains certain principles that signatories must adhere to. For example,

<sup>15</sup> World telecommunications / ICTdevelopment report 2006 (ITU, 2006) page 9

<sup>16</sup> OECD Guide to Measuring the Information Society. November 2005

the Reference Paper requires that signatories implement regulatory frameworks that include the following: 1) Competitive safeguards; 2) Interconnection requirements; 3) Public availability of licensing criteria; and 4) Independent regulators. The commitment to these principles signals to private investors that governments are serious about opening their telecoms sectors to competition, and that the returns on investment in more and better services are secure.

## **New jobs, more jobs**

Liberalization also leads to the creation of new jobs when new entrants and existing service providers compete to offer new products and services to a growing customer base. In many cases, the jobs created by the new entrants and the companies that support them will more than compensate for any initial job losses that may occur within the incumbent operator.

The ITU stated: *“The boom of the mobile industry has not just created new jobs and revenues but also contributed to economic growth by widening markets, creating better information flow, lowering transaction costs, and substituting for costly physical transport.”*<sup>17</sup>

### **Jobs growth in the liberalized telecoms sector of OECD countries**

After an initial decline in employment in the telecommunications sector following the introduction of competition, the early liberalizers amongst OECD countries showed signs of strong growth in telecoms employment.

Most job creation in telecommunications was done by the new entrants, whose employment share in the sector went from 6.2% in 1995 to 20% in 1999. But the former incumbents, after initial losses, also increased their number of jobs by 226,000 after 1995.

Significantly, telecoms liberalization was a key factor in the development and deployment of new technologies such as mobile communications which has created 180,000 new jobs since 1995.<sup>18</sup>

<sup>17</sup> [http://www.itu.int/ITU-D/ict/publications/wtdr\\_06/index.html](http://www.itu.int/ITU-D/ict/publications/wtdr_06/index.html)

<sup>18</sup> OECD Communications Outlook 2001

## **Efficiency gains to the economy**

The most immediate efficiency gains brought by telecoms liberalization are to the telecoms sector itself, especially in raised productivity. Analysis of OECD countries from 1990 – 2001, the ‘decade of liberalization’, shows an average increase in revenue per communications sector employee of 119%.<sup>19</sup> Another measurement of productivity in the telecoms sector, ‘customer lines per employee’, also indicates massive increases in productivity.<sup>20</sup> The efficiency gains in this liberalized sector are striking. Competition in the telecoms sector not only leads to efficiency within the former incumbent and its competitors, but also spills over to all the companies they deal with directly as they insist on quality and cost-effective service.

The most obvious efficiency gain of telecoms competition to the economy as a whole is lower costs, particularly in international calling rates and leased lines. Cheaper international calls and leased lines help to attract foreign investors to other sectors and make it easier for domestic companies to engage in international trade. All companies also benefit from the wider range of services and innovative new products which accompany competition.

Foreign direct investment in a competitive telecoms market brings a rich flow of new business methods to the telecoms sector and local firms, adapting to local customs and culture and re-vitalizing the way people do business.

It is furthermore noted that, by the ITU for example,<sup>21</sup> that numerous indirect growth, efficiency and productivity gains can be realized by an efficient introduction and utilization of ICT services.

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<sup>19</sup> OECD Communications Outlook 2003, p. 208 - 211

<sup>20</sup> *ibid.*

<sup>21</sup> Chapter 4 “THE INDIRECT ECONOMIC IMPACT OF ICTs” of World telecommunications/ ICT development report 2006 (ITU, 2006)

## Universal access

The International Telecommunication Union (ITU) defines universal access as “widespread availability of telecoms or ICT service.”<sup>22</sup>

Liberalization in the telecoms sector leads to new investment and significant growth, especially in the rollout of completely new services. Countries that have made formal liberalization commitments tend to have higher levels of fixed line and mobile penetration, and also have higher telecoms sector revenues.<sup>23</sup> For example, Chile was an early liberalizer, beginning in the late 1980s, and the growth in its teledensity rates during the 1990s doubled that of Colombia, Mexico and Venezuela who all started later.<sup>24</sup>

Very few countries have achieved universal access solely through monopoly operators. In fact, the need to create universal access is often a decisive factor in a governments’ decision to liberalize the telecoms sector.<sup>25</sup> Telecoms liberalization has led to an explosion of choice for business and personal users alike. Typically, when governments open their telecoms market to competition, they put into place rules to ensure that market participants contribute to achieving universal access objectives.

If properly planned within government and agreed with market entrants, most countries can attract private investment in infrastructure that benefits the economy and society as a whole, including rural and low income areas. Market competitors have the biggest incentives to respond with speed and innovation to the needs of telecoms users, no matter how big or small their accounts.

