



BISER

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

BISER – Workpackage 6: e-Europe Regions Domain Reporting

Regional Portrait of Kentriki Makedonia

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Table of Contents

| | |
|--|----|
| NUTS 2 Regions in Greece..... | 3 |
| 1 The NUTS nomenclature in Greece – background and current structure..... | 3 |
| 2 The spatial structure of Greece..... | 3 |
| Qualitative Description of Region Kentriki Makedonia..... | 4 |
| 3 Basic facts | 4 |
| 4 Map | 4 |
| 5 Regional structure..... | 5 |
| 5.1 <i>Spatial structure</i> | 5 |
| 5.2 <i>Infrastructure</i> | 5 |
| 5.3 <i>Population structure / migration (demography)</i> | 5 |
| 6 Economic factors..... | 5 |
| 6.1 <i>Economic development in the last decade</i> | 5 |
| 6.2 <i>Sectors</i> | 5 |
| 6.3 <i>Unemployment</i> | 6 |
| 6.4 <i>Innovation</i> | 6 |
| 7 BISER survey results on Kentriki Makedonia | 7 |
| 7.1 <i>Methodology</i> | 7 |
| 7.2 <i>Selected results</i> | 8 |
| 7.2.1 Population..... | 8 |
| 7.2.2 Establishments | 12 |
| 8 Sources | 13 |

NUTS 2 Regions in Greece

1 The NUTS nomenclature in Greece – background and current structure

Greece is a parliamentary republic. Its parliament, composed of only one chamber, elects the head of state, who in turn nominates the prime minister. The organisation of the Greek state can be defined as centralist with some autonomies, as in public administration the centre prevalently has legislative supremacy over the surrounding areas.

State administration is organised on the basis of the criteria of decentralisation. Regional state organs have overall say on matters in their districts. Central services, apart from the special powers which belong to them, decree general directives, assuring the co-ordination of regional organs and exercising control over them as dictated by the law.

As in other European countries, the Nomenclature of Territorial Units for Statistics subdivides Greece into hierarchical levels. The Greek state (NUTS 0) is subdivided into four macro areas (NUTS 1) which have no administrative function and are: Voreia Ellada, Attiki, Nisia Aigaiou and Kriti.

On an administrative level, the country is divided up into 55 prefectures (NUTS 3) which constitute an instrument of government at local level. Prefects are elected and chair the councils of each prefecture. Regions and communes are responsible for local administration. Since 1986, Greece has been divided into 13 regions (each of which include several prefectures, NUTS 2) with duties mainly relating to co-ordination.

These 13 regions are therefore on the second level of classification but are not autonomous bodies with juridical, legislative and administrative independence.

2 The spatial structure of Greece

Greece (Hellenike Demokratia; the Hellenic Republic), is a country in the south-west of Europe, comprising the southern section of the Balkan peninsula, and numerous archipelagoes and islands. It borders with Albania to the north-west, to the north with the former Yugoslav republic of Macedonia and with Bulgaria and to the north-east with Turkey. It faces the Aegean sea to the East, the Mediterranean to the South and the Ionian to the West. It spans 131,957 square km with a coastal expanse of 13,680 km. The capital is Athens.

The continental part of the country includes Thrace and Macedonia to the North, stretching to the Calcidica peninsula to the South, Epirus in the centre, separated from the Pindo range by the Tessaglia; to the south the Peloponnese, joined to the continent by the isthmus of Corinth, crossed by the canal of the same name, and Atticus.

The island part includes around 2000 islands, most of which are in the Aegean sea (also called the Aegean Islands): to the North, the northern Sporadi, the islands of Taso, Samotracia and Lemno, off Calcidica and Thrace; to the East, off the Turkish coast, the islands of Lesbos and Chios, and further south, the Dodecanese islands (also called the southern Sporadi); in the centre, Eube and the Cyclades, separated from the island of Crete by the part of the Aegean sea named the Sea of Crete to the South. Egina is the main island situated in the Gulf of Thessaloniki. In the Ionian sea, to the north-west of the Peloponnese are the Ionian islands. The Greek territory has a very varied morphology with the central regions, plains and plateaus of western Tessaglia, Macedonia and Thrace, the mountainous peninsulars of Calcidica and the Peloponnese.

