Argentina: Investment Opportunities in the ICT Sector

Ministry of Communications

Council of the Americas, NY.
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▪ Overview of the sector in Argentina
  ▪ Starting point and government plan
  ▪ Investment opportunities
Overview of the sector in Argentina

**SECTOR REVENUES** are low and have been decreasing in real terms over the past years …

… additionally, **INVESTMENT AS % OF REVENUES** has been low if compared to that of other countries within the region.

In terms of **BASIC SERVICE PENETRATION** (fixed & mobile), Argentina is doing better than other countries in the region …

… however, Argentina is lagging behind in terms of **QUALITY AND ADVANCED SERVICE PENETRATION**.

Finally, Argentina shows **SIGNIFICANT LEVELS OF INEQUALITY** among provinces and income classes.
This situation was generated by restrictions on the demand and supply side

1. Price controls in fixed telephony.
2. Reduced competition in residential market.
3. Inefficient allocation and use of spectrum.
4. Weak execution by the regulator.
5. Difficulties to build infrastructure

6. High prices for consumers.
7. Barriers for ICT adoption by businesses and government.
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Total sector revenues have declined in recent years

<table>
<thead>
<tr>
<th>Service</th>
<th>2012</th>
<th>2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay TV</td>
<td>2.4</td>
<td>8.7</td>
<td>-10% p.a.</td>
</tr>
<tr>
<td>Mobile data</td>
<td>3.4</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Mobile voice</td>
<td>3.5</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Fixed telephony</td>
<td>1.2</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Fixed broadband</td>
<td>1.5</td>
<td>1.3</td>
<td></td>
</tr>
</tbody>
</table>

USD billions – ARS revenues converted to USD using ‘blue chip’ rates

Revenues by service

SOURCE: Ovum, 451 Research, IHS Technology, Economist Intelligence Unit, Analysis Mason, Ámbito Financiero
Argentina has high service penetration when compared to other countries in the region …

**Mobile**
% of lines / population

- 2005: 57
- 2015: 146
- 2020: 126
- 2023: 129

**Fixed telephony**
% of lines / households

- 2005: 77
- 2015: 79
- 2020: 69
- 2023: 59

**Fixed broadband**
% of subs / households

- 2005: 8
- 2015: 54
- 2020: 40
- 2023: 47

**Pay TV**
% of subs / households

- 2005: 62
- 2015: 74
- 2020: 30
- 2023: 50

SOURCE: Anatel; Subtel; IFTEL; MinTIC; Indec; ANTV; 451 Research; Telegeography; IHS Technology
... however, there is low penetration of advanced services.

**Fixed: average speed of connections**

- **Argentina**: 5.3 Mbps, 1Q 2016
- **Chile**: 7.3 Mbps
- **United States**: 15.3 Mbps

**Mobile: 3G and 4G penetration**

- **3G and 4G lines / total mobile lines, %, 2015**
  - Argentina: 50% (3G), 8% (4G)
  - Chile: 73% (3G), 5% (4G)
  - United States: 41% (3G), 58% (4G)

SOURCE: Akamai, 1Q2016, 451 Research
In addition, there are significant differences in service penetration among provinces.

SOURCE: ENACOM, Censo INDEC 2010, ITU
The ICT sector is a priority for Argentina as a key driver of economic and social progress.

ICT employment has a multiplier effect on the economy.

Connectivity as a driver to integrate the country and reduce poverty.

In Chile, increasing broadband internet penetration by 10% led to a ~2% decrease in the unemployment rate.

Columbia, R. Katz

The Ministry has defined a program for the sector centered around 5 priorities

<table>
<thead>
<tr>
<th>Regulatory framework</th>
<th>1</th>
<th>Build a modern high-speed broadband infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>Improve 3G and 4G mobile network quality</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Develop a modern framework for the digital age</td>
</tr>
<tr>
<td>Demand stimulation</td>
<td>4</td>
<td>Stimulate demand for advanced services</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Eliminate The Country's Digital Gap (&quot;Zero Digital Poverty&quot;)</td>
</tr>
</tbody>
</table>
1. Build a modern high-speed broadband infrastructure

