BISER

IST-2000-30187

Benchmarking the Information Society:
e-Europe Indicators for European Regions

BISER – Workpackage 6: e-Europe Regions Domain Reporting

Regional Portrait of Sicily

Report Version:	Final Draft
Report Preparation Date:	September 2003
Classification:	Limited
Authors:	University of Rome
Contract Start Date:	1st December 2001
Duration:	24 Months
Project Co-ordinator:	empirica (Germany)
Partners:	Danish Technological Institute (Denmark), Local Futures (United Kingdom), Salzburg Research (Austria), University of Rome - Department of Sociology (Italy), Work Research Centre (Ireland)

Project funded by the European Community under the "Information Society Technology" Programme (1998-2002)

Table of Contents

NUTS 2 Regions in Italy

1 The NUTS nomenclature in Italy – background and current structure

The Republic of Italy is divided into regions (NUTS 2), which are in turn divided into provinces (NUTS 3) and again into communes (municipalities). The nomenclature of Territorial Unities for European Statistics (NUTS) subdivides Italy and other nations of the EU into various hierarchical levels.

The NUTS favours institutional divisions based on the subdivision of regional territories by two criteria: normative and analytical. On a regional level (without taking communes into account) the administrative structure of the member states generally includes two principal regional levels (Lander and Kreise in Germany, regions and departements in France, comunidades autonomas and provincias in Spain, regioni and province in Italy etc.).

The Italian state (NUTS 0) is subdivided into five macro-areas (NUTS I) which have no administrative function and are; North-West, North-East, Centre, South and Islands.

The regions (NUTS 2) are autonomous bodies, so with political, juridical, legislative and administrative independence, as established by the Constitution, and never to clash with the laws of the State. The twenty Italian regions are distinguished between Regioni a Statuto Ordinario (regions with common statute), established in I972, and Regioni a Statuto Speciale (regions with special statute), established earlier, and which enjoy greater autonomy. The region is governed by a “Consiglio Regionale” (Regional Council), which has between 30 and 60 members elected by citizens. The Regional Council in turn elect the “Giunta Regionale” (Regional Committee), which has executive and administrative functions, and both elect the President of the Regional Council. Three delegates elected by the Regional Council of each region take part in the elections of the President of the Republic, together with both Houses of Parliament (the Chamber of Deputies and the Senate of the Republic).

The provinces are at the third level of classification.

2 The spatial structure of Italy

Italy is subdivided for administrative purposes into 20 regions, which are then organised into provinces and communes. Five of these regions have a special statute (Friuli-Venezia Giulia, Sardinia, Sicily, Trentino-Alto Adige and Valle d’Aosta). The total surface area of the country is 30I,40I squre km and the total population numbers 57,844,000 inhabitants. Italy is, without doubt an interesting country from a geographical point of view. The variety of landscapes is infinite, from Mont Blanc, through the Padanian plain, the rolling hills of Tuscany and the Marches and the villages clinging to the Appennines, to the arid landscapes of the South and the geographical uniqueness of the islands (especially in Sicily and Sardinia). This brings about a series of differences in climate, population, economy and agriculture which make the country a place of ever-changing landscapes.

Qualitative Description of Region Sicily

3 Basic facts

	Region (NUTS2)	Country (NUTS0)	EU
	Regioni Sicily	Italy	EU15 average
GDP [€ in PPP per inhabitant (2000)]	15,074.4	23,588.4	22,576.4
Area [km²]	25,706.9	301,316.2	3,191,119.9
Population absolute (1998)	5,103.2	57,588.0	375,812,900
Population density [inhabitants/km² (1998)]	198.5	191.1	117.8

4 Map

5 Regional structure

5.1 Spatial structure

Sicily is the largest island (25,708 sq. km.) of the Mediterranean sea; it is also one of the most important region economically and has the richest heritage of history and art of southern Italy. Its geographical particularity lies in its compact but varied geographical structure, the uniformity of its rivers, the typically Mediterranean climate and the insularity which has helped Sicily to experience homogeneous historical development with original traditions, art and culture.