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<sup>22</sup> ‘Trends in telecommunication reform 2003; promoting universal access to ICTs’, International Telecoms Union

<sup>23</sup> Final report for World Bank, Phase I, Telecoms and trade liberalization and the WTO, prepared by Analysys

<sup>24</sup> Roadmaps for success in telecoms liberalization; issues and best practice, Report by Analysys for the OECD, 27 March 2003

<sup>25</sup> Susan Schorr presentation, ITU & Mongolia regulation

## Safe-guarding universal access in Latin America

New telecoms companies entering liberalized markets in Argentina, Chile and Peru were faced in the late 1990s with many customers who were having great difficulty paying their bills. Disconnecting these customers would not only have been counter-productive for the companies, but would also have risked rolling back the enormous progress that had been made in universal access in those countries. In response, the new entrants developed imaginative solutions that allowed them to keep increasing the amount of service provided while making sure these customers could stay connected.<sup>26</sup>

- In Argentina, 1,133,000 customers took advantage of initiatives to preventing the economic crisis from causing a rise in disconnection:
  - “*Líneas Control*”: a product that allows customers to have a phone line with limited credit. Once the limit is reached, the customer may only receive calls or make calls using pre-paid phone cards. By the end of 2002 a total of 531,900 customers used this service.
  - “*Línea Recupero*”: a product designed for customers with more than one outstanding bill. It allows customers to keep the line in operation, while only making calls using pre-paid cards.
- In Chile, as of 2002, over 556,000 users used products aimed at providing communications services to the lowest income sector. “*Bajo Consumo*” includes the installation of a line to receive calls and make a pre-determined number of local calls for a set monthly charge.
- In Peru, 636,000 customers used similar programmes.

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<sup>26</sup> ‘Bridging the digital divide; the Telefonica contribution in Spain and Latin America’, excerpted from Telefonica 2002 Corporate Responsibility Report, [www.telefonica.es/corporateresponsibility](http://www.telefonica.es/corporateresponsibility)

## **Llaqt@red – Peru**

Llaqt@red, or “people’s net” in quetchua, is an innovative project of the operator Telefónica del Perú to provide Internet access to low population density and isolated rural communities in Peru using the marginal capacity of Telefónica’s existing hubs and VSATs.

The pilot project launched in April 2004 selected 17 villages according to criteria based on number of inhabitants, population density, distance from the departmental capital and illiteracy rate.

Telefónica developed partnerships with municipal governments to promote the installation of Internet cabins in the communities and with local entrepreneurs to operate the network and provide the Internet access service for students, entrepreneurs, public institutions and the general population. Each location generally has four PCs and is open 15 hours a day, 7 days a week. Average income from Internet access only is US\$ 668/month and best effort connecting speeds reach 128 Kbps.

Benefits of the access points have been to provide telephone access for people not close to a payphone and Internet access mainly to students and young people who represent 80% of the users of the centres.

Rather than ‘cherry-picking’ the most lucrative customers, telecoms companies are making a long term commitment in liberalized markets and proving flexible and competitive enough to provide service to all parts of society.

Universal access should be considered broadly and in a technology neutral way. It doesn’t matter precisely how or where each citizen accesses the global communications infrastructure or value-added services, simply that he or she is able to get access. A range of access technologies – including wireless technologies and mobile – will be essential in ensuring universal access in the future. Mobile is a key driver of universal access as mobile services grow exponentially in countries that have awarded mobile licences to the private sector.



For countries with low levels of fixed line penetration, private sector investment may even allow them to take advantage of wireless and mobile technology to leap-frog over fixed line networks for the provision of some services. Only in a liberalized and competitive environment do the incentives truly exist for innovation and resourcefulness to overcome the challenges of providing universal access.

*“New and creative enterprises can make rural and low-income markets profitable, affordable, sustainable and served in ways that meet national and local development objectives. But this also requires innovation and creative business and public policies.”<sup>27</sup>*

### **Liberalizing access to submarine cable landing stations**

There is wide recognition of the importance of access to low-cost, high speed international bandwidth in driving information and communications technology and economic growth, education, social welfare and even national security. High prices for international bandwidth generally stem from a lack of competition and the presence of monopoly control of facilities such as submarine cable landing stations. The lack of competition resulting from monopoly control of such facilities has harmful consequences that obstruct the economic growth and a wide range of other important factors that contribute to the progress and general welfare of a country.

A 2006 report by the United Nations Conference on Trade and Development (UNCTAD) confirms that broadband directly boosts competitiveness and productivity, and can contribute hundreds of billions of dollars a year to the gross domestic products of developed countries.<sup>28</sup> In fact, this access has become such a valuable resource for businesses and other large users that the UNCTAD report concludes that countries with limited access to bandwidth and those that lack the infrastructure needed to provide bandwidth at a reasonable cost are at a competitive disadvantage.

