Regional Assessment of the Telecommunication Market in Latin America and the Caribbean

I.   Abstract

The present document undertakes the issue of the ICT's development in countries of LA&C, with reference to their level of economic activities such as capital flows, unemployment, income distribution and poverty, and on the economic side, their investments in the telecommunications sector and infrastructure of communications, on the other hand.

The work also analyzes recent progress on ICTs' regional development, the situation in rural areas and the infrastructure for the main telecom services in the region. The relationship between ICTs and education, economy and technology are also part of the analysis.

The work presents recommendations to achieve a better and faster ICT introduction and diffusion among the population of the region.

II.   Summary

1.   Introduction

The Action Plan of Quito, the America Connectivity Agenda (2002) and the World Summit on the Information Society - Declaration of Principles and Plan of Action, Geneve (2003), consists in a set of connected goals and objectives and political decisions to be made in favor of the removal of the structural problems that affects the economic and social development in relation to the achievement of the new Information Society.

The universal access to the basic telecommunication service and also Internet is a key factor in this process that will favor the extension of the benefits of the new era to education, health and other services supported by the information infrastructure that will reach not only urban areas but also rural and isolated ones.

"Telecenters" are a leading factor in the achievement of these goals; in particular in rural and other needy areas, which means a social distribution of the cost of new services, mainly Internet access.

Both, the cooperation of international entities and social participation are very important and successful instruments for the extension of the ICTs and to maximize the social impact of the new services in the less developed and isolated areas. Government administration will also benefit from the progress of the ICTs, increasing social participation, bringing more transparency and a better communication from both sides.

"Teleworking" is another significant development to be made in favor of a better integration and extension of the labor market, reducing costs of transportation or social movements of population (migrations) in less developed countries. New technological jobs will be created, such as software development, call centers and other activities oriented to the net, with minimum or zero negative impact to the environment.

Other important and positive impacts will be related to the diffusion of culture and education, in favor of local activities and the global inter exchange of these experiences.

In brief, the "Connectivity Agenda" is a challenge to accelerate the economic and social development process in the region, reaching more of its population, including rural areas, reducing poverty and improving income distribution, the extension of the ICTs and the global benefits of the new Information Society.

2. The Economic Process in the 90's towards the new century

The 90's became a period of very important international inflow of capitals to the region, mainly in the basic services and the infrastructure sector. Nevertheless, at the end of the decade many local economic crises interrupted the process. Unemployment rates remain high and a low level of resources utilization was also relevant. In the new century the region began to overcome certain debt problems and the international inflow of capitals stopped. In spite of this, some countries have been able to take certain advantages, in terms of economic growth and infrastructure development towards the introduction of ICTs.

3. Income Distribution

The region shows important signs of inequitable income distribution in terms of the Gini coefficient and other indicators if compared with the situation in more developed countries. Unfair income distribution, rural poverty and idiomatic dispersion are important barriers to achieve a broader insertion of ICTs in the LA&C population.

4. Basic Telephony, Mobile and other services Infrastructure

Certain progress has been made in basic telephony penetration, but the indexes are still well behind the levels of developed countries. It still remains as an important gap in terms of future investment.

Meanwhile, mobile telephony reached a most interesting growth, surpassing in several countries the penetration indexes that correspond to the fixed telephony one. Having gone so far in 15 years, it shows how difficult it is to predict about the advanced technology markets all around the world. This process is an important fact to review the still alive classical approach of the universal service obligation and the universal access to telephone services.

On the other hand, public phones were and still are a key factor in the diffusion of universal access. New services brought by "telecenters" could be an alternative way to provide more public access to new services like Internet. On the contrary, broadband for Internet access is still a very underdeveloped service in the region.

5. Internet and ICT's

Not being Internet by itself the complete meaning of Information Society, Internet became, nonetheless, a main instrument. The "digital gap" has different dimensions, some in terms of stock, others in terms of flows, but the Internet level of penetration and diffusion will provide the first big approach to the gap.

Despite being a very dynamic process, the Internet growth of the region is still not enough to cut the existing digital gap that depends not only on the telephony penetration. More than this, it relies on the quantity and capacity of the PCs. Nevertheless, a bigger than usual ratio between computers and users partially compensates the existing gap.

A first approach usually shows that income levels are related with Internet and PCs penetration. Instead, the analysis indicates that prices are an important factor in the determination of Internet access. Governments can also close partly the gap with active policies.