Together with the minor Aeolian islands (Lipari), Ustica, Egadi, Pantelleria and the distant Pelagie, Sicily is the most extensive region in Italy, though it has only the fourth highest population. The population density (197,5 inhabitants/km²) is slightly higher than the national average .

5.2 Infrastructure

Sicily has two main airports. The Punta Raisi airport of Palermo is the biggest and busiest, 30km from the city centre, which can be reached by a bus service or a good road network. The other important airport is Fontanarossa, very near the city of Catania. Other important Sicilian airports are at Trapani, which does not have regular, frequent services, and Pantelleria and Lampedusa, both extremely important if they happen to be the only way of reaching the islands. During the summer period there are direct flights to and from several Italian cities.

5.3 Population structure / migration (demography)

In 2001 total population living in Sicily was 5.076.700 (see tab.1). Live births were 53.152, deaths 46.863. A good part of the population felt under the age category between 25 and 44 years old. (see tab. 2). The elderliness is of 92,8% with peaks, in some case, above 100%, as for example in Messina's province. Even though elderly process is not very high, compared to the national level, it is still going on in all the region.

There is an disparity in population's distribution: the almost uninhabited inland area clearly contrasts with the largely populated coastal areas. There is still a considerable migration from mountains and hills where economy is prevalently agricultural-pastoral, to larger towns and industrialized areas along the coast, where earning prospects are improving and living conditions are better. The most densely populated areas are the coastal belt near Catania and Messina, around Palermo, Siracusa and the hinterlands of Agrigento and Licata; the inland under populated areas include highlands of the Sicily Apennines, Etna, the Erei, Iblei and other high ground in the west.

6 Economic factors

6.1 Economic development in the last decade

The economy has improved lately in the processing industry, but only in certain places. Most of the island still depends on sheep-farming, mining and subsistance farming. Fishing, in contrast to livestock-breeding, is an important resource (especially tuna and swordfish); the most common agricultural products are citrus fruits, almonds, olives and vegetables. The extraction industry has been boosted by the discovery of some hydrocarbon deposits (methane and petroleum) which will bolster the traditional mining resources (potassium, sulphur, the latter in steady decline). The sectors of food, textiles, canning, chemicals, mechanics, timber, building and construction materials have grown more important over time. Tourism is not fully exploited, despite the number of beautiful zones on the island.

6.2 Sectors

- Farming and agro-food industry: Fisheries, Gardening, Orchards, Wine production
- Industry: Building, Petrochemistry, Pharmaceuticals and para-chemistry
- Services: Education and training, Publishing and printing, Tourism, Trade

For what regards economy, primary sector is still very important both for quality and output, though characterized by a clear-cut division between the low-productivity inland areas where wheat is extensively cultivated, and the coastal belt, with its specialized cultivation of citrus fruit, orchards and vineyards.

Industry in Sicily is important too and is represented in two sectors: the modern one in provinces of Siracusa, Caltanissetta, Agrigento, Messina and Catania, and the traditional one spread all over the territory. New industries are petrol-chemical, mechanics, chemistry, electronics, etc. Old industries are mostly those producing food: wine, oil, conserved products, pasta and other products exported in other Italian regions. It is also interesting to note that Sicily is one of the few parts of the country where the land has still some mineral resources which let the production of rock-salt, potassic salts, methane and petrol.

The principal industrial areas lie around Catania (engineering, pharmaceuticals, electro-technical industry, food, building materials). For the service sector, commercial sector is fragmented into small units, while the proportion of employment in the public sector is excessive, especially in Palermo. Banking and finance are active, especially in the larger centres. Tourism is clearly a major source of income, though still suffering from the lack of adequate hotel and other facilities.

6.3 Unemployment

- Working population: 1.374.000
- Distribution of employment:
- Industry: 20%
- Agriculture: 9%
- Other activities: 71%
- Unemployment rate: 21,5% (Italy 9,5)
- Activities rate: 42,9% (Italy 48,5)

Source: Servizio Statistica della Regione -Elaborazione su dati ISTAT

The quality of life in Sicily is conditioned by a generally bad economical development, characterised by a high rate of unemployment (21,5%), frequently leading to exploitation and crime. The total average of people declared employed are 1.374.000: 130.00000 in Agricultural sector, 274.000 in Industry sector, 971.000 in other activities.

