GLOBAL INFORMATION SOCIETY WATCH 2008

Focus on access to infrastructure

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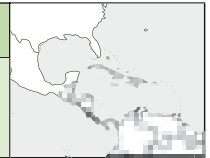
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Introduction

According to the Constitution of Costa Rica, education, health, electricity, water and telecommunications are all universal public services. This policy, supported by a "solidarity state",[1] has resulted in power supply (91%) and land-line telephony coverage (65%) that ranks among the highest in the world.

Until now, telecommunication services have been a state monopoly handled by the Costa Rican Electricity Institute (ICE) and its subsidiary Radiográfica Costarricense (RACSA), the state-run internet service provider (ISP). Throughout the years, Costa Rica has carried out several pioneering efforts – some more successful than others – targeted at guaranteeing universal access to information and communications technologies (ICTs) for all citizens:

- Twenty years ago, the Educational Informatics Programme established computer labs in elementary and secondary schools to integrate computer use in the curriculum. However, a significant number of these laboratories are not connected to the internet, hindering the programme's pioneering potential. It has already been surpassed by other Latin American countries, where initiatives that started later have been able to provide connectivity.

- Since 2002, the costarricense.cr initiative has provided each Costa Rican citizen with a free email account and a personal website linked to their identification document number.

- The programme Communication Without Frontiers established public access points in post offices, banks and municipal government offices throughout the country.

These state-supported initiatives have had a positive impact on the country's position in Latin American ICT rankings. Several indicators from the Global Information Technology Report 2006-2007 produced by the World Economic Forum (WEF) illustrate this fact (see Table 1).

General position of the country

The investment in education as a universal right has had an impact on the population and shows in things like the level of the education system, the availability and quality of research centres, and the number of researchers and engineers. A country's educational quality has a bearing on its strategic uses of ICTs. As a result, it is included as a determining factor in the WEF report.

Costa Rica has a very good position regarding internet users and computers per 100 inhabitants, unlike broadband use. However, in the Cisco Broadband Barometer compiled by the Costa Rican High Technology Advisory Committee (CAATEC)[2] between December 2006 and December 2007, broadband penetration grew by 50%. This growth was experienced mainly in Costa Rican homes, followed by businesses. Little growth was experienced in educational centres and the public sector. Broadband also experienced greater growth in metropolitan areas compared to rural areas.

The indicators for telephony and internet servers place us at number one in the region. The figure for mobile subscribers is from 2004, and since then the percentage has more than doubled, with mobile networks reaching 57% of the population.

These data indicate that the universal access model was well on its way when the analyses were conducted. However, 2007 marked a radical change in access to ICTs for the Costa Rican population, owing to the adoption of the Central American Free Trade Agreement (CAFTA) between the United States (US) and a number of Central American countries, including Costa Rica. This substantially modifies Costa Rica's development model, especially regarding connectivity legislation included in CAFTA: the General Telecommunications Law and the Law to Strengthen and Modernise the Public Entities of the Telecommunication Sector.

Key transformations in the regulation of the telecommunications sector

It is too soon to precisely establish the effect that CAFTA will have, but ICT access will be unequivocally and strongly affected, as well as the information, communication and knowledge processes for different social groups.

CAFTA opens up the market in the three most profitable areas that the ICE controlled under the state monopoly model: mobile telephony, internet and networks. Telecommunication services change from being a public service sustained by the state, to being a service available to the public, sustained by the market. As a public service, they were cross-subsidised: the bigger consumers paid above-market prices to guarantee basic subsidised rates for people with fewer resources. With CAFTA, prices will answer only to the market, and only those with the resources to pay will be able to access the services.

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1 The term "solidarity state" refers to the policy that those who have more pay more to subsidise those who have less. In this way universal access to basic services can be achieved.

