Trading our way out of trouble. Liberalisation and trade – past, current and future policy trends
Innovation and open markets have defined the development of Telefónica in the last 20 years…

**Countries**
- **1987**: Spain
- **2007**: Operations in 25 countries

**Customers**
- **1987**: About 10 million subscribers
- **2007**: About 230 million customers

**Services**
- **1987**: Basic telephone and data services
- **2007**: Integrated ICT solutions for all customer segments

**Employees**
- **1987**: Approx. 63,000 professionals
- **2007**: Approx. 250,000 professionals

**Finance**
- **1987**: Revenues: €3.2 bn, Assets: €12.9 bn, Market Cap: €2.5 bn
- **2007**: Revenues: €56.4 bn, Assets: €105.9 bn, Market Cap: €106.1 bn
...driven mainly by an expansion to Latin America

Telefónica total investment in Latin America
1990-2007 in M€

- Net direct investment: 45,604
- Infrastructure investment: 37,850
- Total: 83,454

Source: Telefónica internal data

Biggest foreign investor in Latin America
### A. Open markets and foreign investments contribute heavily to innovation

<table>
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<tr>
<th>Transfer of technology and know-how</th>
<th>Increase of competition on domestic markets</th>
<th>Providing for better economy of scale</th>
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<tr>
<td>1. Import of high-tech goods and foreign direct investments contribute to domestic innovation through transfer of knowledge &amp; better access to technology for consumers and business (“spill-over-effects”)</td>
<td>2. Multinational companies acts as “bridging institutions” by internal flow of know-how and R&amp;D</td>
<td>3. Companies investing abroad are more efficient &amp; productive than domestic ones, forcing national companies to develop better products and services</td>
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<td>Larger international markets justify and pay better of for R&amp;D expenditures (especially important for smaller national economies)</td>
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Transfer of technology and know-how
Effects of FDI on local providers

Total providers / local provider percentage of Telefónica in Latin America

More than 90% of Telefónica’s providers in Latin America are local companies

In 2007 the total purchase volume of Telefónica in Latin America was around €10 MM

Sources: Telefónica Corporate Responsibility Report, 2008
Transfer of technology and know-how
Development of customer and access numbers in Latin America
(total market figures in million, 2002-2007)

The market entry of foreign investors (Telefónica & América Movil) has been a catalyst for the development of the Information Society in Latin America

Transfer of technology and know-how
Mobile industry is moving towards Open Source Software

- Morfeo is an Open Source Software (OSS) Community
- Hosted projects aim to:
  - Define a standard application to create business opportunities
  - Help incubate R&D activities
- Success is based on a win-win relationship model between the different actors involved:
  - Large companies and operators (e.g. Teléfonoica)
  - SMEs
  - Academia
  - Public Research Centers
- Started in 2005 with €300K budget and 3 members in Spain
- Today >10M€ and 50 members and expanding to other European countries and Latin America

Technology transfers and investments in ICT provide big chances for innovation in services and applications
Flow of know-how, investments and R&D in Telefónica

R&D distribution of Telefónica by internal customers (2007)

- Telefónica S.A. (Innovation Plan): 12.3%
- Telefónica España: 50.8%
- Grupo Telefónica: 96.3%
- LATAM: 31.5%
- External market: 5.7%
- Teléfonica España: 39%
- Telefónica O2 Europa: 23%
- LATAM: 38%
- United Kingdom, Ireland, Germany, Czech Republic, China, Mexico, Brasil, Mexico, United Kingdom, Ireland, Portugal, France

30% of Telefónica’s internal R&D efforts are going to Latin American businesses

38% of total investments of €4.3 MM in technology innovation* has been made in Latin America in 2007

* according to OECD definition

R&D center with local co-operations with research institutions in Brasil & Mexico

Sources: Telefónica Corporate Responsibility Report 2008, internal information of I+D of Telefónica, Corporate presentations

11 Dec 2008 – OECD ICCP workshop on ICT & Innovation
Increase of competition
Benefits mainly for population with lower income (mass market)

Installation fee for fixed line

1. Sao Paulo:
   - from US$ 1,200 in 1997
   - to US$ ~38 in 2006

2. Argentina:
   - from US$ 2,500 in 1990
   - to US$58 in 2006

Penetration when Telefónica entered markets:
- Segment A: 90%
- Segment B-C: 20%
- Segment D-E: 2%

Penetration in 2005:
- Segment A: 107%
- Segment B-C: 90%
- Segment D-E: 45%

% of population in Latam:
- Penetration when Telefónica entered markets:
  - Segment A: 90%
  - Segment B-C: 20-30%
  - Segment D-E: 60-70%

Source: Internal Telefónica analysis
B. Entering some markets in Latin America require(d) barriers to overcome

1. Legal uncertainty
   - e.g. Limits to allocation of spectrum to mobile services

2. Restrictions to Foreign Direct Investment (FDI)
   - e.g. Restrictions for investments in TV services

3. Restrictions to Repatriation of Profits

4. Promotion of National Champions
   - e.g. Taxation of mobile services as luxury service

5. Intrusive Regulation
   - e.g. Restrictions for investments in TV services

6. Spectrum Caps

MARKET BARRIERS FOR TELECOMS
C. Suggestions for an “Innovation Policy”

1. No trade barriers for ICT products & services and FDI
   - Revise and expand Information Technology Agreement (ITA) to include all technologically advanced products
   - Lower barriers also for ICT services (e.g. through GATS)
   - Foster creation of international industry standards and interoperability

2. Create open and stable investment environment
   - Macroeconomic and political stability
   - Respect for property rights (IPR & infrastructure)
   - Support FDI by Multinational Companies as these function as “bridging institutions” for innovation

3. Improve general business environment
   - Regulatory reforms with focus on Better Regulation & fostering investments
   - Raise educational level
   - Improve access to financing for businesses