6.4 Innovation

It is important to consider the level of diffusion of infrastructures which is lower than the national value. The tele-communication networks have a percentage incidence of 72,1% . Compared to infrastructure elsewhere the level is on the average. The most relevant percentage incidence concerns educational structures (97,7%) and health care structures (89,3%). The lowest level concerns cultural infrastructures.

7 Soft factors

7.1 Housing

Rented property in Sicily numbers 3I3,000, 7.3% of the national total, of which I00,000 are in Palermo, constituting 3I.9% of total rented property in Sicily and 5% of that found in the II metropolitan areas. There is a higher than national figure of privately owned property in Sicily (76.8%) and a lower figure for property owned by private companies, insurance companies and prevident associations (overall 3.3%).

7.2 Culture

To maximise Cultural Heritage, the region of Sicily has promoted research relating to local cultural systems, with the aim of identifying areas with a common cultural identity and a support system on which to build specific development strategies, as part of the Regional Urbanistic plan. The objective is to promote the development of the territory by means of initiatives carried out by local bodies.

7.3 Regional image

Sicily presents a multitude of different images: gardens and orange trees in blossom by the coast, with the columns of ancient temples and snow capped peaks in the background; the parched hills of the interior with fields half desert and crowded villages still suspended in the past, or huge petrochemical plants on the southern coast, with tankers from Arab ports berthed in the docks.

8 BISER survey results on Sicily

The following will (by necessity brief) provide an exemplary insight into the BISER survey data, in order to give an overview on how the *Regioni* Sicily performs regarding key Information Society indicators.

8.1 Methodology

There are 211 European regions at the NUTS 2 (Nomenclature des unités territoriales statistiques) level and clearly a project like BISER can not carry out surveys in each of these regions since accuracy of the resulting metrics requires a minimum number of observations. Within the limits of budget, it was decided to select 28 out of 211. The regions cover the range of patterns of sectoral structure ("agricultural", "manufacturing" and "services", depending on the share of employment in each of the sectors) and economic power (as GDP per head) as well as Member States according to the distribution of population.

Regions which were surveyed are: Salzburg (Austria), Liége (Belgium), Fyns Amt (Denmark), Väli-Suomi (Finland), Ile de France, Bretagne, Nord-Pas-De-Calais, Languedoc-Roussillon (all France), Darmstadt, Stuttgart, Braunschweig, Magdeburg, Mecklenburg-Vorpommern (all Germany), Kentriki Makedonia (Greece), Border, Midland & Western (Ireland), Sicilia, Lazio, Toscana, Lombardia (all Italy), Friesland (Netherlands), Lisboa & Vale do Tejo (Portugal), Castilla- Leon, Cataluna (both Spain), Smaaland Med Oerna (Sweden), Berkshire, Buckinghamshire and Oxfordshire, Leicestershire, Greater Manchester, and Tees Valley and Durhams (all U.K.).

Within each region the sample was set up as a random probability sample which provides a sufficiently representative picture of the resident population (aged 15+) and of the region's business establishments. For the population survey (RPS), a minimum of 400 successful interviews were conducted in each region; in the establishment survey (RDMS) the sample was at least 300 per region.

Computer Aided Telephone Interviewing (CATI) was used. Telephone interviews offer the advantage of quick and reliable data collection from a central telephone unit. For general population surveys in former times there have been doubts about accuracy of randomisation but recent developments in sampling practices can provide for real probability samples even with rather poor list sources and the growing fractions of non-pub numbers – the shortcoming being that a very small number of households without telephone are not included. CATI also offers best field control, automated sample administration, simultaneous data entry and permits a complex branching of the interview flow depending on filter questions and thus allows to apply questions tailored e.g. to the respondent's experiences with ICT, a firm's equipment status etc.

The population survey provided a person sample (rather than a household sample) and was predominantly based on random dialling methods. Sampling in each Member States was carried out allowing for national differences regarding organisation of telephone number allocation and unlisted telephone numbers, and taking other national peculiarities into account which may require various strategies of random drawing.