2 www.caatec.org

Table 1: **Costa Rica's ICT access status**			
Indicator		Ranking within the LAC sample*	Ranking within the global sample (122 countries)
Infrastructure environment			
Telephone lines	32.09 per 100 inhabitants	1	38
Secure internet servers	61.7 per 1 million inhabitants	1	30
Availability of scientists and engineers	4.95 (from 1 to 7)	2	37
Quality of scientific research institutions	4.24 (from 1 to 7)	2	38
Individual readiness			
Quality of education system	4.12 (from 1 to 7)	1	40
Quality of public schools	3.73 (from 1 to 7)	1	50
Internet access in schools	3.08 (from 1 to 7)	9	81
Cost of mobile telephone call (USD)	0.05 per 3 minutes	2	27
Cost of broadband (USD)	2.06 per 100 kilobits per second (Kbps)	5	55
Individual usage (based on 2004 data)			
Internet users	25.42 per 100 inhabitants	1	45
Personal computers (PCs)	21.83 per 100 inhabitants	1	33
Broadband internet subscribers	0.66 per 100 inhabitants	10	60
Mobile telephone subscribers	25.45 per 100 inhabitants	17	87

* The Latin America and Caribbean (LAC) sample includes Chile, Uruguay, Mexico, Brazil, Argentina, Peru, Venezuela, Paraguay, Ecuador, Dominican Republic, Jamaica, Barbados, El Salvador, Panama, Colombia, Nicaragua, Bolivia, Guatemala, Honduras and Suriname.

Source: **World Economic Forum**, *The Global Information Technology Report 2006-2007*

The functions of the Public Services Regulatory Authority (ARESEP), whose job it was to regulate public services and guarantee universal access, as well as those of ICE, which was responsible for implementing technical projects to fulfil ARESEP's mandate, have changed substantially. ARESEP will now regulate competition in the telecommunication market, and ICE will be just another service provider in the market. According to projections made by specialists, in five years' time ICE will lose 66% of its market share.

The principle of universal access to energy and telecommunication services is not compatible with market competition. Private providers will not operate at cost, much less subsidise populations that do not have the resources to access private services, because they are purely profit-oriented.

The purchasing power of the population is unequal, and the solutions proposed to solve this problem are remedial policies and programmes that give special conditions to the population sectors with the greatest need, particularly through a fund to attend to poor sectors called the National Telecommunications Fund (FONATEL). But this mechanism has already been tried unsuccessfully in other Latin American countries and has had little impact on providing access to ICTs for the most excluded population groups.

Moreover, following the rules on the dominant provider, it has been established that ICE's current infrastructure, built through years of public investment, will be used at cost by the enterprises that come to compete in the telecommunications market (Article 61, General Telecommunications Law). Costa Rica has excellent telecommunications and electricity infrastructure which has been developed by the state – that is, with the contributions of all Costa Ricans.

Although one might assume that the Costa Rican market is small – since it is a small country with a population of just over four million – it is a very dynamic market, precisely due to the high investment in infrastructure. Already other private enterprises working in Central America have expressed their interest in participating in the national market: Telefónica from Spain, América Móvil from México and Millicom from Sweden.

It is crucial for people and organisations interested in the social aspects of ICTs to monitor and follow up the deep changes that CAFTA and its telecommunications chapter will produce in the ICT access area, and amongst the Costa Rican population.

ICT access in the Costa Rican home

Table 2 illustrates coverage of different ICTs, both digital and non-digital, based on a 2006 household survey with a special ICT component (INEC, 2006).

Non-digital ICT	Coverage of total population	Urban	Rural	Digital ICT	Coverage of total population	Urban	Rural
Electricity	99.1%	99.9%	98%	Mobile	56.4%	65.1%	43.1%
Radio	84.9%	87.7%	80.8%	PC	28.2%	36.8%	15.2%
Television	93.7%	96.1%	90.1%	Internet access	9.8%	13.9%	5.2%
Land-line telephony	64.4%	74.4%	51.8%				

Table 2: Home access to ICTs

Source: **INEC (2006)**

Access to electricity, radio and television is widespread in Costa Rica. Even in an analysis by geographic region, access to the three services is similar in all regions, which is very uncommon in poor countries. This is related to the solidarity state model mentioned above.