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<sup>27</sup> Trends in telecommunication reform 2003; promoting universal access to ICTs', International Telecoms Union

<sup>28</sup> See [http://portal.unesco.org/ci/en/ev.php-URL\\_ID=23480&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/ci/en/ev.php-URL_ID=23480&URL_DO=DO_TOPIC&URL_SECTION=201.html)

Today, opening up access to undersea cables is seen as fostering economic growth and reducing the digital divide.<sup>29</sup> The approaches that have been taken in cases of failure to reach commercial agreements to grant access to undersea cables are the following:

- Enactment of a statute
- Application of competition law
- The application of telecommunications regulations

Many developing countries have taken significant steps to open up international telecommunications access to facilities at cable landing stations. For example, the Telecom Regulatory Authority of India (TRAI) recently issued regulations that require owners of cable landing stations to provide access to such facilities on fair and nondiscriminatory conditions.<sup>30</sup> In addition, the regulation requires that owners of cable landing stations file a “Cable Landing Station – Reference Interconnect Offer” with TRAI for its approval. The regulations require that the filing contain detailed terms and conditions, including prices, under which interconnection at the cable landing station will take place.

Another country that has taken significant steps to open up access to facilities at cable landing stations is Singapore. In May 2002 the Singapore regulatory iDA (Info-communications Development Authority of Singapore) designated connection services at submarine cable landing stations as an unbundled network service pursuant to the Code of Practice for Competition in the provision of Telecommunications Services.<sup>31</sup> The iDA had earlier conducted a public consultation to respond to concerns raised by Facilities Based Operators (FBOs) regarding the high prices SingTel charged these carriers to access their own cable capacity at SingTel’s landing stations.

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<sup>29</sup> The regulation of undersea cables and landing stations, International Development Centre, 2007

<sup>30</sup> International Telecommunication Access to Essential Facilities at Cable Landing Stations Regulations, File No. 416-1/2007-FN, TRAI, June 7, 2007

<sup>31</sup> iDA Consultation Paper: Proposed Amendments to SingTel’s Reference Interconnection Offer to offer Connection Services at Submarine Cable Landing Stations, dated 21 May 2002

## The Singapore Case Study

### The pre-regulation environment

Prior to the regulation of connections services, FBOs that sought to access their capacity at SingTel-controlled landing stations faced two main problems:

- 1) excessive high charges for cross-connection services; and
- 2) onerous and time-consuming forecasting and other administrative processes.

### The post-regulation environment

In 2002, the iDA completed its audit of SingTel's proposed charges for connection services at Submarine Cable Landing Stations and implemented the following reforms:

- the charging structure was changed from capacity dependent to capacity independent. That is, charges are the same irrespective of the amount of capacity activated. After these reforms, for example, an activation of an STM-1 would cost the same as an activation of an STM-16; and
- the total charge for the cross connect was set at the dramatically lower rate (a reduction of a multiple of more than one hundred), making Singapore a showcase for best practice in the Asia Pacific region and helping drive industry growth and competitive market entry.
- the iDA also directed SingTel to make significant improvements in the provisioning of the service.

### Further regulatory reform

In 2004, the IDA refined its regulations on cable system open access. Previously, an FBO was permitted to obtain connection services and collocation space for backhaul at a SingTel landing station only if it owned indefeasible rights of use (IRU) in a submarine cable system connecting to that landing station. Only if that requirement was met could an FBO then provide backhaul and transit services to third parties.

These limitations were removed and operators are now able to access capacity that is either owned, or leased on a long term basis on any submarine cable connecting to the landing station. Furthermore, these operators can also access capacity that is owned or leased by *third parties* in order to offer them backhaul and transit services.

## **Focusing regulatory efforts and regulatory challenges**

Regulatory efforts applied in the process of liberalization should focus on areas of greatest importance in making competition a reality. This focus can be achieved by determining whether market power is harming competition, for example if there are facilities that are key to the provision of competitive services but are not available from multiple sources or at reasonable prices. As an example, prior to the liberalization of international services, submarine cables and landing stations were often limited in number and accessible only on unreasonable terms, thus comprising significant obstacles for the development of competition in the international services market. However, as new entrant operators were allowed to gain access to submarine cables / landing stations, competition in the international services market emerged. This regulatory focus can also be achieved by focusing on the detection and correction of anti-competitive practices in all areas of the market. Regulators often focus their scrutiny for market power and resulting anticompetitive conduct on international access, then trunk and access lines. As competition develops, regulation can be progressively withdrawn. The challenge is on ensuring adequate investment while at the same time as ensuring effective competition. This is a very difficult balancing act and needs to be undertaken with constant consultation of all stakeholders, as well as looking to international best practice.

National regulators should thus consider in which areas, if any, intervention is necessary – because of market power and the lack of effective competition or the presence of anti-competitive conduct – and focus regulatory inquiries there. The regulatory tools applied should, as *per* the WTO Reference Paper,<sup>32</sup> provide competitive safeguards and lay down the interconnection requirements as appropriate.

