



## Peru: The Battle for Control of the Internet<sup>1</sup>

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# Introduction

Someday you could turn on your computer, click on a link to a website that someone recommended and get a message like this from your internet service provider:

"This site is not available with the basic service plan. To subscribe to premium service, please call 0-800-555-1234."

Then you might try to visit the website where your family uploads and stores photos and videos and get this message:

"This service is no longer included as part of this service plan. Click here for access through the low-speed public network or click here to find out about the other plans we offer."

Can you imagine a day when there are two kinds of internet networks, one open and public and the other closed and exclusive, similar to free-to-air television channels and cable television channels? Can you imagine only being able to access certain websites or online applications by paying extra for a specific internet access service, like the "premium" channels on television? Can you imagine having to pay an internet company extra so that your company's website or your blog can be seen by customers and readers?

Who could even think of turning the internet into something so much like television? Where did this idea come from? What are the reasons behind it, and what would be the consequences?

The debate between those who want the internet to remain open and unfiltered (net neutrality supporters) and those who propose the use of network management systems to make more efficient use of the network (network management supporters) covers a wide range of issues. For those who support net neutrality the issues at stake run from market concentration and the possibility of a single company gaining majority or even monopoly control over the market, to issues related to freedom of expression and obstacles to innovation, competition and universal broadband access.

On the other hand, advocates of network management place emphasis on making better use of existing networks to prevent congestion, providing every user with the service and quality that they are paying for, and the possibility of generating revenues that can be used to finance the expansion and technological upgrading of networks, to convert them into new generation networks capable of supporting broadband services.

We will address each one of these issues below, but will begin by presenting the necessary background and context with an overview of fifteen years of telecommunications sector reforms in Peru.

# 1. Telecommunications reform in Peru

On 16 May 2009, it was exactly fifteen years since the signing of concession contracts between Peru and Spanish telephony giant Telefónica, which marked the culmination of one of the most controversial privatisation processes in the country's history. The controversy was sparked, on the one hand, by the surprising price paid by Telefónica, and on the other, by the public's steadfast opposition to the deal: only 31% of Peruvians believe that privatisation was beneficial. (Latinobarómetro, 2007)

The sector is currently facing profound changes owing to the development of broadband services and the convergence of networks and services. In recent years, a growing number of voices and proposals have been raised regarding the focus to be adopted by public policies to guide and facilitate this process of change. Some promote market concentration, vertical integration and temporary or permanent deregulation as a means of spurring investment in infrastructure by telecommunications operators.<sup>3</sup> Others advocate free competition and open access to networks, calling on the state to play an active role in safeguarding competition.

## Privatisation

After a long period (1931-1970) of private sector management by International Telephone & Telegraph (ITT), fixed-line and long-distance telephony services were transferred to state management from 1970 until 1994. During this period, the foundations were laid for the development of a public service considered to be "of national interest" and the principle of universal service was adopted. Throughout these years, the Peruvian state made significant investments in order to expand service and achieved growth from just over 142,000 telephone lines in 1970 to the 640,000 lines that were included in the privatisation package in 1994. (Zegarra, 2005)

Nevertheless, despite the considerable efforts made by the state, telecommunications sector indicators in the early 1990s were less than encouraging, largely as a result of cross-subsidising of services, the lack of competitive pressure, high equipment costs, the use of telecoms services for political/electoral purposes, and the poor quality of service. (Coopers & Lybrand, 1993) Adding to these difficulties was the economic crisis of the 1980s and the government's decision to stop paying its creditors, which led to the loss of sources of financing for investments.

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<sup>3</sup> The highly publicised case of Telefónica de España requesting a "regulatory holiday" to avoid sharing its fibre network has raised this debate to the level of a European Community dispute.

The reform process, promoted by multilateral institutions like the World Bank and International Monetary Fund, was a response to a series of factors, in which technological developments that challenged the idea of a natural monopoly played a decisive role. (Gallardo, 2000; Wallsten, 2001). These technological advances essentially made room for competition in telephony services, which meant it was no longer necessary to continue maintaining state-controlled monopolies.

