

## 01.3 Industry, Commerce and Content

When economic activity is considered within the context of the new Information and Communication Technologies (ICT), it takes on a variety of dimensions that need to be examined individually. By way of a first approach, the impact of the ICT on economic activity may be analysed in four sub-areas:

1. The **production** of services and products, and consultancy in the ICT sector
2. The **use** of the ICT in companies. The impact on the industrial/business world in general
3. **Electronic commerce** between companies or with the end consumer
4. The creation of multimedia **content**

The introduction of the Information and Communication Technologies affects the production sector on two fronts: firstly, in the **generation** of goods, consumable products and services of companies in the electronics sector, as defined in a broad sense; and secondly, in the **use** made of the new technologies by the remaining companies. Thus the information society, acting as a dynamo, introduces new forms of production into the traditional sectors and creates a new industry of electronic equipment and communication services.

**Electronic commerce** makes it possible for goods or services to be exchanged between people or organisations without direct contact. It may be used between companies (extranet) or between the company and the end consumer (e-commerce), and it requires the participation of certifying authorities and certain applications that will guarantee the security of the transaction. Commerce with the end consumer is still at an early stage, but considerable growth is anticipated in the next few years. On the other hand, the appearance of the Internet offers a new form of communication and marketing, of which advantage must be taken in order to strengthen this type of commerce.

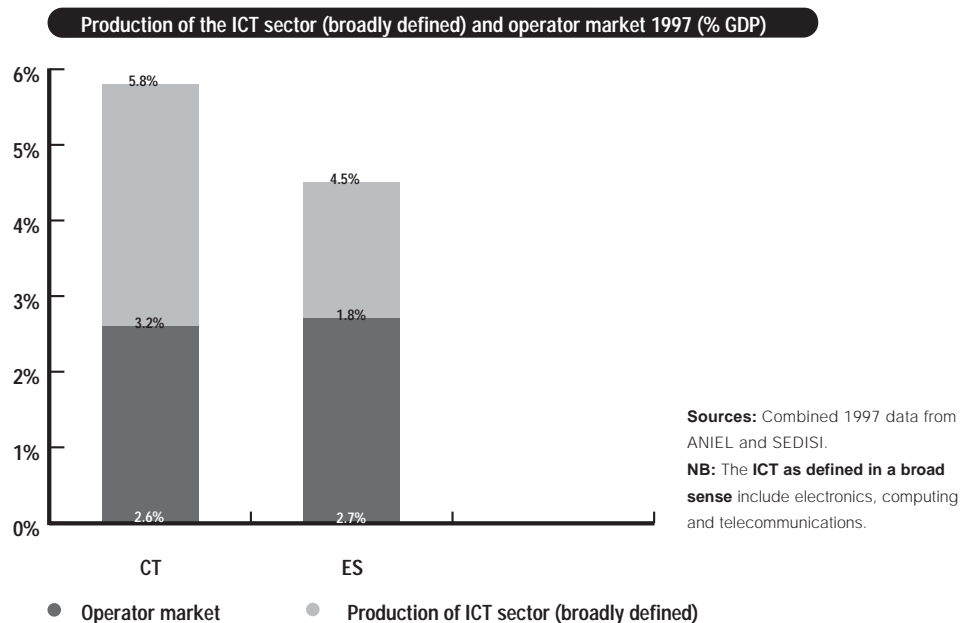
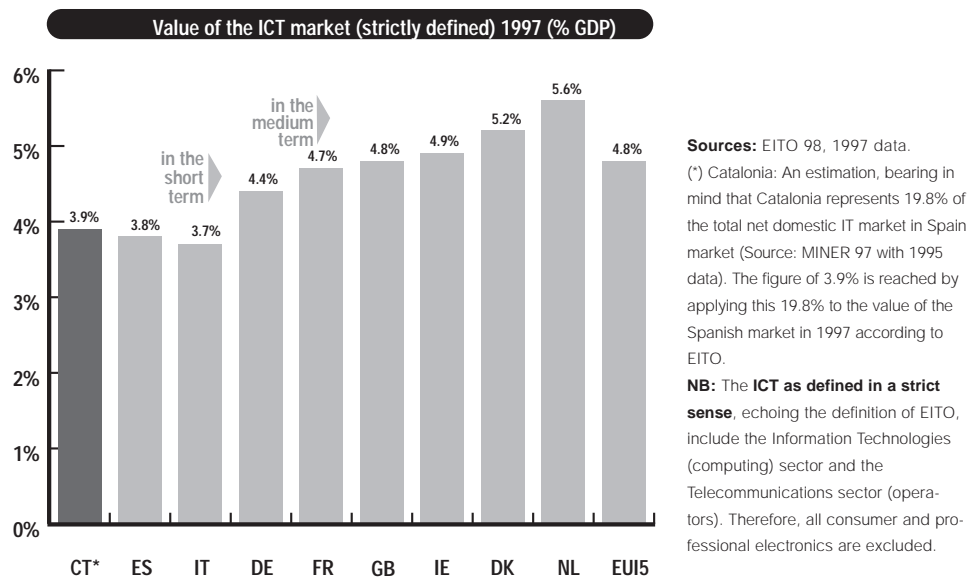
The information society also generates an industry of multimedia **content** and gives a new dimension to audiovisual media (cinema, TV, etc.). Catalonia must increase the production of these content, since rapid rates of growth are foreseen for this sector. The necessary content must be developed for education, health care, culture, leisure and other fields, both for the Catalan public and for export to the rest of the world.