This approach has the additional benefit of ensuring that scarce regulatory resources are targeted to market sectors where it is likely to drive the goals of liberalization to its fullest and to minimize regulatory intervention where no, or insignificant, problems are identified.

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<sup>32</sup> WTO Reference Paper on Basic Telecommunications (24 April 1996), at: [www.wto.org/english/news\\_e/pres97\\_e/refpap-e.htm](http://www.wto.org/english/news_e/pres97_e/refpap-e.htm).

## Summary of the benefits and challenges of telecoms liberalization

### Benefits of telecoms liberalization

Lower prices, particularly on long distance/international calls.

New and innovative services with better reliability and greater capacity, enabling overall economic growth.

Foreign direct investment (FDI) in the telecoms sector, accompanying spending in the local economy and transfer of technology, skills and business methods.

FDI increases as a whole – improved facilities and infrastructure attract FDI and liberalization commitments send a positive signal to potential investors.

Increased user access and the opportunity to deploy more affordable universal access.

Concrete step to boost ICTs and allow citizens to join the global information society.

### Challenges of telecoms liberalization

Higher prices of local calls, as tariff re-balancing occurs. (short term)

Potential initial loss of jobs at incumbent as it becomes more streamlined and competitive.

Incumbent can no longer act as a 'cash cow' for the national budget.

Tariff re-balancing following liberalization can result in price adjustments. Immediately after telecoms liberalization, when cross-subsidies are reduced and prices reflect the actual cost of service provision, the price of local calls and the monthly subscription may increase and the price of long distance and international calls may decline. However, in the medium term, prices for local calls tend to go down, and consumers enjoy a greater variety of services and pricing choices.

Under monopoly, public telephone companies usually become large and powerful employers, providing substantial direct and indirect revenues to government. Introducing competition creates a threat to the incumbent both as an employer and as a social contributor. However, most countries find that competition ultimately creates employment opportunities that outweigh the initial job losses within the incumbent. Progressive liberalization is also an opportunity for the incumbent to become competitive, develop new services, and reach out to new markets at home and abroad. This provides more opportunities and better security for employees in the medium to long term. The loss of direct revenues to the state may also be offset by higher tax revenues generated by market entrants and as a result of growth throughout the economy facilitated by telecoms liberalization.

On balance, liberalization brings significant net benefits to a country's economy and citizens. However, the transition period can create challenges that governments need to be prepared for. The liberalization process can be disruptive, particularly for the incumbent and its employees. Being a cohesive group, the opponents of liberalization may more easily organize resistance to change. The beneficiaries of liberalization are spread throughout the economy and typically will not be able to advocate as effectively as the opponents to change.

It is therefore of crucial importance that the government take a long-term and strategic view of the overall benefits of liberalization to the economy and to society as a whole. The time, resources and political will required to ensure successful reforms are a considerable investment, and demand the vision and courage of decision-makers and implementers of liberalization.

### III. ROADMAP TO LIBERALIZATION

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#### **Getting support from the top**

Reform is most likely to succeed if it is led at the highest level of the government. This can be the head of government or the minister in charge of telecommunications who may then allocate responsibility for the overall reform to a single person with direct access to senior government levels, freedom to cut red tape, and sufficient team resources.

#### **Setting clear policies and procedures**

For the sector to attract investment, laws and regulations must be clearly defined, implemented and enforced.

The first step to reform is to make an inventory of existing legal instruments affecting the sector: treaties, bilateral and multilateral trade agreements, telecoms laws, decrees, ministerial orders, licenses, tenders and contracts (such as for specific services with network operators, ISPs<sup>33</sup> or equipment manufacturers and vendors). Once this inventory is completed, an analysis can be done which leads to a strategy for reform of the sector.

Pressures from interested groups – incumbents trying to maintain ongoing protection, new entrants trying to obtain special rights, treasury officials attempting to maximize sale revenues (from licensing or privatization) – can rapidly steer reform off track. It is essential that the team in charge of reform remain loyal to the primary purpose of the reform, which in most cases will be to provide both consumer and business users with more varied, efficient and less costly communications services.

The blue print for reform should then be presented to all interested parties in the telecoms sector, using public consultation, government workshops

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<sup>33</sup> Internet service providers

and other ways to involve all those affected.<sup>34</sup> A document summarizing the results of this process should be circulated widely.

The government can then prepare a draft law, taking full account of the input received from the public consultation as well as international experience and best practices.<sup>35</sup>

### **Drawing up a liberalization and regulatory timeline**

Whilst most countries have, today, made significant inroads to the liberalization of the domestic telecommunications industry, as reported by the ITU-D,<sup>36</sup> this does not mean that a fully liberalized and regulatory effective market is in place. Countries do not always choose to liberalize all telecoms activities at once; liberalization may be phased in over a number of years. When a country prepares its blueprint for reform, it should clearly define the order in which different communication activities will be liberalized, and set a deadline for full liberalization. Additionally, contemporaneous with the introduction of liberalization the regulatory tools to be used should be addressed.