At the same time, as the markets in the developed countries matured and more competitors started entering the field, the big telecommunications companies began to seek out new business opportunities in emerging markets. (Wellenius, 2005) Backed by investment bankers and consulting firms, they exerted pressure to promote the privatisation of public enterprises. (Gallardo, 2000)

Unlike the case in the developed countries, the reform process in Peru faced a series of limitations: insufficient infrastructure, obsolete technology, a scarcity of human resources, little or no information on the state of telecommunications companies, a weak financial market and a fragile legal and institutional framework. This situation increased the perception of risk on the part of investors and led the government to offer greater guarantees for investments in concession contracts. (Spiller, 2005)

The official objectives of privatisation (CEPRI Telecom, 1994) were: (i) to expand telephone service, (ii) to improve the quality of service, (iii) to promote competition, (iv) to not hinder national security and (v) to attract major investments. Nevertheless, given the economic and credibility crisis the country was facing, the objective of collecting revenues significantly influenced the process. (Gallardo, 2000; Cannock, 1997)

For this reason, the government decided to maintain an integrated monopoly (local and long-distance telephony) and established a five-year period of exclusivity, during which tariffs would be gradually adjusted to eliminate cross-subsidies. (Gallardo, 2000)

As a result, the state received a high transfer price (USD 2.002 billion) but this also led to high tariffs for users and limited the emergence of innovations. (Razo, 2007) The market lost the flexibility needed to adapt to a changing environment.

## **Expansion**

While it is true that there was significant growth in the number of telephone lines and the volume of investments after privatisation took place, this growth cannot be entirely attributed to privatisation. In fact, in countries that maintained state monopolies, such as Costa Rica and Uruguay, there were similar or even higher rates of growth than in Peru. (Gallardo, 2000; Rozas, 2005; Razo, 2007)

Fixed-line telephony service grew to 2.7 million lines in 2007. However, this growth has not

been constant: during the first years of exclusivity the average annual growth rate was 19.5%, but in subsequent years this dropped to only 6.2%, which was even lower than the average growth rate during the period 1970-1993 (6.7%), when telecommunications companies were under state management.<sup>4</sup>

In general terms, the estimations of the demand for service made by Coopers & Lybrand<sup>5</sup> were correct, although the pace of growth was not as projected.<sup>6</sup> This difference could be because the unsatisfied demand in 1994 was greater than estimated at the time of privatisation, or because of the business strategy of using the period of exclusivity to capture clients, with the aim of reducing incentives for the entry of competitors.

A similar situation was seen with regard to the company's investments: during the first five years, average annual investments totalled USD 671.6 million, but in the next five years, annual investment dropped to less than a quarter of this amount. (OSIPTEL, 2005) The average annual growth of lines in service between 1998 and 2002 was a mere 1.6%, and there was even a year (1999) when negative growth was recorded (-3%).<sup>7</sup>

According to official figures, by late 2007, 70% of Peruvian households still lacked telephone service, which is a reflection of the prevailing conditions of social exclusion and centralism in Peru. While close to 60% of households in Lima have telephone service, only 1.7% of rural households<sup>8</sup> have had the opportunity to connect to the telephone network, (INEI, 2008) leaving them no other alternative than public telephones and, more recently, mobile phones.

## Competitiveness

Another objective sought through the development of the telecommunications sector is the promotion of competitiveness. Communications facilitate business activity by allowing for greater interaction between market actors and access to information, thus lowering transaction costs. This leads to a more competitive economy.

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<sup>4</sup> See Figure 2. Annual rate of growth in fixed-line telephony service by period.

<sup>5</sup> The consulting firm that advised the Peruvian government during the privatisation process.

<sup>6</sup> See Figure 1. Projected and real expansion of fixed-line service.

<sup>7</sup> It should be noted that this slowdown is consistent with global trends following the internet bubble, when capital investment declined by close to 50% between 2000 and 2003 in the developed countries (OECD, 2009).

<sup>8</sup> According to figures from the most recent census (2007), the rural population of Peru represents 24.1% of the total population.

When the privatisation process began, Peru had the lowest fixed-line teledensity rate in South America, ranking in tenth place. (CEPRI Telecom, 1994) By 2007, Peru had moved up to eighth place, ahead of Paraguay and Bolivia.<sup>9</sup>

However, if we consider the region as a whole, we see that the difference between Peru's fixed-line teledensity rate and the regional average is actually greater today than it was in 1993. In other words, in comparative terms, Peru is further from the regional average today than it was before privatisation.

Similarly, if we compare the development of fixed-line telephony relative to growth in GDP per capita between 1993 and 2007, we find that Peru, despite registering significant economic growth, has not managed to match the rise of GDP per capita with a similar rise in teledensity and remains below international levels.<sup>10</sup>

## Competition

As we mentioned earlier, technological innovations made the concept of a natural monopoly in the telecommunications sector obsolete, and this justified a reform process aimed at opening up the market to competition.

However, the privatisation model adopted by Peru, which chose to maximise the income earned through the transfer of operations, has significantly limited the development of free competition in almost every market of the telecommunications sector.

The privatisation process allowed Telefónica to operate in all markets, and the resulting vertical integration has allowed Telefónica de Perú to become the biggest operator in the majority of the country's telecommunications services. (Martínez, 2007)

In 1998, the period of exclusivity ended and the telecommunications market was opened to competition.<sup>11</sup> This process took place in conjunction with the renegotiation of concession contracts. Policy guidelines for the development of the sector were established, including the lifting of certain administrative entry barriers with regard to the granting of licences and concessions to new operators, and the postponement of the application of the productivity factor to Telefónica del Perú. This policy reform also modified the definition of local areas,

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<sup>9</sup> See **¡Error! No se encuentra el origen de la referencia.** Fixed-line teledensity in South America.