Policies in favor of Internet development are:

- Unbundling of last mile access, including Cable TV access

- Reduced tariffs for Internet access

- Fair rules for Internet peering between ISP's

- Interconnection of ISP's with incumbent operators

- Regulating essential facilities with cost based prices.

Active policies could, among others, include:

- Creation of public "telecenters", mainly for schools, libraries, local counties in rural areas, eventually for NGO's related with the development of the Information Society

- PC's acquisition facilities

- Universal Service funds application towards ICT's diffusion

- Development or even introduction of Internet into government activities, regarding the relationship with citizens, general interest and taxpayers' issues

- Introduction of new e-learning and e-health programs

- Tax reduction for the ICT's development.

6.   Economic Impact of Telecommunications development

There is a positive effect of the telecommunications infrastructure growth in terms of the global economic development of the region during the 90's, including the increase of productivity and the "spillover" of the new technology skills over other activities.

7.   Educational situation

An educational traditional gap remains between the LA&C countries and the developed regions. It is greater for the higher levels of instruction than for the primary ones. That means that in the tertiary level the gap is greater. Nevertheless, there are some countries with specific educational programs that are not in such poor condition. Only pilot projects could be found on the education in ICT's use in the region.

8.   The Information Society process in the region and ICT's policies

A majority of LA&C countries have created bureaus or a commission for the development of the ICTs to achieve the global objectives of the Information Society. On the other hand, these activities do not show either a strong coordination or a high level administrative status as recommended by the Quito Action Plan.

Although there are many ICT's administrative activities in the different countries of the region, they seem to be in a clear contrast with the ICT's situation in the region, which calls for an improvement of these actions. There are, of course, few but important exceptions, such as Chile, showing that that high coordination levels together with fitting policies are a key factor for success.

Direct government policies must be concentrated in:

- Deployment of modern telecommunications networks

- Priority of Internet access in schools as universal objective

- Implementation of educational programs for the use of informatics tools

- Deployment of community "telecenters" to extend the Internet and other ICTs to lower income and rural population

- Development of the e-Government tools

9.   Relevant characteristics of the ICT's regional development

Even after a period of great public and private investment in the infrastructure of telecommunications in the LA&C region, still remains an important gap towards the achievement of the future Information Society with the existing gap in the ICTs in the first place.

The ICT's gap must be approached like a phenomenon by itself to be solved, being the gap in the level of income the most important reason to explain that situation and the bad income distribution the second one. But it is no solution to wait for the economic growth to obtain the resolution of the ICT's gap. Moreover, an important ICT development in the region to fill the existing gap could bring a better atmosphere to improve the economic growth quality and quantity.

An important factor is, in this view, that technological progress could offer better new services and alternatives at low prices. Certain objectives of universal service, for example, can be easily obtained by means of new services, such as mobile telephony, than with the old ones. Voice over IP ("VoIP") is another technological device that can be regarded as a new alternative to offer better solutions in terms of prices to achieve a better diffusion of ICT's technologies into the population. There are also new alternatives to obtain new software and hardware tools at better prices. For example, new Free/Open Sources of Software for Government appliances.

Focusing on the Internet penetration there is still an important gap in the region, with a little more than 8% against almost 50% in the OCDE countries. Better access prices and more computers will be key factors to improve ICT's situation in the region.

The use of different languages in an almost not English-speaking region, as LA&C, is another factor to be considered. The existence of web pages developed in Spanish or in other regional and aboriginal languages is absolutely scarce.

The regulatory approach provides another source of gaps, regarding the importance of rules that could help improving the development of ICT's applications and avoid monopoly practices that could delay or even act as a deterrent to competition and deployment of new alternatives and services. The regulation must consider new technological phenomena such as VoIP that could provide new solutions for old problems at better prices.

Speaking in general terms, there are no sustainable programs for the Information Society in the region but instead, many important well-designed "pilot projects" in relation with Internet, its applications and diffusion for massive users.

The ICT's development in the region, though still in an early stage, can prove an important effect on economic and social progress in education, culture and productivity, among other subjects.

10.   Limitative Factors

The study shows that there are certain common factors in LA&C that must be recognized as limitative barriers to ICT's development. Nevertheless, the infrastructure development in the region is greater than what its income average level would usually admit. That owes to the important economic resources, domestic and foreign that were dedicated to this sector with high technological standards.

