Recommendation Implementation Analysis

TELECOM Development Symposium

ITU TELECOM AMERICAS 2000
Rio de Janeiro
10 - 15 April

Acknowledgments

This report was prepared by Ernst & Young Consulting, under the supervision of Mr Fernando Lagraña, Vice-President and Head of the Forum Division, ITU-TELECOM.

Our special thanks and appreciation go to those ITU Member States that supported the project by responding to the survey questionnaires. Without their comprehensive input, it would not have been possible to produce the report in its present form.

Our thanks also go to Messrs Patrick Nicolet, Serge Messin and Xavier Logean of Ernst & Young Consulting who wrote the report, and to Messrs Fernando Lagraña and Pierre Gagné and Mrs Tsehai Bekele of ITU, for their comments, proposals, reviews and management of the project.

The views expressed in the report are those of the authors and do not necessarily reflect the opinions of ITU or its membership.

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1 Introduction

The deployment of a proper telecommunication infrastructure and of suitable computer resources is a critical factor in ensuring that any population has access to the benefits of the new economy. Failing to provide such access would exacerbate the digital divide between the information-rich and the information-poor. Developing countries are obviously lagging behind, but they will be able to take advantage of new technologies to develop Internet access and move quickly into the information age, provided they get the necessary support and create a favourable environment. Rural and low-density areas in developing and developed countries alike should also benefit from wireless technologies (fixed or mobile), obviating the need for costly deployment of a wireline infrastructure.

However, this task requires a common effort by the private and public sectors, national and international bodies, local communities and global institutions. Governments, regulators, investors and potential consumers must all work together to foster local, regional and national initiatives. Developing the new economy and leading citizens to a knowledge-based society implies that all share the same vision, work in the same direction and cooperate rather than compete.

I am pleased to see that the TELECOM Development Symposium has continued in this same spirit since its creation in 1995. The TDS would not have existed without the financial support of the private sector. It would have had no meaning without the efforts of the target countries and of the fellows from national delegations. If would have had no substance without the contribution of everyone involved: fellows, administrations, academic institutions, international experts, and so on. Finally, it would not have continued without the collaboration of ITU-TELECOM and of the Telecommunication Development Bureau.

I would like to take this opportunity to thank all for their shared vision, and in particular our partners from the private sector who have agreed to devote some of their resources to this venture in spite of the highly competitive environment in which our industry operates.

Fernando Lagraña
Vice-President, TELECOM
Head, Forum Division

2 Developing Telecommunications in Rural Areas

2.1 Introduction

Globally, in today's connected society more people are connected than ever before. Yet the majority of the people in the world still do not have access to any kind telephony at all.

Looking at fixed phone lines alone (Figure 1), we observe a rate of growth of about 6% worldwide and a particularly high rate in the Asia-Pacific region of around 11%. In Europe, 50% is about as high as we get in terms of teledensity for fixed lines. Europe is pretty well built out. In Asia, the figure is rising from 6 to 26%: a good example of increasing teledensity. In the Americas, teledensity remains low primarily because of the low rates in South America, but the level is rising, from 30 to 42%, almost approaching that of Europe. So the world is catching up in terms of teledensity, except for Africa, because of the lack of investment to build out a fixed-line infrastructure.

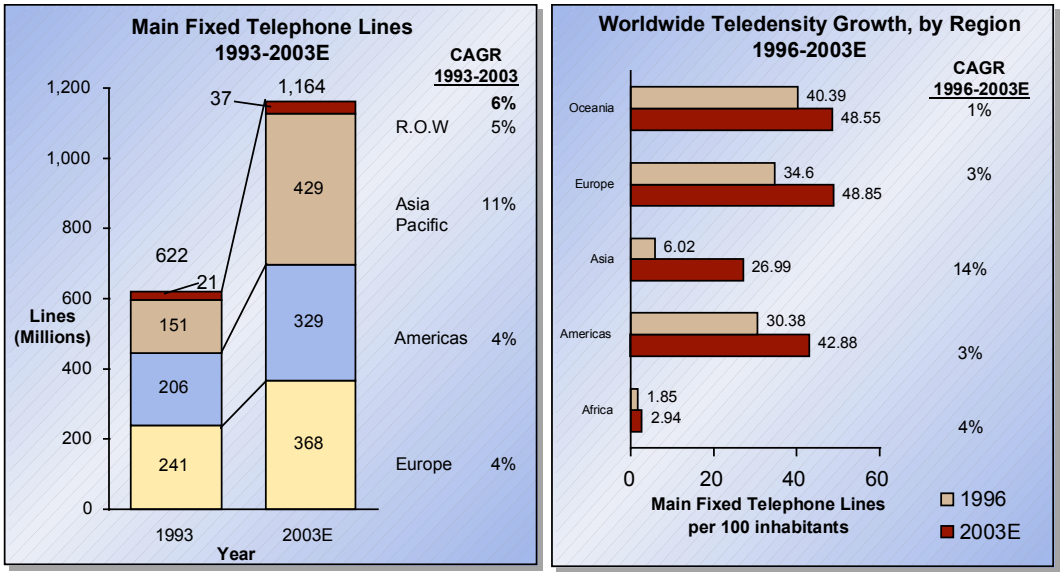

Figure 1 – Basic access is growing throughout the world in the connected society

Source: ITU World Telecommunication Development Report, 1999; ITU Indicator Database; World Economic Outlook, May 1996; The Leadership ConnectionTM interviews, Ernst & Young.

Developing countries have been taking major steps to get connected. Some have advanced further than others, and a few have reached levels of access equivalent to those of developed countries. Indeed, the level of access in the main cities of a number of developing countries is as good as in developed countries. Disparities are much more evident within countries, between regions with different income levels. Significant connectivity gaps remain throughout the developing world. Thus, one of the key benefits of the connected society is simply increasing connectivity in regions of the world where it is currently lacking.

2.2 AMERICAS 96 Telecom Development Workshop

For the AMERICAS 96 Telecom Development Workshop (TDW), the priority subject identified by the Telecommunication Development Bureau (ITU-BDT), in close consultation with the countries of the region, was **Rural Telecommunications**. The purpose of the TDW, through its five panels, was to develop constructive ideas on telecommunication technology and regulation for serving populations in rural areas.