Whatever the timeline chosen, governments should ensure that value-added services – including Internet access and data services – are liberalized immediately, and avoid restricting the use or re-sale of leased lines. An analysis should also be conducted of the regulatory requirements for developing consumer service competition and business focused competition. They will require different treatment and both bring critical outcomes.

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<sup>34</sup> The OECD has produced extensive best practice work and information resources on public consultation, available at [http://www.oecd.org/document/590,2340,en\\_2649\\_34275\\_2671611\\_1\\_1\\_1\\_37405,00.html](http://www.oecd.org/document/590,2340,en_2649_34275_2671611_1_1_1_37405,00.html)

<sup>35</sup> E.g. models for legislation inspired by the OECD, European Commission, and US Federal Communications Commission recommendations

<sup>36</sup> <http://www.itu.int/ITU-D/ICTEYE/Regulators/Regulators.aspx#>



## **Establishing an independent regulator**

Successful liberalization requires the creation of a strong, effective and independent regulator whose reach and resources are appropriate to the national telecoms industry.

The regulator has two main functions:

- It implements laws and regulations adopted by the legislature and government, fine-tuning them where necessary to apply to a given situation.
- It acts as 'referee' in resolving issues and disputes between market players.

To be able to enforce the new telecoms laws effectively and independently, the regulator needs to have the necessary institutional and functional attributes.

### **Essential conditions for independence of the regulator**

- Legal authority and enforcement powers – the regulator needs to be put on a firm statutory footing with administrative independence and the legal authority to enforce its decisions and impose penalties where necessary. In some countries, this may require extensive legislative or even constitutional preparation.
- Financial resources and autonomy – the regulator needs to be provided with funding for the initial years and have the ability to become financially self-sufficient. Sufficient resources need to be in place so that the regulator can do its work effectively.
- Knowledgeable but independent staff – conditions of appointment and employment need to be set to ensure the regulatory authority's staff act knowledgeably and independently at all times. These conditions can include suitable qualifications, absence of financial interest in any entity involved in the telecoms sector, absence of any conviction or offence, conditions of resignation and removal, sufficient compensation, duration of the term if appropriate, rules on future employment with regulated entities.
- Appeal rules must give due process rights to appellants but must not be such that appeals against the decisions' of the regulator can materially reduce its effectiveness in a fast moving market place.

## **Setting competitive safeguards**

Countries that have joined or plan to join the WTO should sign up to and implement the WTO Reference Paper of the 24<sup>th</sup> April 1996<sup>37</sup>, which sets out the essential competitive safeguards for telecoms liberalization.

For both fledgling competitors and future new entrants, the regulatory framework must be clear, predictable, and sufficiently stable to create the confidence necessary for investment in the telecoms sector.

The competitive safeguards required should be consistent with the Reference Paper, which provides those safeguards and policies that may be appropriate to prevent or address anti-competitive conduct by major suppliers, and which may include:

- Preventing anti-competitive cross-subsidies from services or facilities provided on an exclusive or dominant basis
- Interconnection with a major supplier which is the basis of
  - Non-discriminatory access to sufficiently unbundled services (no requirement to pay for components that are not needed), on non-discriminatory terms ;
  - Non-discriminatory, transparent, and cost-oriented interconnection terms for competing service providers ; and
  - Interconnection at any technically feasible point in the network.

In addition, based on an analysis of state of competition in their local markets, some regulators have adopted policies such as the following:

- Non-discrimination in notice and specifications for network technical data affecting the attachment, interconnection, and deployment of services and equipment ;
- Non-discrimination in access to proprietary customer data subject to the customers' option to have such data withheld ;
- Establishing appropriate cost-accounting practices ; and
- Providing for audits and regulatory oversight.

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<sup>37</sup> Available online at <http://www.worldtradelaw.net/misc/referencepaper.pdf>

## **Licensing**

A telecoms license is the act or document which authorizes an entity to provide telecoms services and/or to operate telecoms facilities. As soon as the regulator is set up, licensing the incumbent operator(s) and new entrants is one of its first tasks.

Licenses are one of the keys to success in the liberalization process. They provide the basic certainty and legal security investors and lenders need to invest the huge amounts of money necessary to install or to upgrade telecoms infrastructure. For telecoms liberalization to bring a fully competitive telecoms market, market entry should be subject to as few barriers and restrictions as possible.

Unfortunately, liberalization has often been accompanied by a proliferation of licensing requirements covering a wide range of operators and service providers. Excessive licensing can stifle emerging competition at birth, particularly competition in international services. Excessive licensing restrictions, including excessive licensing fees, raise barriers to entry and reduce the potential for competition. Licensing conditions that specify technology may also create market distortions and stifle innovation by imposing conditions going beyond 'essential technical requirements'.