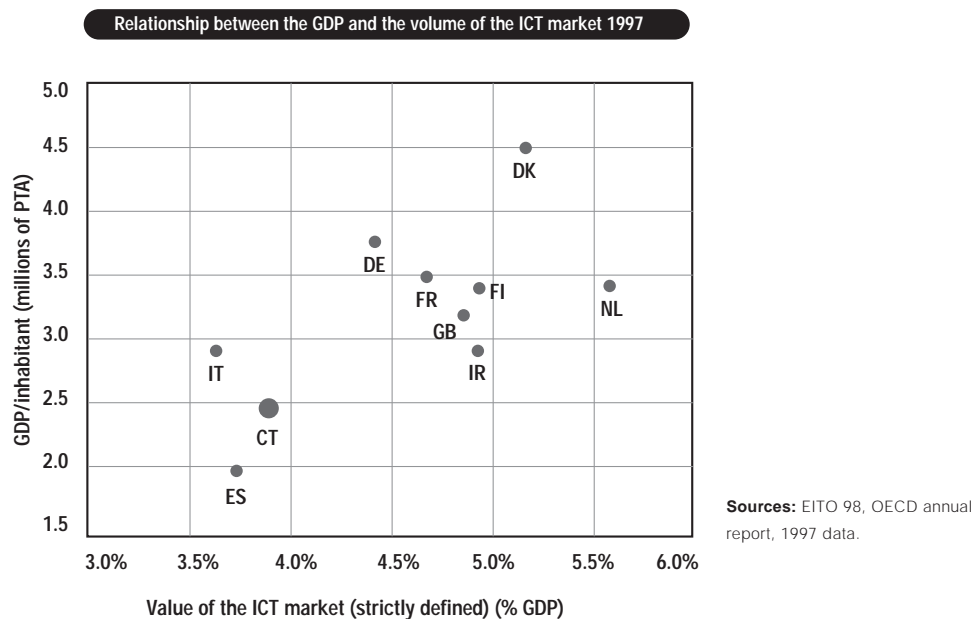
The proposed indicators for monitoring the position in Catalonia in this area are:

- 01.3.1 Volume of ICT business
- 01.3.2 Investment in the ICT sector
- 01.3.3 Number of business incubators and ICT companies in these incubators
- 01.3.4 Volume of electronic transactions and number of companies with Internet
- 01.3.5 Electronic commerce
- 01.3.6 Volume of business of the audiovisual and multimedia sector

### 01.3.1 Volume of ICT business

The three graphs below show the ICT market in relation to the GDP in a number of different countries. In the second graph the strictly ICT-related production is separated from that of the telephony operators.