As Mr A. Laouyane, then Director of BDT, pointed out during the TDW, *"improvement of the quality of life of rural villagers and the socially deprived can only come from an integrated development programme, within which telecommunications are one component or facilitator. (...) It is thus considered that an integrated development plan on all fronts, including the provision of telephone services and community centres providing telecommunication, mail, money, information, municipal and social services – and why not distance learning and telemedicine? is the key for quality of life."*

2.3 Essentials of Rural Telecommunication Development

During the TDW, various key issues, strategies and policies were discussed regarding the development of rural telecommunications, including:

- New technologies and new products available (Panel P.1)
- Critical analysis of technical solutions in the case of low-density rural areas (Panel P.2)
- Regulatory environment/Universal access to the basic telephone service (Panel P.3)
- Relations between government, operators and support to develop rural telecommunications (Panel P.4)
- Integrated rural development applications: Telemedicine and tele-education (Panel P.5)

The workshop entailed active participation by all delegates, who were divided into two working groups, under the guidance of facilitators, where they had the opportunity to highlight key questions about rural telecommunications, focusing on technologies for low-density rural areas and regulatory issues, respectively.

During the final session of the TDW each working group presented the main results achieved, which were debated. In conclusion, the TDW at AMERICAS 96 proposed a set of recommendations.

The second four-year cycle of the ITU TELECOM Development Symposium (TDS) has now been completed, and ITU has conducted a survey to assess the progress made by its Member States in implementing the various recommendations made at AMERICAS 96.

2.4 Implementation of AMERICAS 96 TDW Recommendations

In order to measure implementation of the set of recommendations in the various countries, the ITU TELECOM Development Symposium (TDS) unit conducted a survey, based on a questionnaire sent to 34 developing countries of the Americas.

The objective of this study is to identify whether the recommendations have been implemented. A total of 19 answers to the "Developing Telecommunications in Rural Areas" and "Development of the Information Society" survey were received (55% of countries polled).

AMERICAS 2000 Survey	TELECOM 99 Survey	TELECOM 99 Survey
Developing Telecommunications in Rural Areas and Development of the Information Society	Developing Countries and the Information Society (worldwide survey)	Human Resources and Technology (worldwide survey)
55%	55%	48%

Table 1 – Comparison of number of responses in the different surveys

Below we present the consolidated results of the survey, according to the recommendations developed by ITU during the TDW. We then address each recommendation in detail: reminder of the recommendation, presentation of the results and, finally, analysis of the results and comments. We examine how the recommendations are implemented in the various countries, and summarize the comments made by the countries in the survey.

2.5 Results of the Survey

2.5.1 Overview

Three main potential lines of action were identified and surveyed. In order to improve rural telecommunications, countries may have:

1. Launched specific rural telecommunication programmes/projects
2. Taken regulatory actions
3. Shared know-how and facilitated knowledge transfer

In addition, specific questions were also included aimed at assessing the perception of the role played by ITU in supporting the rural telecommunication process.

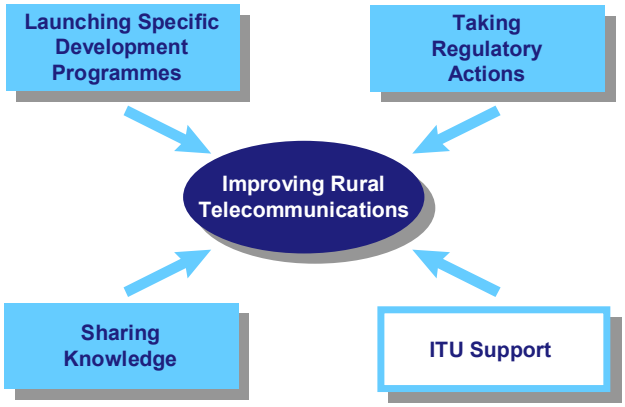

Figure 2 – Recommendations for improving rural telecommunications

Consolidated Results of the Survey

Overview of Chosen Lines of Action

Table 2 summarizes the main choices made by countries to support rural telecommunication development. Countries may have chosen to pursue one, two or three main lines of action in parallel, namely: launching specific development programmes; taking regulatory actions; sharing knowledge.

% of countries addressing rural telecommunication development							100%
	1 initiative			**2 initiatives**			**3 initiatives**
Launching specific development programmes	✔			✔	✔		✔
Taking regulatory actions		✔		✔		✔	✔
Sharing knowledge			✔		✔	✔	✔
% of countries having chosen specific lines of action	89%	68%	74%	63%	63%	47%	42%

Table 2 – Overview of chosen lines of action

The results in Table 2 show that all the countries have launched programmes to promote rural telecommunication development. This theme proposed by ITU was very well received and implemented. Each specific line of action (launching specific development programmes; taking regulatory action; sharing knowledge) has been applied by at least 68% of the countries. This success indicates that all the programmes were suited to the economy and needs of the countries surveyed. Almost half of the countries have even applied all the recommended lines of action.

In the following sections, we analyse each of the recommendations in turn.

Overall perception of the support role played by ITU

Table 3 summarizes the Member States' perception of the role played by ITU in supporting them with the rural development process.

Perception of the role of ITU	Very efficient	Efficient	Not very efficient	Inefficient
% of countries	19%	43%	31%	7%
Overall rating	61%		39%	

Table 3 – Overall perception of the support role of ITU

Considering the wide gap in rural telecommunications between the developed and developing countries, and having regard to the goals of the TDS, ITU's role should be important for the developing countries. Indeed, as stated in Article 1 of the ITU Constitution, the organization's basic treaty instrument and charter, one of the purposes of the Union is: *"to promote and to offer technical assistance to countries in the field of telecommunications, and also to promote the mobilizsation of the material, human and financial resources needed for its implementation"* and *"to promote the extension of the benefits of the new telecommunication technologies to all the world's inhabitants"*.

The results in Table 3 show that 61% of the countries in Latin America have a positive perception ot ITU's role and input, although this good overall result has to be set against the fact that only 55% of the countries replied to the survey; no figures are available for the remaining 45%.

Different aspects of ITU's role were surveyed. In section 2.7, each of these is presented, along with specific comments.

2.5.2 Recommendations aimed at launching specific programmes/projects

Objectives

In order to assess whether the countries have implemented recommendations promoting the launch of specific programmes/projects, the following questions were asked:

- The development of rural telecommunications is crucial for countries where the majority of the population lives outside large urban centres. Does your country have any specific rural telecommunication development programme?
- In a number of countries of the Americas region the level of teledensity is still fairly low. To reduce this deficit it has been recommended that governments should strive to open public communication access points across the country in order to serve rural and remote areas as well as low-income communities. Has your country launched any specific programme to increase the penetration of public access points?
- With the rise of the Internet some countries have launched national programmes aimed at connecting rural and low-income communities to the Internet. Has your country launched any specific project in this regard?