The establishment sample included establishments (and thus covered also branch offices and not only autonomous enterprises) from different industries across all economic activities but excluded establishments with less than 5 employees. Sampling was managed as a stratified approach, i.e. done separately for groups of establishments conforming with certain criteria, in order to guarantee a sample representative of the industrial structure and employment size distribution in each region. The establishment sample was drawn from the best existing source lists available, either provided by public authorities or by specialised address brokers.

Readers are reminded that survey results are estimates, the accuracy of which, everything being equal, depends on the sample size and on the observed percentage. With samples of about 300 and 400 interviews respectively, the real percentages vary within the following confidence intervals:

Observed percentages	10%	20%	30%	40%	50%	60%	70%	80%	90%
Confidence intervals if n=300	6.4% - 15.4%	14.7% - 26.6%	23.7% - 37.2%	33.0% - 47.4%	42.6% - 57.4%	52.6% - 67.0%	62.8% - 76.3%	73.4% - 85.3%	84.6% - 93.6%
Confidence intervals if n=400	7.1% - 13.9%	15.9% - 24.9%	25.1% - 35.4%	34.6% - 45.6%	44.4% - 55.6%	54.4% - 65.4%	64.6% - 74.9%	75.1% - 84.1%	86.1% - 92.9%

8.2 Selected results

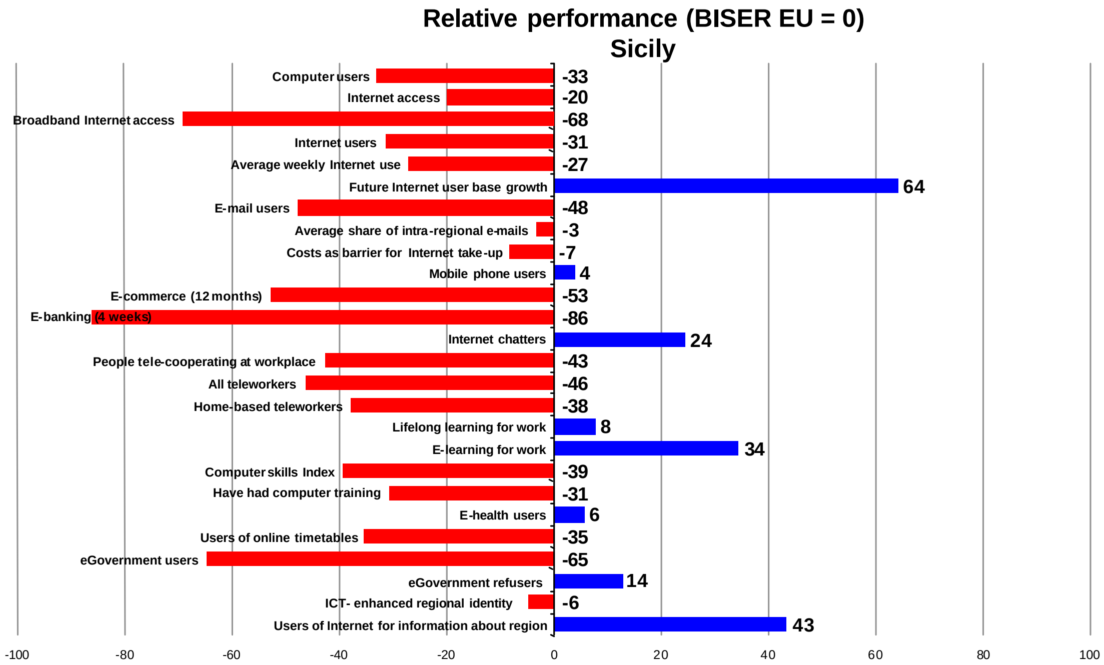
The following figure presents relative performance of Sicily region compared to the average across all 28 BISER region. The BISER average is not representative for the whole of the EU territory in a statistical sense. However, it has been checked that the sample is very similar to the EU with regard to average values for key socio-demographic and business sector variables, respectively.´