### 01.3.2 Venture capital investment in ICT companies

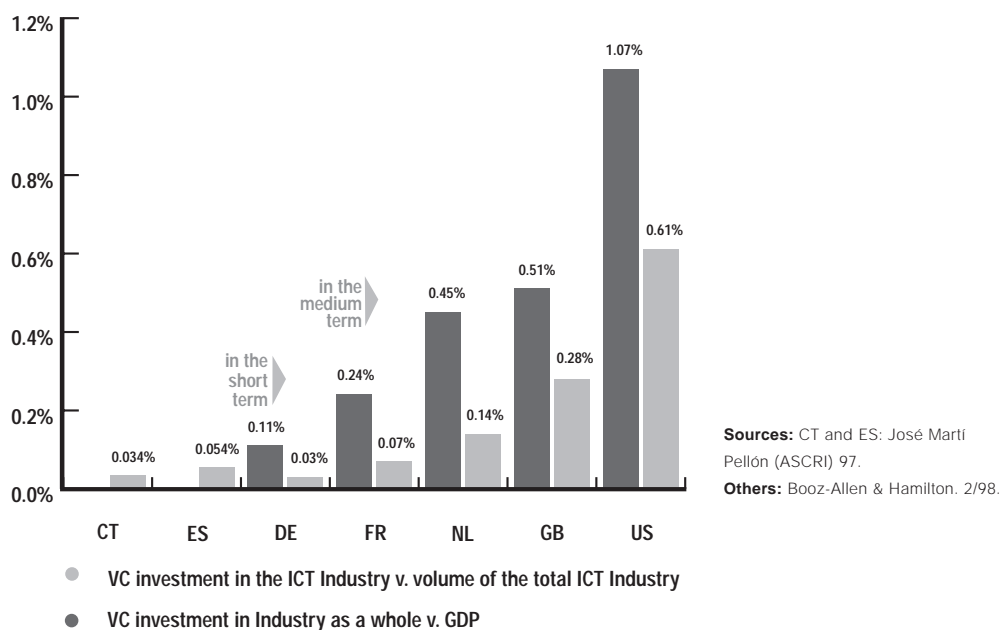
In 1997 in Catalonia total Venture Capital (VC) Investment amounted to 5,083 million pesetas. This figure represented 12% of the investment made by the Spanish State (42,146 million pesetas.).

Approximately 13.6% (690 million pesetas in Catalonia) of VC investment is assigned to the ICT sector.

VC investment in Catalonia represents 50% of the investment made by the Community of Madrid and is 30% less than the figure for Andalusia.

The next graphic does not contain any data for Catalonia and Spain due to the lack of data provided by operators.

It is necessary to invest in "seed capital" instead of investing in "expansion capital" or in the acquisition of companies (Buyout).



### 01.3.3 Number of business incubators and ICT companies in these incubators

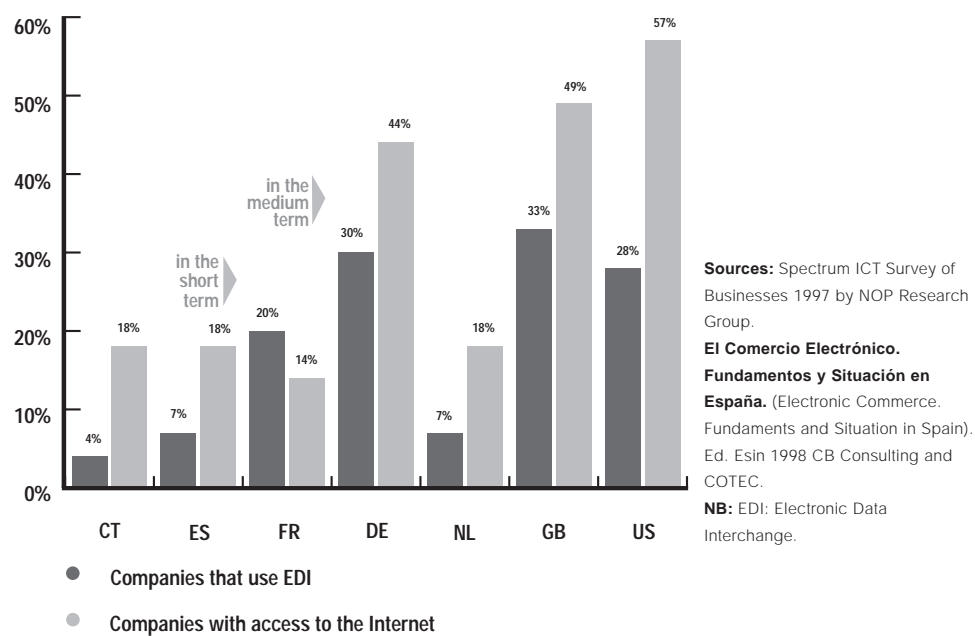
According to the data available, in Catalonia in 1998 there were 23 business incubators with a total of 57 ICT companies. To be specific, these incubators (with the number of ICT companies shown in brackets) are the following:

Badalona (3), Vic (1), Igualada (1), Manlleu (1), Vilafranca del Penedès (2), Parc Tecnològic del Vallès (12), Torelló (0), Barcelona Activa (3 business incubators) (23), Rubí (0), Santa Coloma de Gramanet (1), Cornellà (6), Mataró (2), Sabadell (1), Barberà del Vallès, Ripoll (1), Les Preses (0), Reus, Valls, Lleida, Sant Boi, Terrassa (3)

An example of the high percentage of ICT companies in relation to the total can be found in the three business incubators of Barcelona Activa, where 30% of the companies are from this sector.

**Sources:** CIDEM 1998 and Barcelona Activa (1999).

### 01.3.4 Volume of electronic transactions and number of companies with Internet



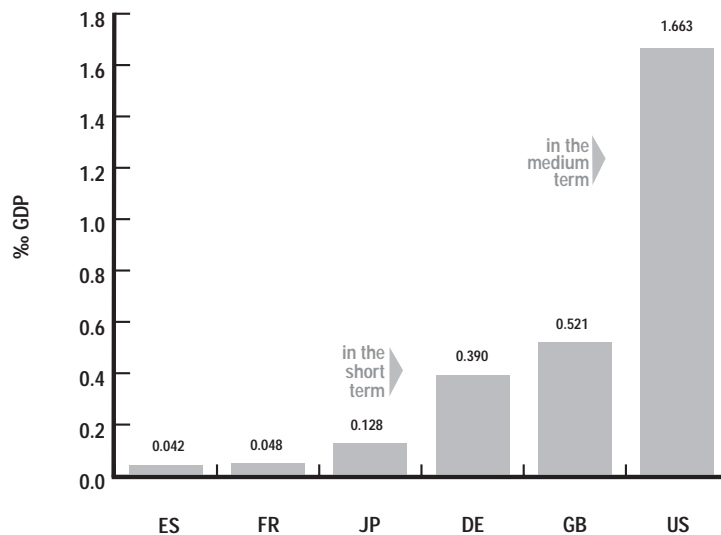
### 01.3.5 Electronic commerce

E-commerce currently accounts for 2% of all commerce in the United States, with an increase in sales of 230% (Boston Consulting). It is foreseen that these sales will exceed \$400 billion in the United States in the year 2002 (IDC).

In Spain, electronic sales totalled 800 million pesetas in 1997, growing to 3,500 million pesetas in 1998. The anticipated figure for 2001 is 200,000 million pesetas. 26% of Internet users in Spain have made use of e-commerce (Source: AECE).