Results of the Survey

The results are presented in the following table:

% of countries having launched any programme/project to develop rural telecommunications							89%
Programme(s)/(Project(s) aimed at	**1 initiative**			**2 initiatives**			**3 initiatives**
Developing rural telecommunications	✔			✔	✔		✔
Increasing teledensity		✔		✔		✔	✔
Connecting rural communities to the Internet			✔		✔	✔	✔
% of countries having chosen specific options(s)	79%	74%	63%	63%	53%	63%	53%

Table 4 – Programme(s)/Project(s) to develop rural telecommunications

Comments

Countries have different policies for the development of rural telecommunications, e.g. use of revenue from international telecommunication traffic for the creation of rural call centres, creation of a special government office, use of funds received from the international organizations. Most of the countries pointed out that a single-operator monopoly is a major obstacle to development.

One of the first means of developing telecommunications in rural areas is the creation of public access points. Countries are working on the installation of public phones in rural areas, for instance one public access point for 500 inhabitants. Using the infrastructure installed, the Internet is starting to be deployed in rural areas, mainly in schools (see section 3).

The theme of promotion of rural telecommunications proposed by ITU has been extensively implemented, with 89% of the countries following the recommendation. Each of the approaches (developing rural telecommunications; increasing teledensity; connecting rural communities to the Internet) has been implemented by at least 63% of the countries. More than half of the countries (53%) have chosen to integrate two or three approaches in their programmes/projects.

The recommendations put forward by ITU were well perceived by the countries, and were in tune with their telecommunication problems and needs.

2.5.3 Recommendations aimed at taking regulatory actions

Objectives

Recommendations on regulatory aspects focused particularly on privatization and tax reduction. The following two questions were asked:

- As part of the privatization process, it has been recommended that operating licences should be issued in a combined area comprising rural and urban areas so as to minimize implementation costs and guarantee profits. Has your country issued such combined operating licences?
- It has been recommended that governments should be urged to remove or at least reduce taxes on telecommunication equipment in rural areas. Has your country implemented such a policy?

Results of the Survey

Table 5 shows the percentage of countries that have issued joint rural and urban licences and/or cut taxes on telecommunication equipment.

% of countries having taken regulatory actions to develop rural telecommunications	68%

Programme(s)/(Project(s) aimed at	1 initiative		2 initiatives
Issuing joint rural and urban licences	✔		✔
Reducing taxes on telecommunication equipment		✔	✔
% of countries having chosen specific options(s)	58%	26%	16%

Table 5 – Regulatory actions to develop rural telecommunications

Comments

The countries' economic situation might rule out cutting taxes on telecommunication equipment. Most of the countries are issuing combined licences for rural and urban areas, sometimes fixed and mobile licences.

Typically, the licences include mandatory instructions, such as the provision of access points in rural areas. This avoids services being deployed only in urban areas, where incomes are higher.

Like the previous recommendation (see section 2.5.1), the regulatory actions theme was well accepted by the countries (68%). There is a sharp difference in the degree of implementation of the two approaches: issuing joint and urban licences (58%) and cutting taxes on telecommunication equipment (26%). In developing countries, urban centres are expanding fast and generating considerable income that can be used for the promotion of rural areas.

Countries prefer to finance rural telecommunication development from income from the telecommunication market in urban areas (by issuing joint licences). The state of the country's economy might add to the difficulty of removing or cutting taxes.

2.5.4 Recommendations aimed at sharing knowledge

Objectives

In order to evaluate the degree to which knowledge is shared between the different countries, the following question was asked:

- It has been recommended that meetings should be organized between countries which have similar problems, in order to share experience and the technical specifications of systems and technologies. Has your country shared experience with other countries?

Results of the Survey

% of the countries having shared experience with other countries	74%

Comments

Some countries organize meeting to share information. However, most of them have no budget for travel and organization of meetings. The Internet has been perceived as an efficient vehicle for pooling experiences, publishing study results and local statistics, etc.

ITU could play a useful role in helping to share knowledge as recommended. For instance, it could provide virtual community groups for exchanging information between countries and with ITU.

2.6 Summary

To summarize, Figure 3 shows the options recommended at AMERICAS 96 in order to ensure the development of rural telecommunications. Figure 4 orders the recommendations according to their degree of implementation by the different countries.