Qualitative Description of Region Kentriki Makedonia

3 Basic facts

| | Region (NUTS2) | Country (NUTS0) | EU |
|---|--|-----------------|--------------|
| | Development Region Kentriki Makedonia | Greece | EU15 average |
| GDP [€ in PPP per inhabitant (2000)] | 15,139.3 | 15,097.5 | 22,576.4 |
| Area [km ²] | 18,810.9 | 313,625.5 | 3,191,119.9 |
| Population absolute (1998) | 1,795.7 | 10,516.4 | 375,812,900 |
| Population density [inhabitants/km ² (1998)] | 95.5 | 79.9 | 117.8 |

4 Map



5 Regional structure

5.1 Spatial structure

Kentriki Makedonia is a district that belongs to the wider region of Macedonia and includes prefectures of Thessaloniki, Serres, Halkidiki, Kilkis, Pella, Imathia and Pieria. This district overlooks the Aegean Sea; it spreads out along Northern Greece, on an area of 18.811 square kilometres, and its chief town is Thessaloniki. Infrastructure.

Macedonia is divided into fourteen administrative districts, which all answer to Thessaloniki and it makes up most of northern Greece, forming the border with the neighbouring countries to the North. Macedonia has always been a very lively region from both a social and a cultural point of view, a hub of continual and intense exchanges between the neighbouring peoples thanks to its geographic centrality in the Hellenic world. Thessaloniki is the second biggest city of Greece and is steeped in archaeological and cultural sites of interest (the Emperor Galerius' palace, the market, the theatre and baths dating to Roman times, the Ethnological Museum, the Museum of Macedonian Resistance, the Macedonian Centre of Modern Art, the National Theatre, the Society for Macedonian Studies, the University).

5.2 Infrastructure

5.3 Population structure / migration (demography)

The 1.900.000 inhabitants of Kentriki Makedonia are nearly 17% of Greece's population. It is one of few districts where natural population increase has been reported.

6 Economic factors

6.1 Economic development in the last decade

The greatest number of Macedonian firms is concentrated in the prefecture of Thessaloniki. Exactly 11% are in Thessaloniki and 17,68% are in Kentriki Makedonia. Turnover is around 9.490 Euro against 12.760 in the whole district. The Table 3 affords information about the number of enterprises, the yearly average of employees occupied and the average turnover by sector. The marketing of public services, with the exception of a large share reserved to the state, is open to private firms, as in many other countries, where, for example, private clinics and public hospitals coexist.

6.2 Sectors

Kentriki Makedonia produces 17,5% of the gross domestic product, coming second only after Attiki. It yields more than 18,5% of the national agricultural product. It is the highest one in Greece. It is the leading producer of rice (84%), tobacco (37%), wheat (30%), milk (24%), meat (19%), and apricots (93%). Moreover it yields 20% of the manufacturing industry product and 17% of services product. With a per capita income of 12.150 euro in 2001 (102% as to

rest of Greece's average), it quickly approaches European standards, achieving a good 70% of the rest of the European Union's yearly average income. The rest of Greece is around 69%.

6.3 Unemployment

In 2001 the share of employed and unemployed persons older than 14 years was above 48,6%. Then the labor force participation rate of this region is still very low compared with the average rate of European Union, 64%. And the difference increases if this data is broken down by gender. Indeed, the male participation rate is 61%, while the female one remains about 37,2%. The same situation of gender inequality concerns the unemployment. The unemployed persons represent the 10,8% of the labour force, while in the rest of Greece they are around 10,5%. However the male unemployment rate is 6,7%, while the female one is 16,7%.

6.4 Innovation

Kentriki Makedonia, compared to the rest of Greece, is in the forefront of information technology, e-commerce and of all kinds of services offered by the Internet. As two Greek Statistics Institutes' data show (Intel Hellas and Metron Analysis), since 1998 a real explosion took place in the purchase of hardware, software, modems, connection to the web and different pc accessories. These prove great development potential and a wide margin of improvement. Many enterprises, new or preexistent ones, feel the need to obtain visibility on the Internet in order to become more competitive in both the Domestic and European market. This is possible because of the decrease in the cost of internet connection and the public's awareness of the benefits of computerization.

7 BISER survey results on Kentriki Makedonia

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

7.1 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), Liège (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% |

7.2 Selected results

The following figure presents relative performance of Kentriki Makedonia 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.

7.2.1 Population

The population of Kentriki makes very little use of new technology. Out of sixteen indicators under analysis, only five have a positive value, compared to the average in other regions. Of these five, three have values which range between 2 and 4 per cent, whilst Internet use for chat measures over fifty per cent.