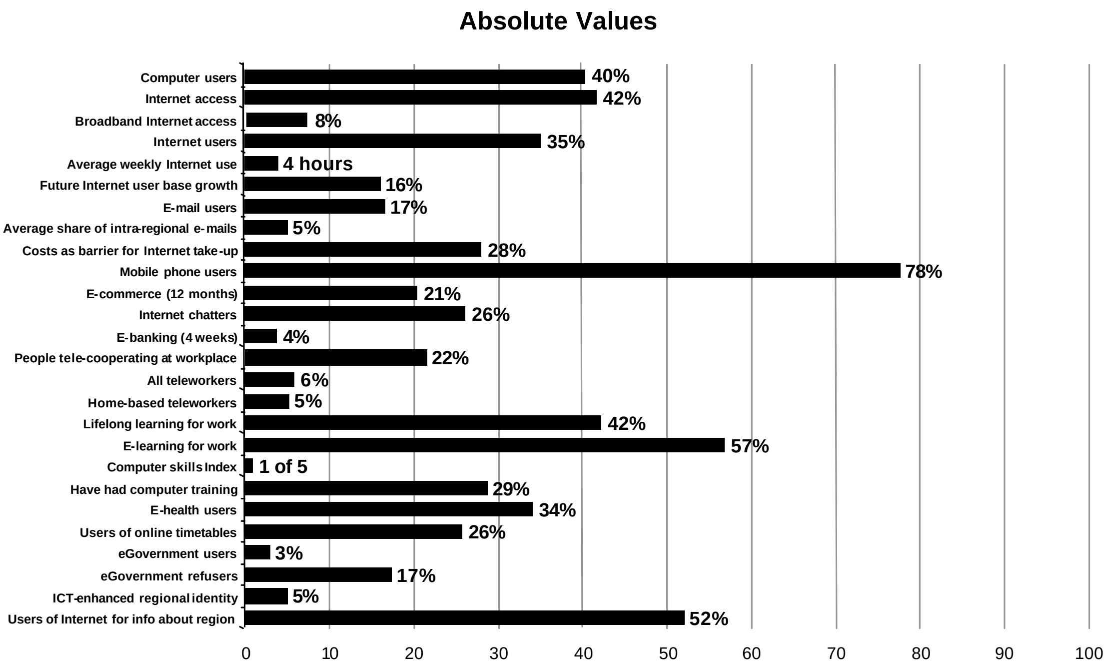
8.2.1 Population

Indicator description (RPS)			
Area	**Indicators**	**Definition**	**Base**
Access and basic usage	Computer users	Persons who have used a computer in the last four weeks	Total population 15+
	Internet access	Persons who have access to the Internet in their home	Total population 15+
	Broadband Internet access	Persons who have access to the Internet at home via DSL or cable.	Persons with access to the Internet at home
	Internet users	Persons who have used the Internet in the last four weeks	Total population 15+
	Average weekly Internet use	Average time spent using the Internet (hours per week)	Internet users (4 weeks), excluding DK
	Future Internet user base growth	Non-users who think it is likely they will use the Internet in the future	Total population 15+
	E-mail users	Persons who have sent at least one e-mail (for private purposes) in the week prior to survey	Total population 15+
	Average share of regional mails	Average percentage of e-mail partners located in the same NUTS 2 region	E-mail users (last week, for private purposes)
	Costs a barrier to Internet take-up*	Involved non-users who agree completely that the Internet is too expensive to use	Involved Internet non-users
	Mobile phone users	Persons who have a mobile phone for their own personal use	Total population 15+
Standard applications	E-commerce (12 months)	Persons who have used the Internet to order products or services in the last 12 months	Internet users (12 months)
	E-banking (4 weeks)	Persons who have used the Internet to conduct on line banking in the last 4 weeks	Internet users (12 months)
	Internet chatters	Persons who have used the Internet to conduct online forum in the last 4 weeks	Internet users (12 months)