However, there are important differences in rural and urban coverage for digital technologies, measured by the availability of computers and the internet. Nevertheless, the tendency is towards an increase in access to these tools. Since 2004, the consultancy firm CID Gallup[3] has been conducting studies for RACSA regarding access to technology in Costa Rican households. For 2008, the study indicates that 39% of households have a computer, which means that in two years there has been an increase of 11 percentage points in the availability of computers. Regarding connectivity, only 44% of the PCs are connected, which represents 20% of households, and a growth of 10 percentage points between 2006 and 2008.

According to a study by the University of Costa Rica's Programme on the Information and Knowledge Society (PROSIC), 90% of the country's young students use the internet, a percentage that grows to 99% for students between the ages of 21 and 24 (PROSIC, 2008). As in other countries, the digital-based technology that has had the greatest growth regarding coverage is mobile telephony, reaching 57% of the population.

According to 2007 data from ICE,[4] Costa Rica ranks third worldwide in individual mobile use (with an average monthly use of 181 minutes per client). Regarding the cost of a call, Costa Rica has the cheapest rate in Latin America and ranks 27th in the world (WEF, 2007). Two aspects have a bearing on this: the cost of the call (USD 0.04), and the fact that within the country mobiles can communicate without network restrictions and with a single rate regardless of where you are in the country.

Mobile messaging (texting) is even more common among Costa Ricans; the cost (USD 0.0027) together with the level of coverage has made this a popular form of communication. Between 2003 and 2006, texting increased 2.5 times, reaching an average of 252 messages per user per month.

Regarding ICTs and income analysis, households with larger incomes have a lot more access to ICTs. For example, in terms of mobile access, the highest income quintile shows a percentage of 86% and the lowest quintile 24%. The presence of computers in households follows a similar pattern: only 5% of the lowest-income households have a computer and none have connectivity, whereas 63% of the highest-income households have a computer and 30% have internet (PROSIC, 2007).

The CID Gallup report indicates that in households with internet connectivity, an average of three people use the internet. However, the same people often connect in public spaces such as study centres, office/working spaces and internet cafés.

It is worth mentioning the importance of the public use of ICTs. Internet cafés are particularly important, since there are over 800 of them in the country and they fulfil a major role in providing ICT access at low cost for communities.

Action steps

Due to the CAFTA-related changes in legislation, it will not be possible to know if the solidarity state model that supported access to ICTs as a universal right would have had the same impact as it did on other essential services in Costa Rica (such as electricity, education, land-line telephony and water, for example). It will be very important to monitor transformations in telecommunication services, and determine if the market will provide better services to the citizens than the universal access model that was being developed in the country. This is a good case study, since there is a baseline and historic documentation to which the future situation can be compared.

There are other countries with examples of good practices and lessons learned that Costa Rica should take into account before making drastic changes, especially regarding the use of telecommunication funds.

It will be difficult to sustain the idea of universal access to telecommunication services in the framework of market competition. However, it would be interesting to test some possibilities, and encourage citizen and civil society participation in this discussion. An orientation towards the social use and appropriation of ICTs is a good way to think about future actions. ∎

3   www.cidgallup.com

4   www.grupoice.com/index.html

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GLOBAL INFORMATION SOCIETY WATCH 2008 is the second in a series of yearly reports critically covering the state of the information society from the perspectives of civil society organisations across the world.

GLOBAL INFORMATION SOCIETY WATCH or **GISWatch** has three interrelated goals:

- **Surveying** the state of information and communication technology (ICT) policy at the local and global levels

- **Encouraging** critical debate

- **Strengthening** networking and advocacy for a just, inclusive information society.

Each year the report focuses on a particular theme. **GISWatch 2008** *focuses on access to infrastructure* and includes several thematic reports dealing with key access issues, an analysis of where global institutions stand on the access debate, a report looking at the state of indicators and access, six regional reports and 38 country reports.

GISWatch 2008 is a joint initiative of the Association for Progressive Communications (APC), the Humanist Institute for Cooperation with Developing Countries (Hivos) and the Third World Institute (ITeM).

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2008 Report
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