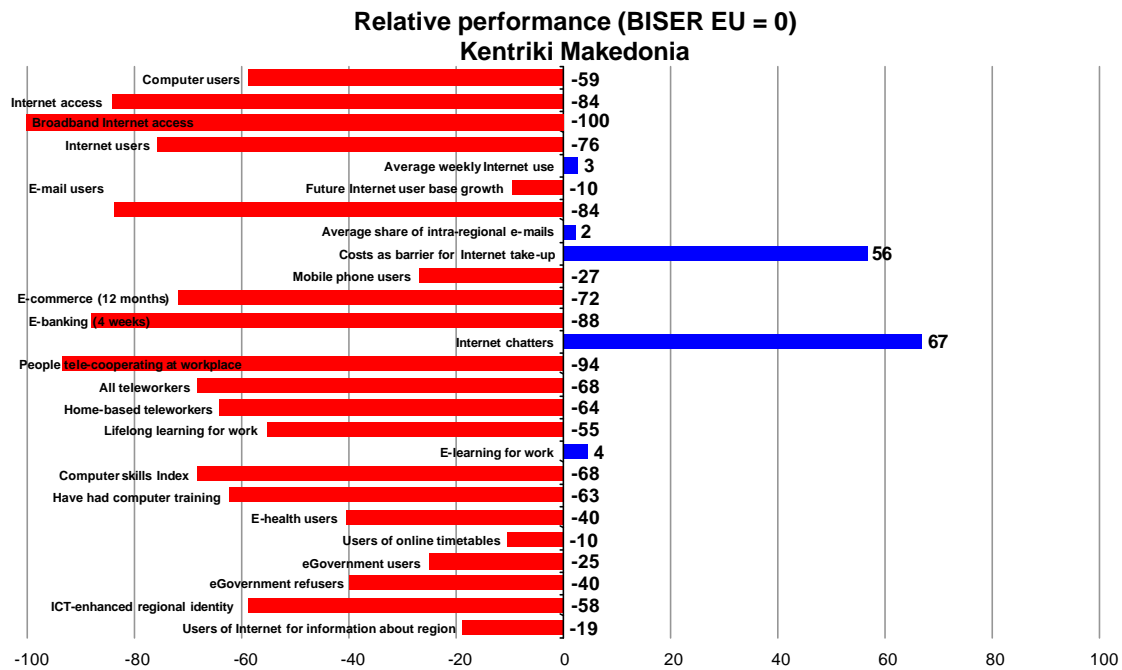
This tendency to use the Internet for quick communication purposes, such as chat, rather than to buy products (e-commerce), to telework, or access on-line services (e-government users) shows how the population is still in phase one of socialisation with new media.

The regional profile of Kentriki gained from the population survey reveals it to be still little computerised, with poor infrastructure and scarce interest in the socio-economic services that the web has to offer.

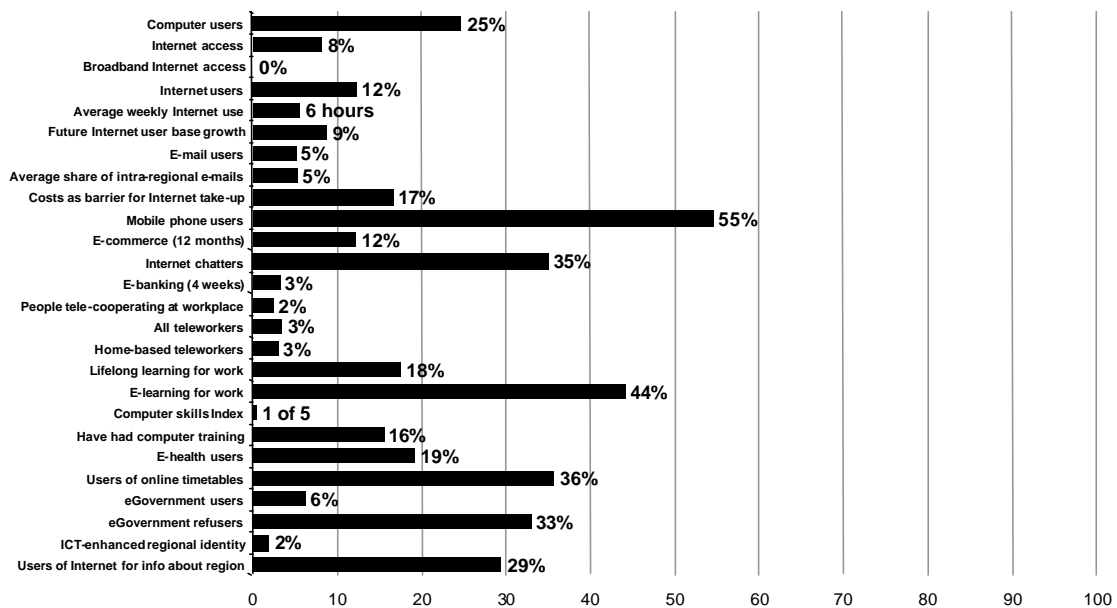
| Indicator description (RPS) | | | |
|-----------------------------|----------------------------------|--|--|
| Area | Indicators | Definition | Base |
| Access and basic usage | Computer users | Persons who have used a computer in the last four weeks | Total population 15+ |
| | Internet access | Persons 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) |