<sup>10</sup> See Figure 3. Regional comparison, teledensity vs. per capita GDP, 1993.

<sup>11</sup> Supreme Decree 020-MTC-1998

expanding them to the size of departments.<sup>12</sup> This abruptly changed the conditions of access to the market, thwarting companies that had begun developing business plans to enter and compete in the long-distance service market. At the same time, a system for the pre-selection of a long-distance service provider was established, stipulating that the “default” long-distance provider would be the same as the one providing fixed telephony service. This helped Telefónica to maintain a considerable share of the long-distance market, which was highly dynamic and showed significant potential for the entry of competitors.

These guidelines were modified in early 2007, adding a new series of objectives to consolidate competition, reduce the infrastructure gap and expand service towards rural areas.<sup>13</sup>

While it is true that there are a number of different companies operating in the Peruvian telecommunications market, it is important to keep in mind that it is still a highly concentrated market. In late 2008, a single company (Telefónica) and its subsidiaries controlled 96% of the fixed-line telephony market. Its next closest competitor was Telmex, with a mere 2.61% market share. It also controlled 91% of the public telephony market, followed by Gilat to Home and Telmex with only 4% and 3% respectively; 80% of the cable television market, followed by Telmex and DirecTV with barely over 0.6% each; and 63% of the mobile telephony market, followed by Claro with a 34% market share. In addition, the Telefónica group controls 70% of outgoing international internet traffic, 68% of national traffic, and 96% of internet service subscriptions. Whichever way you look at it, telecommunications reform has obviously waged few successful battles to promote competition.

## **A new battlefield**

The convergence of networks and services is transforming the logic of the sector. The importance of internet-based services within the range of services commonly used by the public is becoming more evident every day. The internet has been a space for innovation and the launching of new services. Some of these, such as Skype, BitTorrent and YouTube, have become huge phenomena that have attracted the attention of not only users, but also companies and regulators.

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<sup>12</sup> At the time Peru was divided into 24 departments (which have since been renamed regions). Ç

<sup>13</sup> Supreme Decree 003-2007-MTC



Internet-based services, also called information services,<sup>14</sup> are being carefully eyed by operators who see them as a competitive threat. This has led to the emergence of demands to implement schemes for price discrimination, prioritisation and control of content and applications. This would mean eliminating the principle of neutrality that has characterised the internet since its birth.

## 2. The neutral nature of the internet

The concept of neutral networks is nothing new and has in fact resulted from a process of technological evolution characterised by taking the intelligence of networks increasingly closer to the edges, in other words, increasingly closer to users. One clear example is that of telephones, which have gone from being a simple device operated with a rotary dial and a minimum of power to the highly complex systems of today's mobile phones. The same thing has happened with computers, which began as huge data-processing mainframes accessed through "dummy terminals". Today's personal computers have hundreds of times more processing capacity than the mainframes of years past. Thus the intelligence or processing capacity is being taken to the edges, leaving at their centre a network that does nothing more than transfer information from one side to the other. It does not process this information, it does not analyse it, it simply transports it, no matter what kind of information it is, or what it says. It is in this sense that networks are neutral with regard to the information they handle.

This neutrality, therefore, translates into a concept of equity, since all services that are provided through the network would have the same rights and thus the same opportunities when sharing bandwidth, whether the service is electronic mail, a funny video, a scientific journal, or a voice conversation: they are all transported by the network in an equal manner.

The neutral nature of the internet has enabled the development of applications that currently predominate on it, from the World Wide Web developed in the early 1990s to the more recent Web 2.0 applications (YouTube, Facebook, Flickr, etc.) which facilitate interaction among users and have made the internet a more dynamic and participatory network.

This upsurge in participation, however, has become a concern for network operators as they watch traffic growing exponentially, and has led them to take actions to guarantee the quality of the service they provide their customers in the event of network congestion. It is these actions that have sparked the debate around "net neutrality".

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<sup>14</sup> A term used in the United States and imported into the developing countries through free trade agreements.

This debate encompasses a wide range of issues, such as discrimination, control, censorship, blocking of applications, innovation, unfair competition, transparency, equity and quality of service, among others.

## **Positive discrimination?**

Telecommunications operators stress that discrimination, when it involves the offer of different products and services, is actually beneficial for the market, because it allows users to choose the service that best meets their needs. (Telefónica, 2008) Generally, experts believe it is proper to charge an additional amount for a service with additional features or higher quality. (Hahn & Litan, 2007) However, “you cannot react in the opposite way, in other words, to keep this one from having problems, I’ll take something away from the rest; rather, it’s more like, what do I have to do to make sure the most advanced has what it needs without affecting the others,” says Eduardo Villanueva, a communications professor at the Pontificia Universidad Católica del Perú.