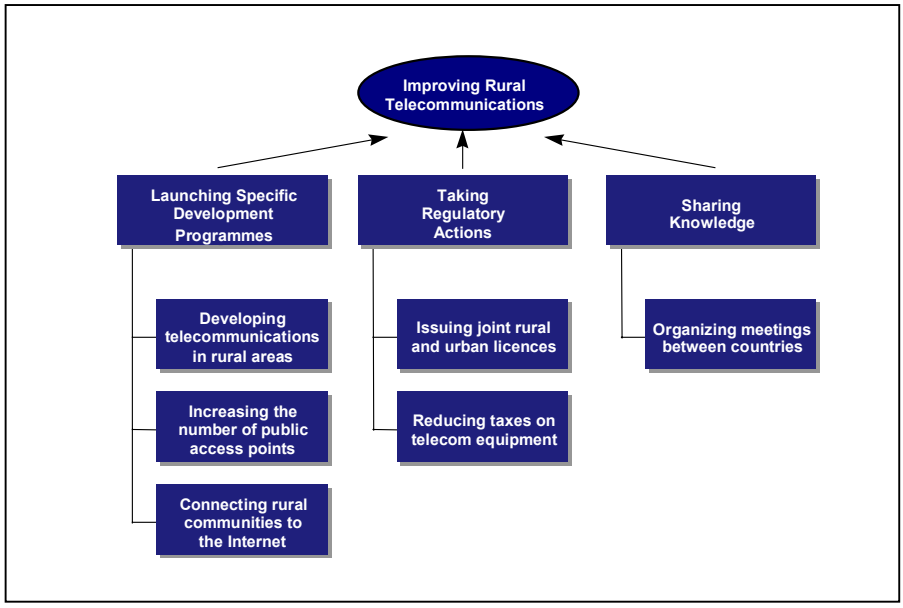

Figure 3 – Summary of recommendations made at AMERICAS 96

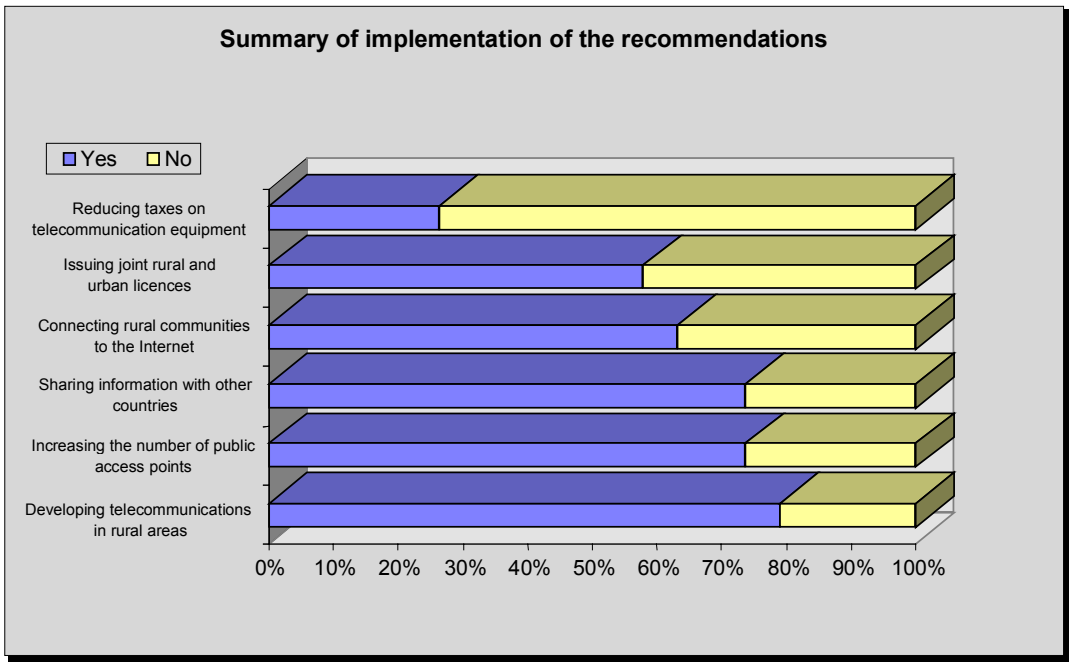

Figure 4 – Overall acceptance of recommendations

2.7 Assessment of the Role of ITU

Objectives

Some of the recommendations made by the working groups at AMERICAS 96 were directed at ITU itself. In order to obtain appropriate feedback on the role played by ITU, the following questions were included in the questionnaire:

- It has been recommended that countries should submit to ITU their technical cooperation requirements in the form of specific, concrete projects so that ITU can process them in the best possible way. Regarding technical cooperation requirements, how efficient is your country's communication process with ITU?
- It has been recommended that those responsible for planning and operating rural telecommunications should be up to date on ITU publications in this area. How accurate is your information about ITU publications?
- It has been recommended that ITU should ensure that governments in the Americas region are properly aware that telecommunications in rural areas must be developed as a means of promoting integrated development in the countries. How do you rate ITU's promotion of this issue?

Results of the Survey

The results are presented in Table 6:

Perception / Recommendation	Excellent	Good	Weak	Very weak
Communication process with ITU	22%	44%	22%	11%
	67%		33%	
Information about ITU publications	11%	28%	56%	6%
	39%		61%	
ITU promotion for rural telecommunications	22%	56%	17%	6%
	78%		22%	
Average perception of ITU	19%	43%	31%	7%
	61%		39%	

Table 6 – Assessment of the role of ITU

Figure 5 gives an overall assessment of the recommendations involving ITU and assessments according to the four questions.

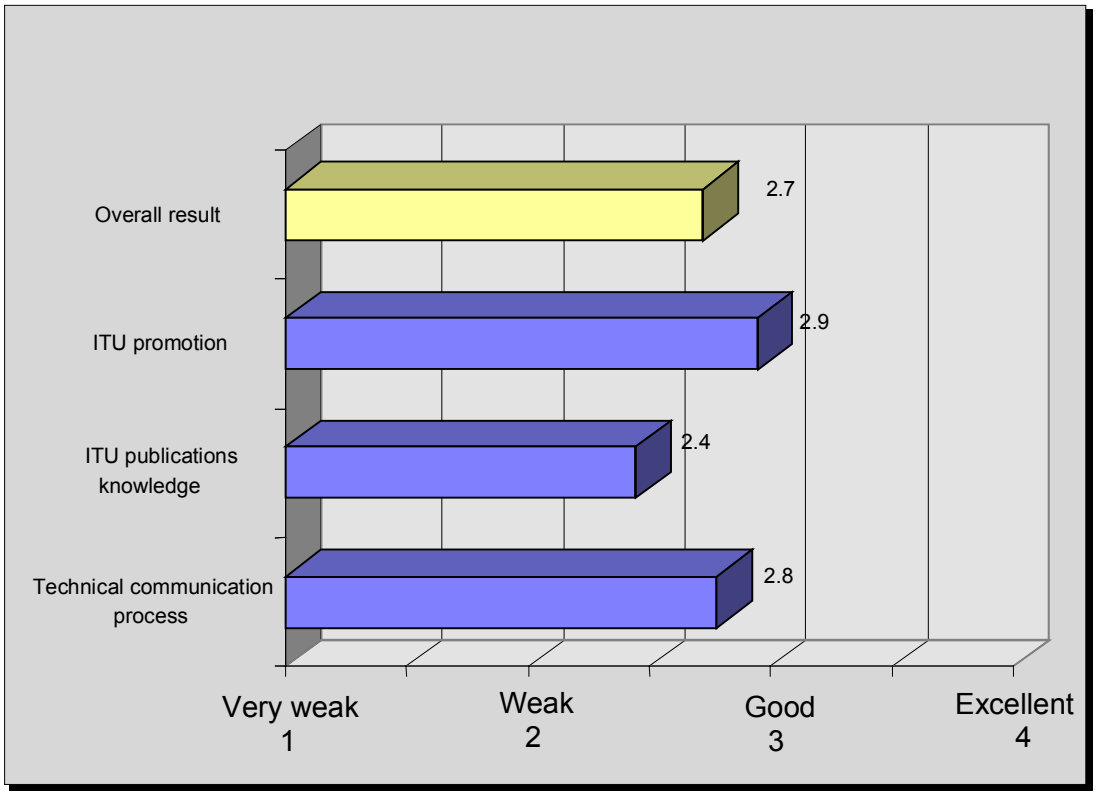

Figure 5 – Rating of the role of ITU

The perception of ITU's support role is homogeneous, ranging from 2.4 to 2.9 (weak to good) on a scale from 1 to 4. On a percentage scale, 61% of the countries are satisfied with the support role played by ITU.