Market entry restriction through individual licensing should only be used in the allocation of limited resources such as spectrum. In the case of anti-competitive conduct, general legal rules, in particular competition law, should be used rather than authorization regimes. Where no competition authority or law exists, the communications regulator should develop competitive safeguards in a transparent way and taking into account the views of interested parties. The number of services subject to licensing should be progressively reduced, and policy-makers should avoid imposing licensing requirements for value-added services such as email and voicemail. Where it is justifiable to attach conditions to the provision of telecoms services, these conditions should take the form of general authorizations or notification regimes rather than individual licenses.

Decisions on the type of license needed and licensing conditions should be based on national law and regulations. Licensing criteria and conditions should be applied in accordance with regulations that are developed in a transparent and open manner, and not through closed-door negotiations with each licensee. Licensing procedures should be fast and efficient. Conditions attached to general authorizations or to individual licenses should respect the following fundamental principles:

- They should be objective and non-discriminatory ;
- They should be transparent ;
- Numbers of individual licenses should be unlimited except in the case of limited resources such as spectrum ;
- Criteria for granting licenses should be based on the objective of encouraging full competition ; and
- Any remaining foreign ownership restrictions should be progressively removed.

Governments should also be aware that the General Agreement on Trade in Services (GATS) and the 1997 WTO Agreement on Basic Telecommunications of the World Trade Organization (WTO) include trade rules applicable to licensing. For example, the Agreement on Basic Telecommunications requires signatories to make publicly available all licensing criteria and the period of time normally required to reach a decision concerning an application for a license and the terms and conditions of individual licenses.

## **Unleashing the Internet**

The Internet is a communications medium like no other, with the potential to radically improve the commercial, educational and social future of a country. It has thrived in a largely unfettered legal environment where computer applications offered over public switched networks have generally not been subject to regulation.

The Internet is a collection of networks that are joined together, and its operation is a highly collaborative activity. It requires the voluntary cooperation of the root servers, the coordinated operation of the Internet backbone that is made up of thousands of Internet service providers worldwide, the coordinated assignment of IP<sup>38</sup> address space by the four regional Internet address registries, and the collaborative development and implementation of many technical standards. As the networks that make up the Internet have many different properties, technical protocols and naming systems, widely accepted technical standards have been developed to allow communications to run relatively seamlessly across the entire network.

This model of flexible, participatory and private-sector driven collaboration is the basis for the current and future success of the Internet. Technical co-ordination of the Internet and policy matters related to it are best driven by taking stock of issues being addressed by existing organizations and making sure that dialogue among relevant stakeholders guarantees the continued smooth and stable functioning of the technical coordination functions of the Internet. This is essential to ensure the Internet continues to be, and develop as, a viable medium for global e-commerce.

### **ICAIS – International Charging Arrangements for Internet Services**

ICAIS' objective was to establish an international tariff system for the exchange of Internet Protocol (I.P.)-based traffic including the setting of government-defined settlement exchange rates, a single internationally regulated system, universal unit for traffic measurement and bi-directional payments at international level.

ICAIS initially became an issue because most Internet hubs were located in the US. As a result, non-US telecoms operators had to use their own facilities and bear the full cost to access those hubs. This is no longer a significant problem because of the building of regional hubs.

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<sup>38</sup> I.P. stands for Internet Protocol, the common communications protocol which allows digital information to travel through the public networks

**ICAIS – International Charging Arrangements  
for Internet Services** *(continued)*

In 2005, the most rapid traffic growth came on intraregional routes within Asia and within Latin America. The traffic within these regions increased 95 percent and 336 percent, respectively. Although Africa continues to be the world's least interconnected region, it had the highest year-over-year growth (59%) in international Internet bandwidth in 2005.<sup>39</sup> Today, and increasingly into the future, most Internet traffic will remain in-region, making a proposed regulatory intervention like ICAIS unnecessary.

As well as the expense of the initial set-up costs, ICAIS would force Internet service providers (ISPs) to limit how and with whom they exchange traffic, impeding the growth and success of the Internet.

To ensure the continued success of the Internet and its benefits to business and society at large, governments should note the lessons learnt from the historical deregulatory approach to wireless and data networks:

- Do not automatically impose legacy regulations on new technologies, and make sure that regulations are not enforced just in case of potential future bottlenecks ;
- Make sure that any regulatory responses are the minimum necessary and that the benefits will outweigh the cost of intervention ;
- When Internet-based services replace traditional services, consider de-regulating the old instead of regulating the new ; and
- Keep a close watch to ensure that anti-competitive behavior does not develop.

The success and growth of the Internet in any given country depend directly on the available telephone network. Where telephone penetration is high, the growth of the Internet has been nothing short of explosive. In countries with low penetration, universal access achieved through liberalization should be the top priority to spread the benefits of the Internet throughout the country.

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<sup>39</sup> *Global Internet Geography 2006*, Primetrica, Inc. 2005.