For Eduardo Quintana, an expert on the subject of competition, discrimination can only be justified by two things. The first is the difference in the cost of serving each user. “If the communications operator incurs a greater cost to serve a certain user and a lesser cost to serve another, then in principle it would be right to practice price discrimination, charging a higher price to users who necessitate greater costs, and vice versa, charging a lower fee to those who represent a lesser cost.” The second is elasticity of demand, in other words, in accordance with how much a user is willing to pay for a service. Economist Ana Garland concurs with this view, noting that “in reality, the discrimination is not based on the content itself, but rather according to the willingness to pay.”

Yet even when users are willing to pay more for a service, some experts believe this would still be wrong. When it comes to internet service, “it would be as if they were charging you for the value of the cargo, when what you are paying for is the right to have the cargo

transported, regardless of what it is,” says Rolando Toledo, general manager of Infoductos y Telecomunicaciones del Perú.

Operators already practice price discrimination based on bandwidth. Those who require a higher-speed service and are willing to pay for it can subscribe for service of this kind. Companies can offer different access speeds. For Tim Wu, (2003) a professor at Columbia University, internet service providers should only discriminate when it comes to things that concern them, in other words, bandwidth or the speed of connection, but not with regard to content or applications, which they do not own. Allowing service providers to discriminate based on the value that users place on communication could lead to a situation where, for example, emergency calls, instead of being free, would have an extremely high cost, since it is in emergency situations that people would be most willing to pay for communication.

(Economides, 2007)

## Right of way

Operators have stated (Telefónica, 2008) that the tools currently available for network management and administration allow them to handle situations of network congestion and avoid cuts in service. Giving priority to some services over others would make it possible for all of them to coexist during periods of congestion, since some applications require simultaneous communication and continuity of service (such as voice or video calls) whereas others do not (such as email).

Periods of congestion (real or not) have led operators to repeatedly stress the need to manage network traffic, given that a small percentage of users account for a large share of traffic. According to Telefónica Internacional, (2008) for example, "10% of users take up 60% to 90% of traffic." However, others, like Andrew Odlyzko, (2009) believe that these arguments have very little to do with the provision of adequate service and are actually a means of prorating the cost of service. In this way, operators would restrict the use of specific applications by specific clients, instead of managing traffic congestion.

One of the most-publicised cases of this kind is that of Comcast, an internet service provider in the United States that interfered with BitTorrent traffic even during periods with no congestion, yet at the same time allowed other customers using large amounts of bandwidth to continue uninterrupted in periods of peak network congestion.

In its ruling on this case, the Federal Communications Commission stated: "Although Comcast asserts that its conduct is necessary to ease network congestion, we conclude that the company's discriminatory and arbitrary practice unduly squelches the dynamic benefits of an open and accessible Internet and does not constitute reasonable network management." (FCC, 2008)

In Eduardo Quintana's opinion, "What is happening there is that they are simply saying that those who have the greatest capacity to pay have a preferential right over the others, and this would not be permitted under either of the forms [of price discrimination] we talked about earlier. Serving users who pay more does not necessarily mean that greater costs are being incurred or that you are favouring or prioritising them for the other reason, that is, elasticity of demand."

Prioritisation, however, means that internet service providers would be able to establish different levels of quality of service, granting each application the minimum quality of service needed to function. For Telefónica, prioritisation is related to fairness, because otherwise applications that require continuity of service (like online games, internet telephony or live video streaming) would be unviable.

It is highly likely that in order for certain applications to work properly in periods of congestion, users will have to pay for a better connection that guarantees the required quality of service. Lessig and Wu (2003) illustrate this idea with the example of online gaming. Obviously, these applications require a high-bandwidth connection in order to simultaneously download high-quality graphics, since the participants in the game could be anywhere in the world. Those who want a better gaming experience would have to subscribe for a higher-bandwidth connection, since this would make it unnecessary to block certain applications or provide deteriorated service. This view is shared by Rolando Toledo, who also notes that operators can develop flexible subscription plans that are different from current plans that charge a flat rate for a certain guaranteed connection speed. These new flexible plans would give customers who use bandwidth-intensive applications for specific periods of time the possibility of paying for a faster connection at the times when they need it.

Establishing standards of quality that give applications that are more sensitive to service interruption the space they need to function is one thing, but as Nicolás Economides warns, leaving this in the hands of internet service providers would open up the field to practices that could affect free competition.