The Union is conscious that 45% of countries did not respond to the questionnaire and that the overall 61% positive rating can be improved upon, and has already identified measures to enhance the communication process and knowledge of available publications.

Recently, BDT has established a "communications officer" post, the main objective of which is to enhance communications between ITU and its membership. The position will be filled in the coming weeks. With respect to means of communication, the IT capabilities of each ITU regional office are in the process of being improved, in order to enable regional and area offices to access all important ITU information and pass it on to the membership (Member States and Sector Members). Furthermore, the regional staff now regularly attend meetings at ITU headquarters in Geneva, in order, amongst other objectives, to be able to inform the ITU membership more effectively about various developments relating to ITU.

The survey indicates that 61% of the countries do not consider access to the publications as adequate. To improve that, a recent BDT decision aims to ensure that all regional offices are provided with all ITU publications, or ready access to them. Clients of ITU regional offices will thus benefit from this decision. In addition, as mentioned above, the new communications officer post will greatly improve the dissemination of BDT information, publications, projects, etc.

One of the communications officer's main tasks will be to promote BDT programmes, activities, information, publications among the membership (Member States and Sector Members).

3 Developing Countries in the Information Society

3.1 Introduction

About 10 million users are connected to the Internet in Latin America (source: Trends in Latin American Networking, University of Texas), i.e. less than 2% of the population. This figure is of course not comparable to the 33-40% of the population in the United States. Nevertheless, as shown by the following charts (Figures 6, 7 and 8), the number of IP hosts is now "exploding" in Latin America and the situation is changing rapidly.

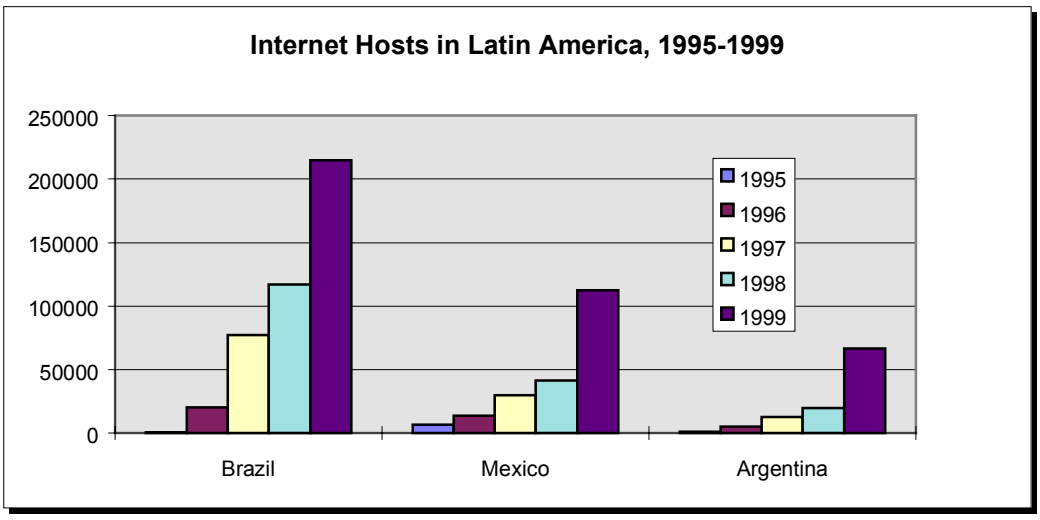

Figure 6 – Number of Internet hosts in Latin America (I)

Source: Trends in Latin America Networking, University of Texas

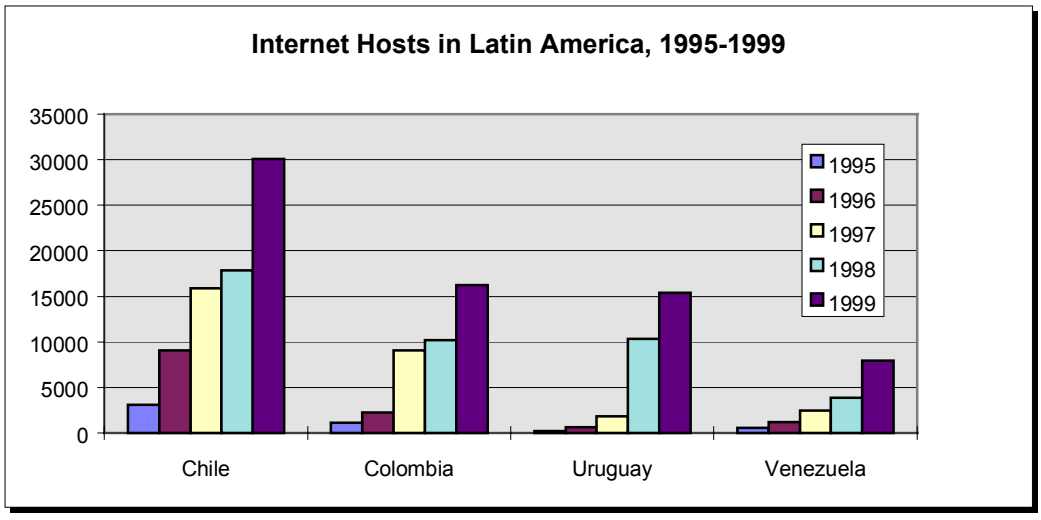

Figure 7 – Number of Internet hosts in Latin America (II)