This situation creates an opportunity to extend the benefits of the Information Society to a broader population provided that access prices were reasonable in terms of the population average income level.

Nevertheless, there are other important features of progress that are still scarce in the region, such as water supply, waste management and electricity that stand as higher priority. Any approach must be adapted to this social environment and cannot be so ambitious as to forget it.

Efforts must be done to develop the popular education in the ICT's use. First of all, education begins by teaching to the teachers.

Governments must assume the leadership in the development of ICTs and the application of initiatives to facilitate the Information Society goals achievement, concentrating and not diverting the short resources, introducing new tools such as e-Government and e-Commerce. International help must also be optimized, concentrating and rationalizing available resources from ITU, NGOs and other financial organizations.

III.   Recommendations

The final part makes recommendations for governments to achieve the goals of the Action Plan of the World Summit for the Information Society (IS), as a previous conclusions of the general review of the situation and experiences in the region related with ICTs and the way to the IS.

In brief, the Action Plan features a way to accomplish:

- Global connection with the ICTs for communities, rural and isolated areas, schools and universities, libraries, scientific and investigation centers, hospitals and other health care institutions and main government offices

- Development and adaptation of educational curricula to the information Society

- General population access to broadcasting services to promote the development of web contents using the different languages to reach a coverage with ICTs for not less than a half of humanity.

Our recommendations are given in different levels:

1.   General:

1.1.   National approach:

- Public policies flexible to the evolution of the technological trends of ICTs

- Facilitate the promotion of ICTs through tax exemptions, credits and capital markets instruments for risk-taking operations.

- ICTs Task Force within each country.

- Development of the e-Government program

1.2.   Regional and international approach

- Intensive use of ITU resources for advisory services and technical support to develop ICTs

- Use of resources from International Credit Institutions including loans for project execution control and results evaluation.

- Coordinate experiences and telecommunication integration policies in the region.

1.3.   Educational approach

- Develop programs for training teachers to extend ICT use and knowledge, mainly by means of pilot programs ("Campus TICs")

- Support schools efforts to open up classrooms to the local community and also developing telecenters in the schools' neighborhood.

- Promote private sponsoring of additional training and qualification of human resources in the use of ICT, including job training

- Encourage the cooperation between private and public sectors to joint efforts to promote and develop ICT and people's qualification

- Promote corporative use of ICT and R&D investment

- Develop science and technology centers.

2. Specific

2.1. Best regulatory practices

- Those related with Internet cost access reduction such as lesser telephone dial up tariffs, flat telephone subscription plans, unbundling of the last mile in copper and Cable TV access; promotion of new access technologies for broadband. Introduction of VoIP regulation

- Competition promotion policies avoiding market power abuses in the Internet access and ISP interconnection markets.

- Promotion of international Internet interconnection at low prices.

- Promotion of local NAP to reduce interconnection costs.

2.2. Telecommunications' Policies

- Priority use of Universal Service funds and other financial resources for Internet development and use in schools, libraries, etc.

- Promote and support the deployment of community "telecenters".

2.3. ICT's Promotion Policies

- Use of economic instruments (credit, tax exemptions, financial available resources, admit accelerated depreciation practices on equipment, import duties reduction or exemption) to promote the production of local contents in the Web, the production of software and induce services exports ("call centers", international traffic facilities).

2.4. Educational Policies

- Training of teachers and professors in ICTs use and appliances.

- Massive education of risk population groups using the ICT's tools, such as tele-education.

2.5. Government administration

- Development of the e-Government program

- Development of Public plans for tele-education and tele-health

- Legislation for the use of digital signature and informatics' security to promote e-Commerce.

IV.   Telecenters as an important tool to develop ICT

"Telecenters" are located in rural areas or less developed urban neighborhoods, equipped with computers, software, Telephony and Internet access, where people can share the use of the different telecommunications devices at a low cost plus the necessary training. There are important successful experiences related with pilot developments of this kind in different regions of the world. There are good examples of pilot programs with telecenters in many LA&C countries.

"Telecenters" are a very important tool to extend the access, the training and the use of ICTs to low income population groups, rural areas and other social groups under risk in developing countries. The knowledge about the experiences and successful programs is well collected in ITU and other international institutions papers (ONU; World Bank, etc.).

The diffusion, enlargement and extension of these facilities will be an important instrument for a successful path towards the Information Society.

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