### **3. Net neutrality and competition**

For Columbia University professor Tim Wu, the idea of maintaining the neutrality of the internet is closely connected with the idea of promoting competition in the telecommunications sector and fostering innovation. "The promotion of network neutrality," he states, "is no different than the challenge of promoting fair evolutionary competition in any privately owned environment." (Wu, 2003: 142)

Internet television could become a major competitor for cable television. (Lessig, 2001) Under the current circumstances, in which a single company controls both markets (internet access and cable TV), there could be strong incentives for preventing internet users from

freely and easily accessing television broadcasting online. This view is shared by Eduardo Quintana, Roxana Barrantes and Eduardo Villanueva, who all pointed out the need to be prepared to resolve potential disputes around this issue. Barrantes maintains that if this matter is not dealt with, "what you are going to get is what has happened in other areas, like the issue of the exclusivity of television broadcasting content which ends up getting blocked on an open signal," a reference to the controversial case of soccer games that could not be broadcast by DirecTV to its customers despite being an "open signal".

Villanueva, for his part, says it would be advisable to establish regulations to prevent these practices in television, although he foresees an immediate problem in this regard: "The biggest risk would be a company like Telefónica intentionally deteriorating the signal if there comes a time when there is suddenly an upsurge in parallel services." In this way it could control the birth and growth of new business models, thereby hindering innovation.

## Guarantees of neutrality

Much of the debate centres around whether or not to establish legal guarantees for net neutrality, that is to say, regulations that prohibit discriminatory practices by internet service providers.

In Peru, such a guarantee has already been incorporated into the legal framework, as noted by Tessy Torres, the oversight manager of the Peruvian telecommunications regulatory agency, OSIPTEL: "Peru had the foresight to introduce a prohibition to prevent these problems from emerging. In 2005, a regulation was adopted which expressly establishes that internet service providers cannot block or limit the use of any application at any point in the network between the user and the service provider, and this of course also covers outgoing and incoming international traffic."<sup>15</sup>

Nevertheless, it has come to light that the contracts of some operators contain clauses that assert their authority to block or limit certain uses of the service they provide. This is the case of the internet service offered through third generation (3G) technology by the mobile operator Claro, which states in one of the annexes to its service contract:

"Claro reserves the right to block certain types of internet traffic such as voice over IP [internet protocol] (for example, Skype, Google Talk, etc.), peer-to-peer traffic (for example, eMule, BitTorrent, etc.), spam and any others that it deems necessary."<sup>16</sup>

Although the regulator's records do not report any complaints filed by customers with regard to this clause, the very fact that it exists constitutes a violation of the regulations in force.

There are other cases, still not documented, involving the intentions of operators to block certain types of network traffic, more specifically, traffic related to voice over internet protocol (VoIP) telephony. This voice traffic is not prohibited in Peru, because it is considered a value-added service. However, since voice communication over the internet is not considered a real-time telephony service, (Bisso & Briceño, 2001) operators can, under the right granted to them by law,<sup>17</sup> suspend the provision of service when they detect "improper use".

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<sup>15</sup> OSIPTEL, Resolution of the Board of Directors N° 040-2005-CD/OSIPTEL Regulations on the quality of public telecommunications services, Article 7

<sup>16</sup> Claro, 3G Service Contract, Annex 6: contenidos.claro.com.pe/portal/documentos/AXO\_06.pdf Accessed 31 March 2009.

<sup>17</sup> General Telecommunications Regulations, Article 129

It should be pointed out that since the term “improper use” is not adequately defined in Peruvian legislation, operators have access to a tool for interfering with or blocking certain uses of the network at their own discretion. In fact, in an internal document entitled Policy on Acceptable Use of Internet Services, Telefónica states: “The company reserves the right to suspend or terminate the services provided, at any time and without prior notice, to customers who do not comply with this policy.” Once again, this would be an explicit failure to observe the legal framework established by the regulator:

“In the event that an operator detects improper use of the service, it will report this activity to OSIPTEL, along with the means of evidence that prove the improper use of the service by the subscriber, user or contractor of the public telecommunications services, prior to the adoption of any action [cautionary suspension or permanent termination of service] which the operator has the right to adopt.”<sup>18</sup>

In cases like these, operators are shielding themselves behind Article 56 of the Conditions of Use of Public Telecommunications Services, which states that a subscriber’s contract terminates, among other reasons, on the grounds established in the subscription contract itself. This essentially grants operators the right to stipulate in their subscription contracts, at their own discretion, specific conditions of service and rules of behaviour for internet users.

Thus Telefónica del Perú has established for its Speedy home internet service a clause that stipulates that customers are obliged to comply with the Policy on Acceptable Use of Internet Services, which states: “The customer is obliged to make use of content in accordance with the law, the present General Conditions, generally accepted moral values and good manners, and the public order.”