Indicator description (RPS)			
Area	**Indicators**	**Definition**	**Base**
Work organisation	People tele-cooperating at workplace	Use of e-mail or other electronic data transfer for co-operation with clients, customers, suppliers or other working partners at other locations	Total employment
	All teleworkers	Multi-locational workers who spend paid working time doing home-based telework or mobile telework	Total employment
	Home-based teleworkers	Persons who spend paid working time working at home or on the same grounds or buildings as their home, and are using a connection to the Internet or their company's computer system while doing so	Total employment
Learning and skills	Lifelong learning for work	Persons in paid employment who have been involved either work related training by their company or by training organisation or in self-directed work related learning in the 4 weeks prior to the survey	Total labour force incl. temporarily not working (unemployed)
	E-learning for work	Persons engaged in lifelong learning who have used e-learning	All respondents engaged in lifelong learning in the 4 weeks prior to the survey
	Computer skills index	Average number of computer skills (out of a list of 5 of increasing sophistication) in the population	Total population 15+
	Have had computer training	Persons who have once attended a computer training course lasting at least half a day in total	Total population 15+
Special applications	E-health users	Internet users who have searched for any health-related information on the Internet in the 12 months prior to the interview	Internet users (12 months)
	Users of online timetables	Percentage of Internet users who have used the Internet to get any timetable information in the 4 weeks prior to the survey	Internet users (12 months)
	eGovernment users	Persons who have used the Internet for receiving at least one of three typical services provided by government/ public administration in the 12 months prior to the survey	All persons who have carried out at least one of these three typical services provided by government/ public administration in the 12 months prior to the survey. Non Internet-users excluded.
	eGovernment refusers*	Persons who agree completely that eGovernment is nothing they are interested in	Internet users (12 months)
Region-specific usage	ICT-enhanced regional identity	Percentage of respondents who state that the Internet and e-mail have given them a greater sense of identity with the region in which they live	Total population 15+
	Users of Internet for information about region	Percentage of Internet users who have got news about region from the Internet	Internet users (12 months)

* = scale inverted in figure below





Note: In the upper figure, the scale has been inverted for indicators where high values are considered negative (see table). This means that if the bar is blue and pointing towards the right for "costs as a barrier for Internet take-up", for example, this means that in this region below average shares of respondents were affected by costs as a barrier.

Looking at ICT use by the population of Sicily, the region achives higher than average values for certain indicators but breaks away from the others by a large percentage in other indicators.

Actually, the above average values were found more for good intentions than actual ICT use, so it is more the perception that in the future the base of Internet users will grow.

This is therefore a sign of the widespread perception of belonging to a not greatly positive phase of new technology use.

Here too, as in other Italian regions, Internet use is concentrated on simple methods of interaction, like the use of chat, leaving more complex applications such as services of e-commerce and e-banking on the sidelines.

However, there is a high percentage of people who use the web to obtain information on the region, a sign that these users are refining their requests and widening the conception of the types of services that the Internet has to offer.

Sicily does remain behind the other regions under analysis as regards web access and users of the Internet and personal computers. These are figures which focus attention on certain regional deficiencies, such as the low computer literacy of the population.

A computer socialisation, in this case, is probably to be hoped for. Indeed, beginner courses in computer training, perhaps provided by regional authorities, would guarantee a more informed demand and would stimulate an increase in offers of web services.