Source: Trends in Latin America Networking, University of Texas

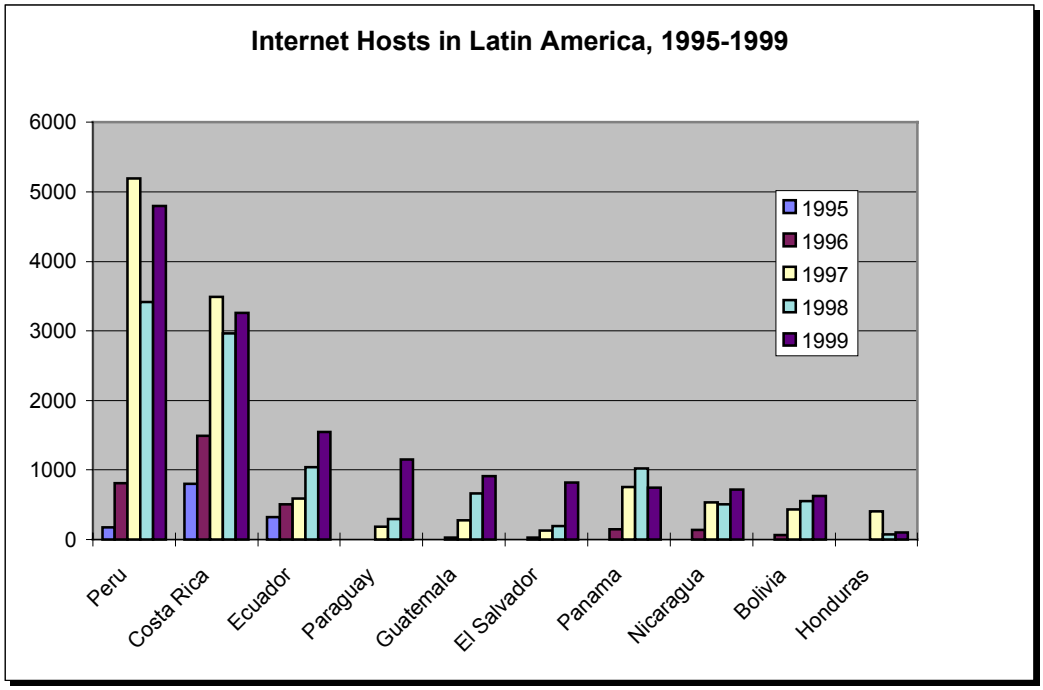

Figure 8 – Number of Internet hosts in Latin America (III)

Source: Trends in Latin America Networking, University of Texas[1]

What makes the Internet a unique force in Latin America's telecommunication markets is its multiple role as a completion enabler, accelerator for infrastructure development, and powerful stimulus to allow the region to leapfrog technologically into the 21st century and participate more fully in the global economy.

The Internet's technological and regulatory impact varies depending upon the level of privatization and liberalization in each specific market. In some parts of the region, governments in many countries continue to waffle on privatization and liberalization, and incumbent operators continue to be hamstrung by bureaucracy that prohibits infrastructure upgrades. The stimulus for privatization stems largely from a realization that governments in the region cannot afford to fund the necessary changes to upgrade public networks for the broadband applications demanded by ISPs and customers alike.

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[1] In Figure 8, some strange behaviour is observed around 1998. By July 1997 the domain survey was not able to count a significant portion of the hosts in the domain system, due to some organizations' restricting download access to their domain data. The blocking of downloads (or zone transfers as they are called) had increased to the point where in the July 1997 survey it was possible to download only 75% of the domains we discovered. It was decided to try a new survey technique before the old one became useless.

In January 1998, the first "new" internet domain survey was run. The new domain survey is the reverse of the old survey. It counts the number of IP addresses that have been assigned a name. It is possible to compare the old and new data, although there might be some problems if the comparison involves locations where the domains were not reachable.

3.2 Results of the Survey

3.2.1 Overview

On the occasion of the TELECOM Development Symposium at TELECOM Interactive 97, the ITU Member States agreed that the major barrier to the development of the information society is cost and not technology. Accordingly, the following recommendations were passed:

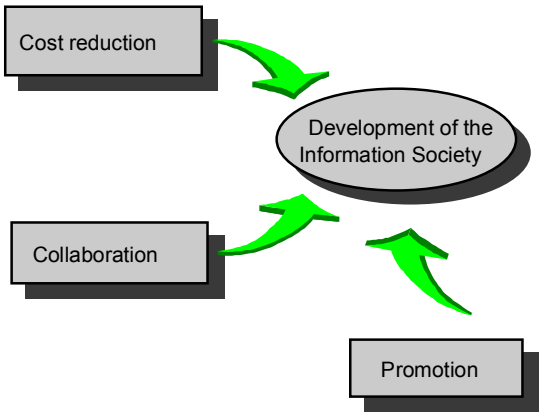

Figure 9 – Recommendations for the development of the information society

1) Reduce the costs of set-ups, of equipment and of tariffs for the end-users.

2) Promote the use of the Internet by creating new value.

3) Collaborate with neighbours in order to take advantage of synergies

Consolidated Results of the Survey

	1 initiative			all initiatives
Cost-reduction programmes	✔			✔
Promotion		✔		✔
Collaboration with neighbours			✔	✔
% of countries having chosen specific approach(es)	61%	100%	19%	19%

Table 7 – Overview of chosen approaches

All the countries have worked on the promotion of the Internet, which denotes a high awareness of the challenges related to the information society. Most of the countries have developed cost-reduction programmes but few of them are collaborating with their neighbours for the development of the information society.

In the following sections, we present the results of the survey for each of the approaches (cost-reduction programmes; promotion projects; collaboration with neighbours), analyse the results and give comments.

3.2.2 Recommendations aimed at reducing costs

Objectives

It was recommended that countries consider lowering costs by using existing infrastructures, website cacheing, using off-line services and applying new satellite technologies (such as LEOs). It was also recommended that taxes and duty on equipment imports be cut, and usage tariffs be reduced in order to boost demand.

Evaluation of this recommendation is based on (i) efficient use of existing technology; (ii) reduction of taxes and duties on equipment imports; and (iii) tariff reductions.

One recommendation advocated that Internet tariff structures should be cost-based, in order to avoid both extremes – high tariffs that would restrain network usage and low tariffs that would not yield sufficient revenue to allow new investment in infrastructure.

Results of the Survey

According to the survey, 56% of the countries followed the recommendations to lower costs by using existing infrastructures, website cacheing, using off-line services, applying new satellite technologies, cutting taxes and duty on equipment imports, and to reducing usage tariffs in order to boost demand.

Different cost reduction methods have been implemented, as shown in the following table:

Efficient use of existing technology	6%
Cutting taxes and duties on equipment imports	17%
Reducing tariffs	22%

Table 8 – Cost reduction methods

Comments

In the light of the results of the same analysis performed in respect of implementation of the recommendations[2] at the Interactive 99 Workshop, it was pointed out that the efficient use of existing technologies has a direct impact on the subscription fees paid by Internet users. Seeing that only 6% of the countries apply that recommendation, there still might be significant potential for cost reduction, unless the proposal is perhaps not applicable in some countries.

[2] Worldwide survey.

In 94% of the countries in the Americas, the end-user monthly average price for an Internet subscription is less than USD 50, and already in 25% of the countries the price is lower than USD 20. As a comparison, USD 20 is also the end-user monthly average price in the USA (source: Communication of the ACM, June 1999, Vol. 42, No. 6).