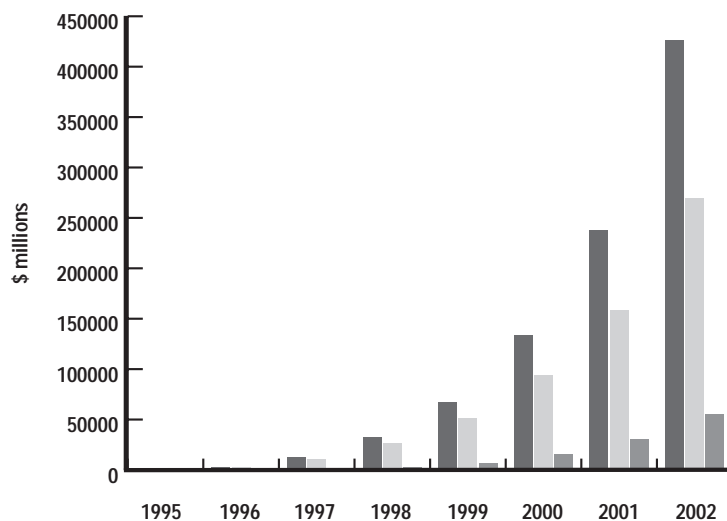


Revenue generated by e-commerce with the end consumer by countries 1998



**Sources:** ES: Secretaría General de Comunicaciones (Communications Office), FR: Benchmark Group, JP: International Trade and Industry Ministry and Andersen Consulting, DE: Pro Active, GB: Veredict Research, US: Jupiter.

Revenue generated by bussines to bussines and bussines to consumer e-commerce 1995-2002



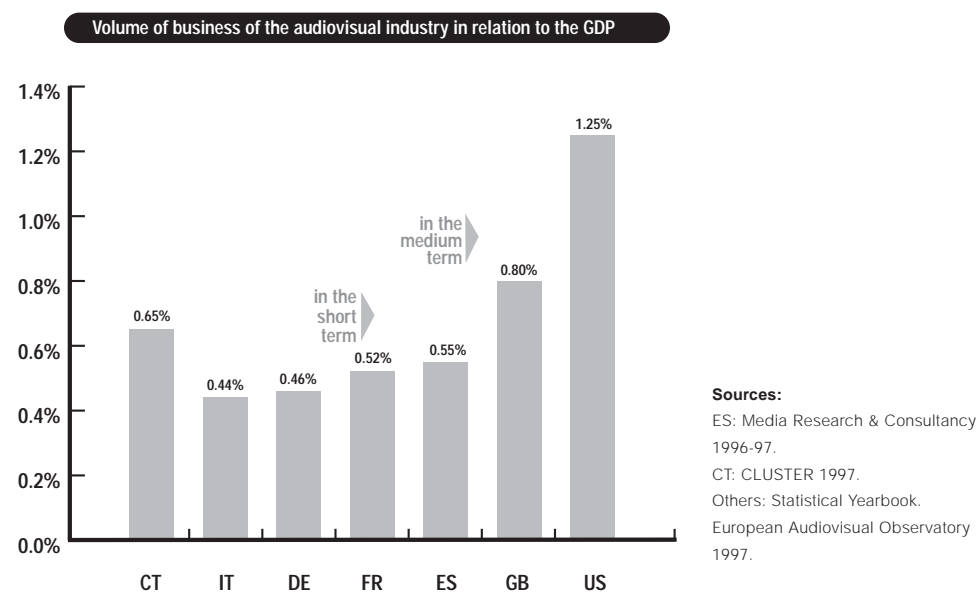
**Sources:** IDC 1998.

World	296	2794	12403	32383	67113	132966	237233	425730
US	290	2450	10651	26469	50777	93897	158359	268816
West EU	3	188	1015	2944	6747	14991	30083	55544

### 01.3.6 Volume of business of the Audiovisual and multimedia sector

#### Audiovisual Sector:

The audiovisual sector includes the activities of cinemas, advertising companies, the rental and sale of videos, pay-TV and TV licences.



#### Multimedia content sector:

Number of titles on CD-ROM in Catalan or Spanish up to April 1997: **223 Titles (of which 31 are in Catalan)**

Number of titles on CD-ROM in Spain: **2,818**

Number of multimedia companies in Spain: **45**, with turnover of 18,000 million pesetas

**Source:** Alfons Cornella <http://dsi1.esade.es/cornella>, <http://www.mcu.es/bases/spa/isbn>, DBK