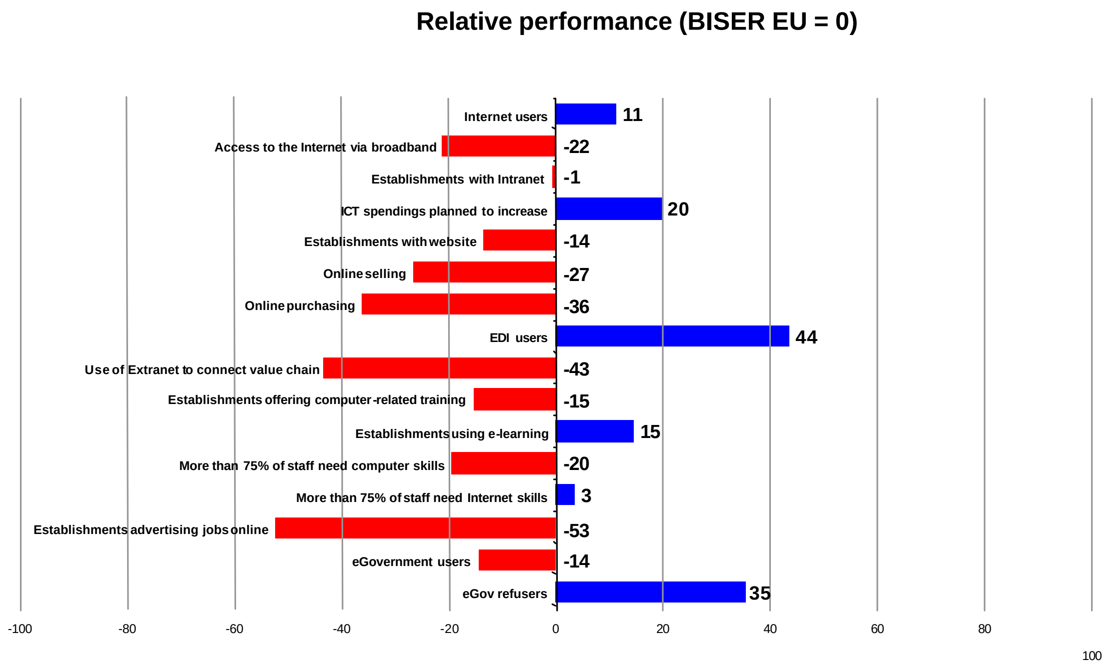
The closing of this gap between the population and the virtual and computer world would also have a positive effect on the increase in the number of teleworkers and those who make use of public administration services on-line.

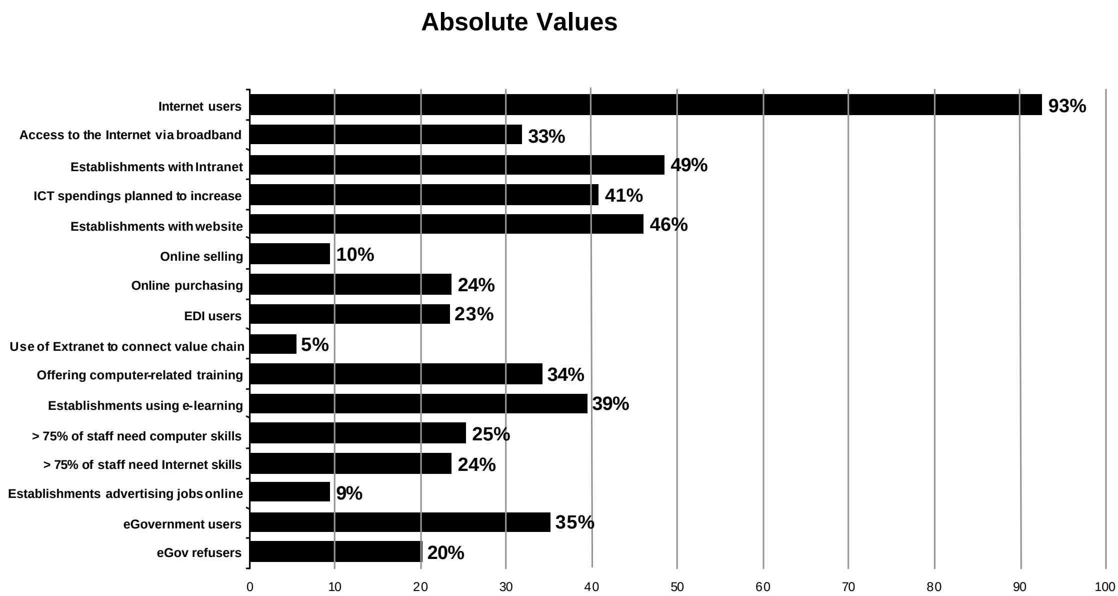
The image of Sicily that we gain from this analysis is that of a region in need of major interventions to support ICT. Indeed, the values above the average relate to indicators which show the weaknesses rather than the strengths of the region. The position occupied by Sicily is far from reaching a balance compared to the regional average and and also from an informed use of net-economy and the web by the population.