Through this clause, Telefónica reserves the right to penalise a customer for inappropriate use of the service and even for spreading “false, ambiguous, inaccurate, exaggerated or untimely” content, thus granting itself powers that correspond to the Peruvian administrative and judicial authorities.

In conclusion, the Peruvian legal framework reflects a clear discrepancy between the rules established by the regulator and the practices of telecommunications operators when their services are contracted.

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<sup>18</sup> Regulation establishing the procedures to be implemented by operating companies for the cautionary suspension or permanent termination of service owing to improper use of public telecommunications services, adopted through Resolution of the Board of Directors N° 060-2006-CD/OSIPTEL, 28 September 2006.

## 4. The stakeholders and the battlefield

Although the debate over net neutrality has yet to begin in Peru, the positions that have been made evident suggest that the battlefield will be set up much as it is in other parts of the world, with the internet service providers against neutrality and content providers and academics in favour.

In brief, defenders of net neutrality maintain that the internet will work better if access and traffic are clearly separated from content. In this way, telecommunications operators will devote themselves exclusively to providing access and would not be able to undertake any processes related to content, thus preventing the possibility of any sort of discriminatory practices based on that content. They believe that in order to foster continuous growth and innovation, the internet must be kept open, preserving the neutrality that makes it possible to explore the full potential of the intelligence at the edges of the network.

Those who agree with the principle of neutrality also maintain that it favours the development of competition in the newly emerging market of information services. This concept, recently adopted in the region through free trade agreements with the United States, implies an equality of conditions at the birth of this type of services: if the internet is neutral and free of discrimination, then it will be the best ideas, from the consumers' point of view, that will succeed. It will be a field for Darwinian competition, in which the fittest will

survive and triumph. (Banerjee, 2006) This would not be possible, in a highly concentrated and integrated market where internet service providers are also information service providers, if discriminatory practices were allowed, thus granting the dominant internet operator the opportunity to also dominate the information services market.

Internet operators, on the other hand, say that discrimination is not detrimental for the development of the market, since the vertical integration of internet service providers with applications and content providers can promote the differentiation of products and offerings, and these differences in internet access services can benefit end-users. Moreover, they maintain, this diversity of service offerings could mitigate the trend towards concentration of the internet service provision market and promote competition through the offering of services better suited to the needs of different consumers.

Finally, the operators say, (Telefónica, 2008) during periods of congestion, prioritisation can bring about more efficient use of the available capacity and provide sufficient signal quality to customers through differentiated prices that would orient service consumption towards better use of the resources shared by all. This in turn would promote the development of the network and its expansion to segments of the population that are still unserved.

The main concern of operators would be to prevent the adoption of laws that would enforce the principle of net neutrality – up until now it has been respected, but is not mandatory. This, they believe, would deprive them of flexibility to design business strategies for handling

the convergence of services.

These are the positions of both sides. What is needed now is to foster an internal debate in order to prevent, on the one hand, de facto practices that violate consumers' rights, and on the other, vertical and hastily adopted legislation that could lead to outcomes contrary to the desired goals, by discouraging investment, raising the price of services, and deteriorating the quality of service.

In the view of experts, although the stage for battle has been clearly drawn, the stakeholders are still not prepared to participate in it. For its part, the private sector will wait, as was the case in Chile during 2008, for an initiative to spark the debate, at which point they will emerge to oppose it. As a strategic partner in this debate, they will turn to the defenders of intellectual property, similar to what happened recently in Europe during the discussion of amendments to the European Framework for Electronic Communications. More specifically, this was the case with the "three strikes" law promoted by Nicolas Sarkozy, which would give internet operators the right to terminate the connection of users caught downloading or uploading copyright-protected material for a third time, after receiving two prior warnings.<sup>19</sup>

At the same time, unlike the case in Europe, consumers' associations in Peru are weak and lack the capacity to influence public policies and participate in debates on technical issues such as these. According to Rosemarie Sinclair of the International Telecommunications Users Group (INTUG), this would be one of the biggest obstacles to a balanced debate between consumers' associations and operators. As such, she believes it is crucial to raise awareness in the private sector, which is also an end-user of services, so that it gets involved and participates in these associations, as has happened in Australia.

## 5. Final comments

In the view of some observers, like Odlyzco (2009) and Iriarte, the problem of net neutrality is not an "internet problem", but rather just one more battle in the "never-ending conflict between efficiency and fairness," in other words, between two models of development: one based on the market, the other on the administration of public goods in the public interest. In the name of fairness, we could want everyone to have access to the internet, and free of charge. In the name of efficiency, we would have to ensure that service fees cover the long-

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<sup>19</sup> The vote taken 21 April 2009 in the European Parliament opposed the implementation of these types of initiatives which infringe on citizens' rights. For more information see La Quadrature du Net: [www.laquadrature.net/en/victory-for-eu-citizens-amendement-138-was-voted-again](http://www.laquadrature.net/en/victory-for-eu-citizens-amendement-138-was-voted-again)



term costs for the network to be sustainable and to pay for its maintenance and improvement.