Some 56% of the countries have only one provider for leased lines. All the other countries have at least three providers, of whom at least one has its own infrastructure.

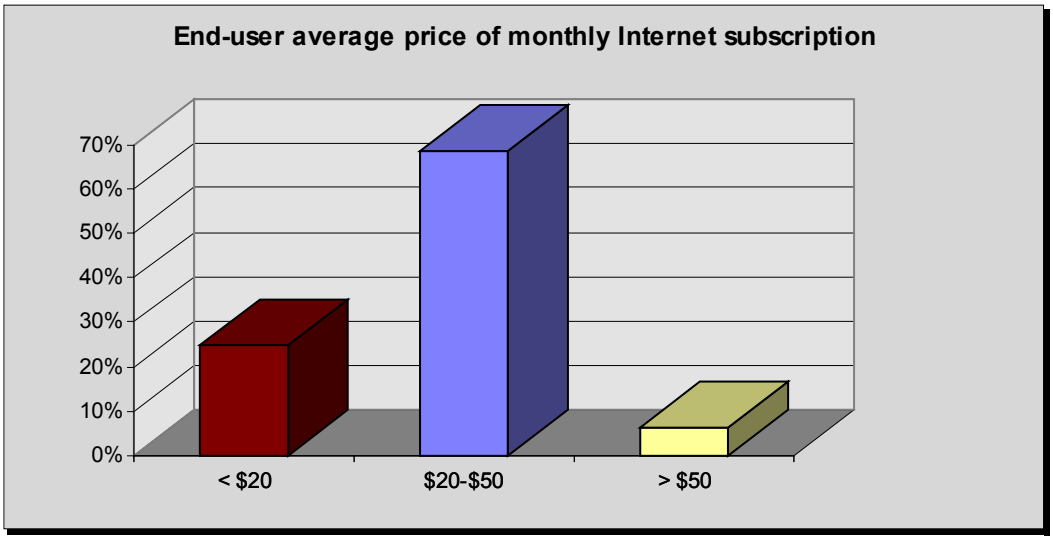

Figure 10 – End-user average price of monthly Internet subscription

The majority of countries agreed on the fact that a competitive market at all levels of Internet provision (equipment, leased lines, ISPs, etc.) would be beneficial in terms of end-user costs. Indeed, most of the countries are already moving in that direction.

As mentioned after the survey made at Interactive 99, liberalization of the ISP market alone is not sufficient to drive Internet monthly fees down to their costs.

The lack of competition on international gateway markets, which is a major determinant of ISP costs, may explain the higher fees on markets that are only ISP-liberalized. If ISP markets and international gateways are not both liberalized in parallel, ISPs suffer from the abusive monopoly position exercised by the monopoly operator in the upstream market (the international gateway market) and there is no guarantee of low, cost-driven access charges.

Thus, the charges applied by the backbone service providers – induced by the liberalization of the international gateway market – play a crucial role in driving down Internet access charges for end-users. In order to achieve low Internet access charges, therefore, international gateway markets must also be liberalized.

3.2.3 Recommendation aimed at generating new value for promotion of the Internet

Objectives

One recommendation suggested that the Internet is not an end in itself and that the objective is not to create content but to create value.

The following key criteria are used for the evaluation:

- Creation of a competitive market for Internet service provision
- Creation of a competitive market for the provision of leased-line services
- Encouragement of favourable tariff strategies in the public telephone network

- Promotion of applications (e.g. virtual e-mail addresses for all students)
- Use of government/academic procurement to prime the Internet backbone network
- Collaboration with neighbours to establish regional Internet hubs
- Encouraging the creation of local content.

Results of the Survey

All the countries that answered the questionnaire (100%) provide access to the Internet. Different activities have been key components of the Internet development and promotion process:

Create a competitive market for Internet service provision	78%
Create a competitive market for the provision of leased-line services	53%
Encourage favourable tariff strategies in the public telephone network	61%
Promote applications	39%
Use government/academic procurement to prime the Internet backbone network	11%
Collaborate with neighbours	17%
Encourage the creation of local content	22%

Table 9 – Promotion methods

Comments

Governments promote the use of the Internet directly, for example by promoting telecentres or cybercafes and creating network access points.

According to the survey, all the countries provide access to the Internet, but identify major barriers to further development of the Internet in rural areas:

- Difficult access to the network and equipment in rural areas. Geographical location, ground communications infrastructures, climate, distance from economic centres, among others, are decisive factors in determining the cost of creating access points in rural areas.
- Cost of communications. The price of access to and use of the Internet is in general too high. On the one hand, the price should be set so as to produce sufficient revenue to yield a profit; on the other, the average income of people in the rural areas cannot generate sufficient revenue to find investment in upgrading the infrastructure and services.
- Education. Many people are unaware of both the technology and functionality of the Internet. Several countries are already promoting the installation of PCs and Internet access in schools. Outside academic circles, the number of cybercafes, and telecentres is also significantly increasing.

Another item of the survey reveals that 61% of the countries are promoting connectivity and raising awareness in order to demonstrate the value of the Internet. Indeed, the Internet can be used to solve everyday problems and meet basic needs such as clean water, rural health, etc.

The major promotion schemes consist in the installation of PCs and Internet access in schools, the creation of telecentres and the allocation of subsidies to companies installing PCs and Internet accesses.

3.2.4 Recommendations aimed at increasing collaboration with neighbours

Objectives

It was recommended that collaboration between neighbouring countries within subregions and regions should be expanded. The use of regional Internet societies, associations and conferences should be promoted. The recommendation also suggested that small countries may achieve economies of scale by uniting efforts with neighbouring countries in order to constitute a more attractive market to equipment vendors. Also, within a given country, a similar economy of scale could be achieved by negotiating multi-annual contracts with potential suppliers.

There are various facets to the application of this proposal – the use of regional Internet societies, associations and conferences; uniting efforts with neighbouring countries; and multi-annual contracts with suppliers.

Results of the Survey

% of the countries collaborating with neighbours by uniting efforts	22%

Comments

In the survey, the countries highlight the main barriers to efficient collaboration between neighbours' countries, as follows:

- Incompatibility of costs and cost-sharing. Each country may have different billing and cost policies that make the comparison of costs difficult.
- No global study available: different markets. Markets may differ from country to country, making global study difficult.
- Ignorance of neighbours' concerns. The Internet may facilitate sharing of information.