8.2.2 Establishments[1]

Indicator description (RDMS)			
Area	**Indicators**	**Definition**	**Base**
Access and basic usage	Internet users	Percentage of establishments using the WWW	All establishments
	Access to the Internet via broadband	Percentage of establishments that access the Internet via DSL, cable, or leased line	All establishments that use the Internet
	Establishments with Intranet	Percentage of establishments that have an Intranet	All establishments
	ICT spendings planned to increase	Percentage of establishments which are planning to increase spendings on ICT in the next 12 months	All establishments
	Establishments with website	Percentage of establishments that have a website on the Internet	All establishments
eCommerce	Online selling	Percentage of establishments that sell online or distribute digital products online	All establishments
	Online purchasing	Percentage of establishments that purchase online	All establishments
	EDI users	Percentage of establishments that use EDI	All establishments
	Use of Extranet to connect value chain	Percentage of establishments that have an Extranet	All establishments
Training and skills	Establishments offering computer-related training	Percentage of establishments that offer computer-related training courses to their staff	All establishments
	Establishments using e-learning	Percentage of establishments that use e-learning tools (online or offline) for training their staff	All establishments
	More than 75% of staff need computer skills	Need for any computer skills in the establishment: More than 75% of staff	All establishments, excluding DK
	More than 75% of staff need Internet skills	Need for Internet skills in the establishment: More than 75% of staff	All establishments, excluding DK
	Establishments advertising jobs online	Percentage of establishments that have published job adverts on the Internet	All establishments
eGovernment	eGovernment users	Establishments that have used the Internet for receiving at least one of four typical services provided by government/ public administration in the 12 months prior to the survey	All establishments that have carried out at least one of these four typical services provided by government/ public administration in the 12 months prior to the survey
	eGovernment refusers*	Percentage of respondents who agree completely that they do not need any eGovernment services	All establishments
* = scale inverted in figure below			

1 All values weighted by employment





Note: In the upper figure, the scale has been inverted for indicators where high values are considered negative (see table).

The shortcomings identified in the analysis into ICT use by the population are also to be found in the establishments and this confirms Sicily's middling position compared to the other Italian regions.

When interpreting these figures it must be said that we are dealing with a small number of cases which are therefore not greatly representative of the business world in Sicily.

There is, however, a real awareness that in order to catch up with other regions, investments in the Internet and in infrastructures are necessary; this confirms that already found in the analysis but is also shows a reassuring realization on the part of the Sicilian establishment.

Values for on-line sales are lower than average, a service of e-commerce, and more generally, of e-business is not, therefore, active. Another confirmation of the lack of web use for socioeconomic methods is shown by the non-use of the web in the supply of on-line public administration services.

Equally connected to such values is the declaration of a lack of suitable professional profiles, in this case the shortage of skills acts as a imposing inhibition to the penetration of e-business in these regions; as the creation of suitable professional profiles would raise the level of computerisation in the population and would be able to transport companies towards innovation. From this realization of not being able to raise the appropriate job profiles with local resources stems the widespread use of the web for on-line training.

The image of Sicily, in an overall evaluation, is that of a region which is slowly becoming aware of being behind other regions in terms of technological innovation. Such a delay is caused by a lack of support policies promoted by local and non-local authorities as well as a lack of private initiatives. There is a pressing need for a socialization to the potential that the net-economy has to offer to this region full of artistic and cultural attractions and typical local produce in the agricultural and alimentation sectors.

In order to equal the results of the other regions, further investments in infrastructure are necessary, so as to be able to facilitate connection and approach to the virtual world.

The Region, seen as citizens and economic fabric together, shows a growing interest towards the world of Internet and the application of marked intervention measures, and could simplify the passage from an initial step in which the Internet is seen as a method of simple relation to a full appreciation of its services and complex interactions.

9 Sources

ISTAT

Rilevazione trimestrale sulle forze di lavoro *Gennaio 2003*

Cittadini e tecnologie, 2000

Censimento intermedio delle imprese

La popolazione italiana 2000

Ministero dell'Economia e delle finanze

Relazione Generale sulla situazione economica del Paese, volume II