This debate has been moved to new forums, as in the case of Comcast in the United States or the review of the European Framework for Electronic Communications. New battlefronts have emerged as well, related to consumers' rights to free choice, the diversification of service offerings, affordable fees and availability of access – but also the right to privacy, the inviolability of personal communications, the freedom to not be tracked or monitored, free access to knowledge and freedom of opinion and expression.

The debate over non-discrimination of internet content, also known as the debate over net neutrality, is not only relevant but crucial for the development of broadband services to benefit the social, economic and cultural development of society.

What is needed is a combination of public policies with a development perspective, accompanied by a joint long-term vision that promotes investment (public or private) in the expansion of services while guaranteeing the competitive offering of services, innovation, and respect for the rights of users, such as those contained in the APC Internet Rights Charter. (APC, 2006).

Finally, in order for this debate to produce the desired outcome, it will be necessary to build a cooperation network between civil society organisations and academia and the private sector, with the aim of reaching a minimum consensus that can serve as the foundation for the design of a strategic vision for the development of broadband services in Peru.

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# Figures

Figure 1. Projected and real expansion of fixed-line service

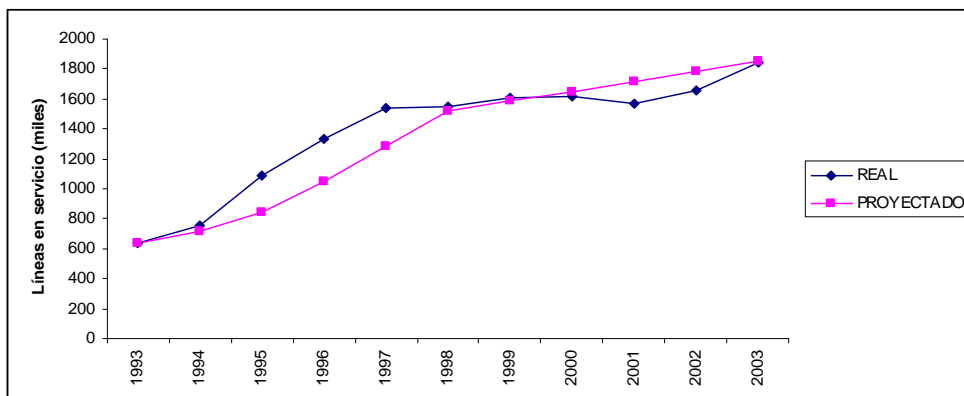
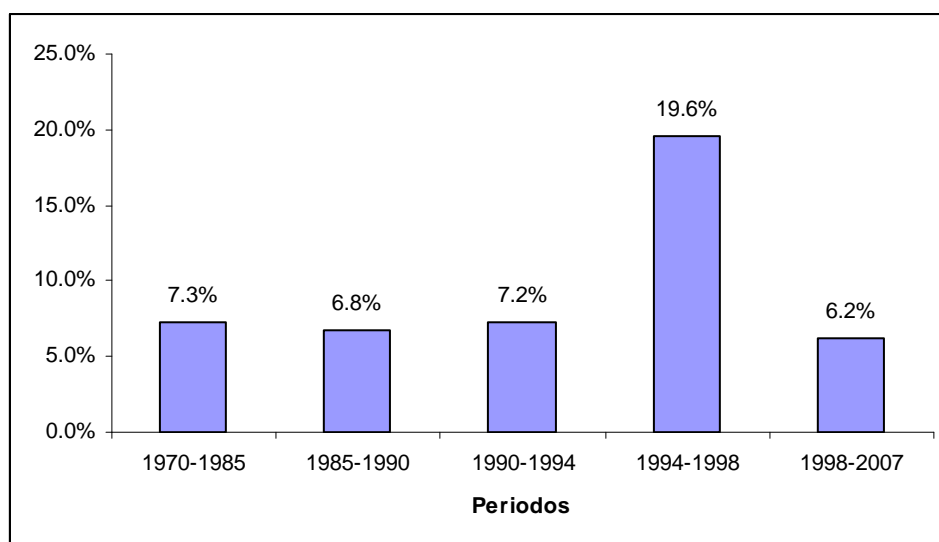


Figure 2. Annual rate of growth in fixed-line telephony service by period<sup>20</sup>



<sup>20</sup> Source: OSIPTEL, Instituto Cuanto. The 1970-1985 period corresponds to the administrations of Juan Velasco, Francisco Morales and Fernando Belaúnde; 1985-1990 to the first Alan García administration; and 1990-1994 to the Alberto Fujimori administration before privatisation. The 1994-1998 period corresponds to the years of market exclusivity or limited access, while 1998-2007 is the current period subsequent to the opening of the market.