## **Rolling out universal access**

Technology and innovation are the best enablers of universal access. Wireless technologies in particular have enormous potential to help bring about truly universal access. In a liberalized telecoms environment, governments should not assume that universal access can be provided only by the incumbent operator, or that the incumbent needs subsidies from its competitors. Setting up a system of subsidies for the incumbent can create serious market distortions. If special funding requirements for universal access exist, they should be managed in a competitively neutral way. New entrants should also have the choice between either paying into a universal access fund or providing universal access services themselves ('pay or play').

## **Removing barriers to international trade**

The removal of international trade barriers to investment in telecoms goes hand in hand with national measures to create a favorable environment for investment and therefore competition.

To promote full implementation of existing commitments made under the WTO framework and further liberalization of all basic telecoms, value-added and computer and related services, governments should ensure:

- Market access and national treatment commitments for all service sectors without restrictions ;
- Earlier implementation dates ;
- Reduction or elimination of foreign ownership restrictions ; and
- Adherence to the "Reference Paper" commitments for basic telecoms services only.

Compliance with the GATS Annex on Telecoms for access to and use of public telecoms networks for the provision of value-added services, including Internet services, and other sectors for which countries have made commitments

## **IV. IMPLEMENTATION SUCCESS FACTORS**

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### **Act quickly, consistently and clearly**

Delay is the enemy of liberalization. When the sector is first liberalized, decisive action is required at the outset to make sure new entrants are not asphyxiated while regulatory decisions are being made. Delays in making regulatory decisions in issues such as interconnection can be fatal to new entrants. While the issue is being debated and decided, the new entrant will be unable to do business, its financial resources will dry up, and it may have to close shop.

Although a quick regulatory decision may carry with it a greater risk of error, quick action is essential if liberalization is ever to get off the ground. Many liberalized countries require that regulators render decisions within three to four months, and that the decisions, once made, are immediately effective notwithstanding an appeal to the courts. The regulatory framework should be balanced by an effective judicial process for obtaining redress when necessary, but spurious claims, or claims designed to hold up the process, should be actively discouraged.

Ensure that the legal system for appeals is functional. Clearly, whilst access to legal appeal is of fundamental importance, it is crucial that the legal system is not being used by any party to stall the introduction of regulatory remedies thus preventing the liberalization of the market place. Appeals, if lodged, must be dealt with competently and swiftly with minimal disruption to the market place.

### **Do not fear mistakes**

The regulator will have to make judgements based on its appreciation of the law, but also on prevailing economic conditions and a sense of what is “good for the sector.” Given the complex nature of its task, the regulator will inevitably make mistakes, leading to reversal of certain regulatory decisions by the courts. Regulators should not view judicial review and reversal as a threat or as a failure, but rather as a normal and healthy part of the regulatory process.



A far worse situation for the market is when the regulator delays or refrains from making difficult or ground-breaking decisions out of fear of judicial review. Regulators should welcome court review and use the review process as a means to help the government and parliament understand areas that may require legislative, as opposed to regulatory, measures.

### **Credibility and independence of the regulator**

The regulator's resources should be matched to the national telecoms industry. To understand and respond effectively to the commercial and practical issues affecting the telecoms market and end-users, the regulator should have open consultative procedures and actively engage with all its constituents, including operators, ISPs, manufacturers, and both business and consumer end-users.

*Political credibility:* market players must be assured that the regulator's decisions will not be disavowed by the head of government or head of state. This would destroy the regulator's political credibility, and make the role of the regulator impossible. While it is essential that the regulator be independent, the head of the regulatory authority should nevertheless benefit from the political support of both parliament and the government.

*Technical credibility:* regulatory tasks involve complex questions of network technology, economics and law. The regulator must include an appropriate mix of these fields of expertise; respected communications engineers, leading economists and administrative and private law specialists.

A regulatory authority that is too dominated by communications engineers will lack credibility on the economics and legal front. An authority too dominated by economists will be accused of being too academic in its approach and not sufficiently close to the technical realities of communications networks. A regulatory authority without a strong legal staff will be accused of drafting decisions that lack legal basis.

### *Ethical credibility.*

To say that regulators must act ethically is a platitude. Of course regulators must act ethically, without consideration for personal gain; and avoiding conflicts of interest. But being ethical is not enough. The regulator must also be perceived as ethical by market players. This cannot be left to chance. Governments should implement rules to promote the appearance of high ethics:

- Regulators should give detailed reasons for their decisions. This is necessary for an effective right of appeal, but also so that readers of the decision understand the factors the regulator took into account in order to reach the end-result. Without explanations, regulatory decisions will always be suspect. Readers may assume that the real reason behind the decision was political, or that the underlying “merits” of the issue received only superficial review. The regulatory process will be perceived as a farce.
- Regulators should safeguard the integrity of their staff, especially in situations where the staff may have come from industry on a secondment or on a permanent basis. In many countries, there is two-way traffic between the regulator and the telecoms industry, with staff moving between the two at different points in their careers. To maintain the ethical credibility of the regulator, its hiring procedures should be open and transparent, and sufficient guidelines or safeguards should be put in place so that employees always act in an ethical way. For example, some regulators forbid current employees to take part in decisions affecting their former employer. In the case of former regulatory staff moving to industry, the regulator may decide not to allow former employees to lobby the regulator for a set time after their departure.