- **Enable revenue opportunities** that will allow players in the sector to increase their investments
  - Flexible *fixed telephony* prices
  - Authorize *bundling* of TV and telecom services
- Protect and facilitate *the deployment of infrastructure*
- Create *transparency about the quality of fixed services*
2 Improve 3G and 4G mobile network quality

- Create a **multi-year plan for spectrum** (e.g., including 5G)
- **Simplify the process to invest in infrastructure**
- Create **transparency about coverage and quality**
- Facilitate **number portability** and **unlocking of devices**
Develop a modern regulatory framework for the digital age

- Establish a **modern regulation** for (non-exhaustive):
  - Media (e.g., licenses attribution, content rules, advertising)
  - OTTs
  - Net neutrality
  - Use of universal service funds
  - Interconnection and access to networks
  - Carrier registration
- Create a plan for the **transition to digital TV**
Stimulate demand for advanced services

- Facilitate access to technology by reducing the cost of internet-enabled devices
- Create incentives for the creation of digital clusters
- Promote connectivity and use of ICT by SMEs (for example: access to high-speed broadband)
- Encourage investments in the IT sector (for example: hardware, software, services)
Eliminate the country’s digital gap (“zero digital poverty”)

- Connect remote towns and cities that have deficient access to internet
- Provide access in low-income and rural / remote locations
- Design initiatives to increase awareness and use of digital services
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In this context there will be ample opportunities for growth and investment, as Argentina will need to catch up to satisfy a latent demand.

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<tr>
<th>IT Expenditure</th>
<th>Smartphone Penetration</th>
<th>Telecommunications Expenditure(^1)</th>
<th>Telecommunications Investment(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of GDP (USD), 2015</td>
<td>% of population, 2015</td>
<td>USD per capita, 2015</td>
<td>USD per capita, 2015</td>
</tr>
<tr>
<td>1,1 x2.6</td>
<td>2,2 x1.8</td>
<td>223 x7.0</td>
<td>55 x3.7</td>
</tr>
<tr>
<td>2,9</td>
<td>65</td>
<td>395</td>
<td>93</td>
</tr>
<tr>
<td>88</td>
<td>1.558</td>
<td>204</td>
<td>204</td>
</tr>
</tbody>
</table>

1 Including revenue derived from devices and telephones.
2 Not including spectrum licenses.
NOTE: Informal exchange rate as quoted on Ámbito Financiero
SOURCE: PEW Research, IDC, IHS, ITU, Ovum Research
Overview of investment opportunities

**Investments already committed by operators ...**

USD Billions, annual investments by main operators

<table>
<thead>
<tr>
<th>Year</th>
<th>Average 2016-19</th>
<th>Committed by operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5,000</td>
<td></td>
</tr>
</tbody>
</table>

... **will provide significant opportunities for growth in the sector ...**

- Fixed network equipment (upgrade in backbone and last mile)
- Mobile network equipment (current 4G rollout and future 5G rollout)
- Partner with ARSAT
- MVNOs
- Mobile towers
- Field services for network rollout and maintenance
- Upgrade to back office of operators (e.g., IT legacy systems)
- End-user devices (smartphones and tablets)

... **as well as enable opportunities in adjacent sectors**

- IT Services (e.g., cloud services)
- Software
- Hardware (computers, servers, etc.)
- Apps
- OTT content
- ICT-enabled industries
  - Health care (eHealth)
  - Education (eLearning)
  - Online banking
  - Connected home
  - Localization services
  - Logistics
Panel: Doing business in Argentina

- Iplan: Pablo Saubidet, President
- Sion: Luis Quinelli, President
- Red Intercable: Jorge di Blasio, President
- Riverwood: Francisco Alvarez Demalde, Founder and General Partner of Riverwood Capital Partners
- Moderator: Miguel Kiguel [President Econviews]
ANURA SA, Atis, Cabase, Cablevision, Catel, Catip, Cisco, Claro, Convergencia, Directvla, Econviews, Editorial Perfil, Gigared, Grupo Clarin, Huawei, IPLAN, IpTel, La Nación, Level 3, Metrotel, Motorola Solutions Argentina S.A., Nokia, Open IT, Riverwood, Sion, Telecom, Telefónica, Torressec del Grupo Innovatel, Servicio Satelital, UBS | Investment Bank., Werthein Group, ZTE Argentina
THANK YOU!