Figure 3. Regional comparison, teledensity vs. GDP per capita, 1993<sup>21</sup>

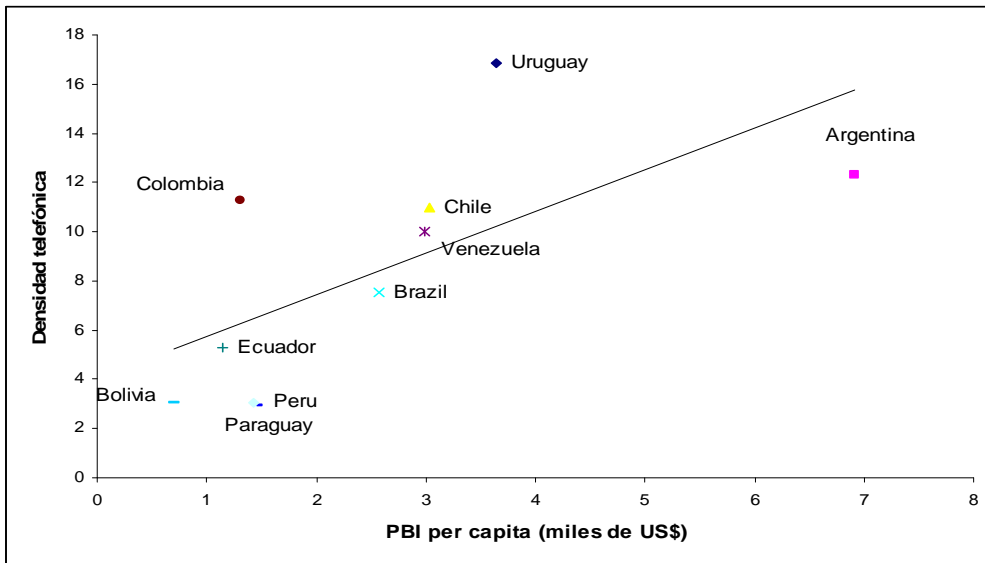
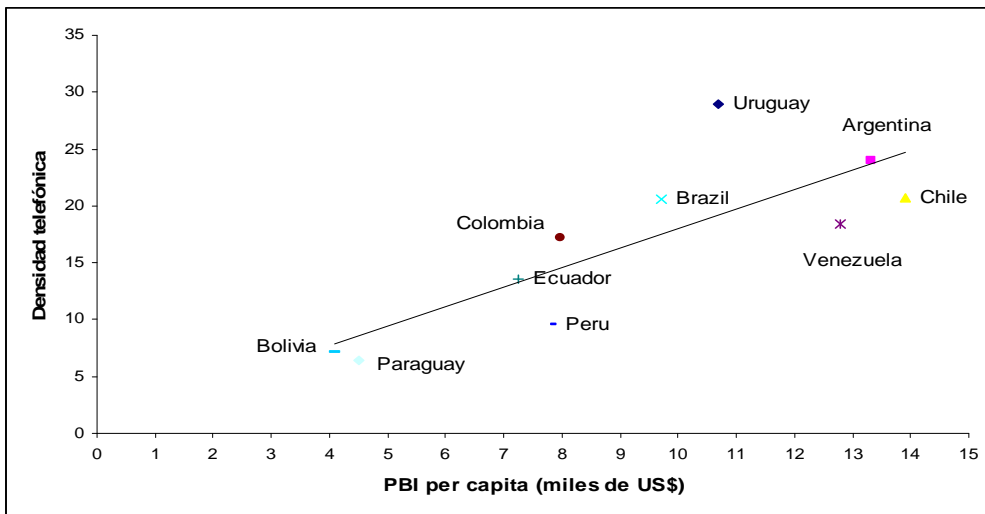


Figure 4. Regional comparison, teledensity vs. GDP per capita, 2007<sup>22</sup>



<sup>21</sup> Source: CEPRI Telecom (1993)

<sup>22</sup> Source: International Monetary Fund, ITU



# Tables

Table 1. Fixed-line teledensity in South America

		2007 <sup>23</sup>	1993 <sup>24</sup>
1	Uruguay	28.90	16.86
2	Argentina	24.03	12.29
3	Chile	20.74	11.01
4	Brazil	20.54	7.51
5	Venezuela	18.38	10.02
6	Colombia	17.19	11.27
7	Ecuador	13.53	5.3
8	Peru	9.58	2.94
9	Bolivia	7.12	3.04
10	Paraguay	6.44	3.06

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<sup>23</sup> Source: ITU [www.itu.int/ITU-D/ICTEYE](http://www.itu.int/ITU-D/ICTEYE)

<sup>24</sup> Source: CEPRI Telecom (1993)