Even if the countries encounter difficulties in collaborating, 74% of them (see section 2.5.3) do however share information. This is the first step towards better collaboration.

3.3 Summary

Figure 11 presents an overview of all the recommendations for the development of the information society. Figure 12 orders the recommendations by the degree to which they are adopted by the countries.

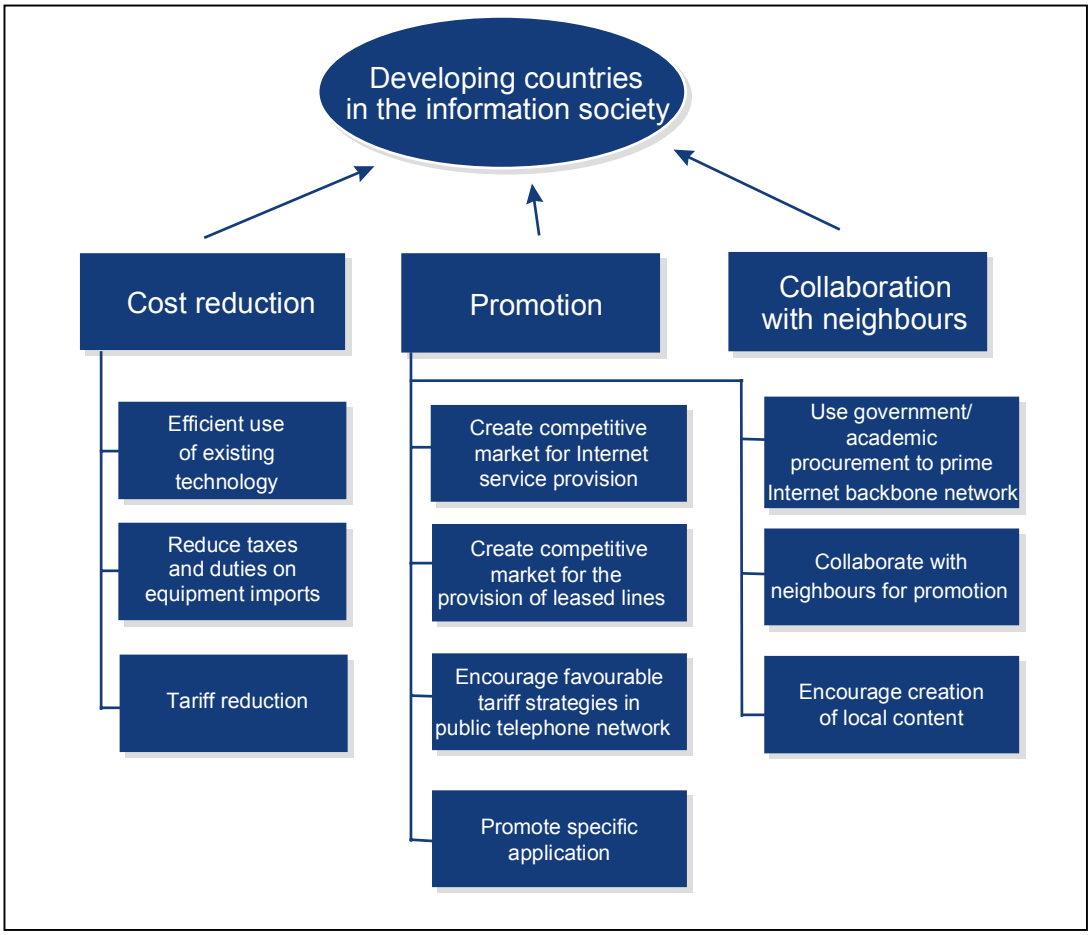

Figure 11 – Summary of recommendations for development of the Internet

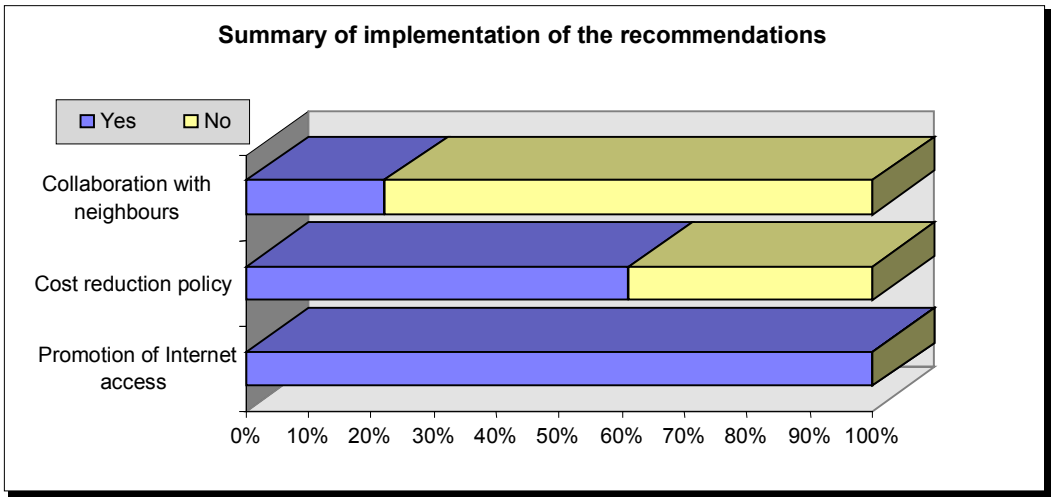

Figure 12 – Overall acceptance of the recommendations

4 Conclusion

From the analysis of the survey, it can be concluded that the direction of the recommendations identified at AMERICAS 96 was in tune with the real situation and telecommunication activities in the countries of the Americas. Of course, on account of economic, social and geographical differences, certain recommendation implementation means are not suited to all countries.

The Union is conscious that 45% of countries did not respond to the survey questionnaire and that the overall 61% positive rating can still be improved upon, and has already identified measures to enhance the communication process between the Union and its membership and knowledge of available publications. Moreover, based on the two collaborations with Ernst & Young for the implementation analysis of the recommendations made at TELECOM 95, Interactive 97 and AMERICAS 96, ITU is currently reviewing several processes to work on, in order to improve its efficiency for better responding to its membership's needs and expectations.

At ITU TELECOM AMERICAS 2000, participants will have the opportunity to actively share experiences, as well as learn more about many new technologies for infrastructure, services and applications that can, without a doubt, provide most of the countries with interesting alternatives.

Welcome to ITU TELECOM AMERICAS 2000.

Fernando Lagraña
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