### **Strike the right balance in licensing fees**

Licensing fees should be used to strengthen the national regulatory authority, not as a means to finance other budgetary items (e.g. health care).

No one likes to pay taxes. But market participants will not object to paying license fees that are used to create and maintain a strong, modern and independent regulator. Market players will get value for their money. The benefits for the market of an effective, fair and financially independent regulator will far outweigh the cost of the license fees.

Problems can occur, however, if governments ask market participants to pay significant license fees, and yet do not provide commensurate funding to the regulator. Governments must resist the temptation to take revenues out of the communications sector. A one-to-one relationship should exist between license fees and the budget of the regulator. Financial contributions to other government budget items will follow, via normal tax revenues, generated by a vibrant communications sector.

### **Limit exclusive rights**

Where massive new network investments are required, a government may find itself obliged to promise some form of exclusivity to an investor as the quid pro quo for the investor's commitment to build-out a heretofore non-existent network. Such exclusive rights should be limited and restricted to achieving well-defined public policy objectives.

Extending exclusive rights broadly (for example to data and value-added services for business) will likely harm innovation, investment and economic development in high growth areas, crippling the sector. The net harm to the country, in terms of limited economic growth and investment in the sector, would far outweigh the short-term benefits.

### **Keep license conditions to a minimum**

Governments and regulators may have a vision of how they want the country's communications market to look in two to three years, and may be tempted to try to engineer that vision into the license conditions of operators. Such attempts, though guided by noble intentions, are in most cases doomed to failure due to the rapidly changing technological and market environment of the communications industry.

Minimum public service and build-out obligations can be justified in some cases, but they must be limited to what is necessary to achieve public interest goals. Governments should specify the end to be achieved (e.g. 90% of population covered within four years, or coverage of key cities and rural communities), but should refrain from specifying the kind of technology used.

## V. CONCLUSION

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Telecoms liberalization brings clear benefits to countries, both directly through lower call charges and a better range of services, and indirectly through the opportunities for business development and economic growth which a fully developed communications infrastructure creates. But the challenges and opportunities of telecoms liberalization are different for every country.

One finding is universal: telecoms liberalization requires planning and forethought, consultation with all the affected participants, a clear view of the objectives, and, above all, the political vision and courage to start the process and keep it going in the face of obstacles. Political and policy leaders need to take the long and strategic view of the best interests of their countries.

The importance of ICTs and the benefits they can bring to nations, consumers and investors continues to grow. Therefore, creating a liberalized and regulated framework that continues to further the direct and indirect benefits of well functioning ICTs markets is as important today as it was when liberalization commenced.

While opposition to liberalization can be vocal, it is usually a minority voice. Building a comprehensive and efficient communications infrastructure will reap benefits for all citizens, throughout the economy, and for generations to come.

## VI. LINKS AND SOURCES

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These links and resources are by no means exhaustive but present a good starting point for finding more detailed information and case studies on telecoms liberalization.

- Asia Pacific Economic Cooperation – Telecommunications and Information Working Group:  
*<http://www.apectelwg.org/>*
- European Commission – DG Information Society:  
*[http://www.europa.eu.int/information\\_society/index\\_en.btm](http://www.europa.eu.int/information_society/index_en.btm)*
- Federal Communications Commission (United States of America) – Global Outreach page:  
*<http://wireless.fcc.gov/outreach/>*
- Global Internet Policy Initiative:  
*<http://www.internetpolicy.net>*
- Inter-American Telecommunication Commission (Comisión Interamericana de Telecomunicaciones):  
*<http://www.citel.oas.org/>*
- International Chamber of Commerce – Commission on E-Business, I.T. and Telecoms:  
*[http://www.iccwbo.org/home/menu\\_electronic\\_business.asp](http://www.iccwbo.org/home/menu_electronic_business.asp)*
- International Telecommunication Union – Telecommunication Development Bureau:  
*<http://www.itu.int/ITU-D/>*
- International Telecommunications User Group:  
*<http://www.intug.org>*
- Organisation for Economic Cooperation and Development – Telecommunications and Internet Policy:  
*[http://www.oecd.org/department/0,2688,en\\_2649\\_34225\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/department/0,2688,en_2649_34225_1_1_1_1_1,00.html)*
- World Bank – Global Information and Communication Technologies Department:  
*<http://info.worldbank.org/ict/>*
- World Trade Organization – Telecommunications Services Reference Paper:  
*<http://www.wtradelaw.net/misc/referencepaper.pdf>*





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