| Indicator description (RPS) | | | |
|-----------------------------|--|--|---|
| Area | Indicators | Definition | Base |
| | 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 online 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) |
| 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



Absolute Values



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.

The profile of the Greek region of Kentriki in terms of establishments confirms this low level of new technology use. It is, indeed, marked by a prevalence of negative values as regards the average in other regions: of the sixteen indicators under consideration, only five display positive values.

Within the first high values are; planned spending to encourage ICT use (56%) and users of e-government (85%). Both indicators refer to a policy of implementation imposed from above, supported by state intervention.

E-government consists of offering on-line services in Public Administration, and in a more advanced phase, leads to the practice of e-democracy; the use of information technology to increase participation in democratic processes. The aim is to make life easier for citizens and businesses. As a consequence, in a region where cabling, intranet and extranet use and e-learning is not as widespread as elsewhere and therefore does not display positive values, the drive to implement new technology comes from policy makers.

Furthermore, for e-government to be possible, a rise in demand from those using the service is necessary. It is therefore indispensable to make access to new technology possible to both citizens and businesses as well as to develop employment possibilities linked to the internet.

The Kentriki region blames problems linked to finding qualified professional figures who could be trusted with the innovation and introduction of new technology into businesses. Companies in this region are still little computerized: negative values compared to the average in other regions were registered for the use of a company web site, on-line sales and purchases and the use of training courses on the Internet.

The overall picture of this region, as regards the diffusion and use of ICT seems to have a negative propensity compared to the average in other regions. Indeed, both the population and establishments are still little computerized; one way to implement ICT could be interventions from above to guide the way towards innovation.

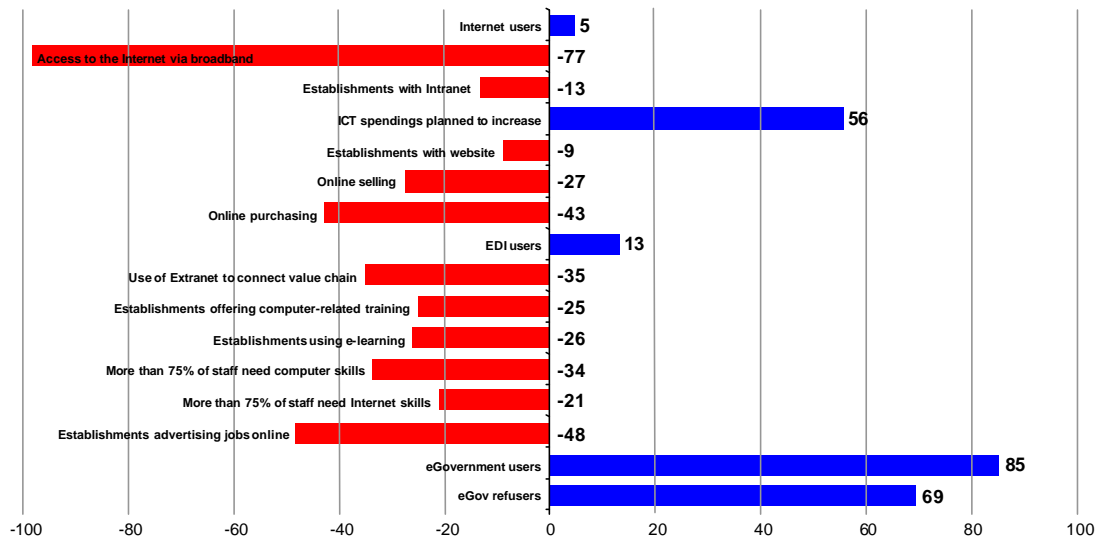
7.2.2 Establishments¹

| 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 |

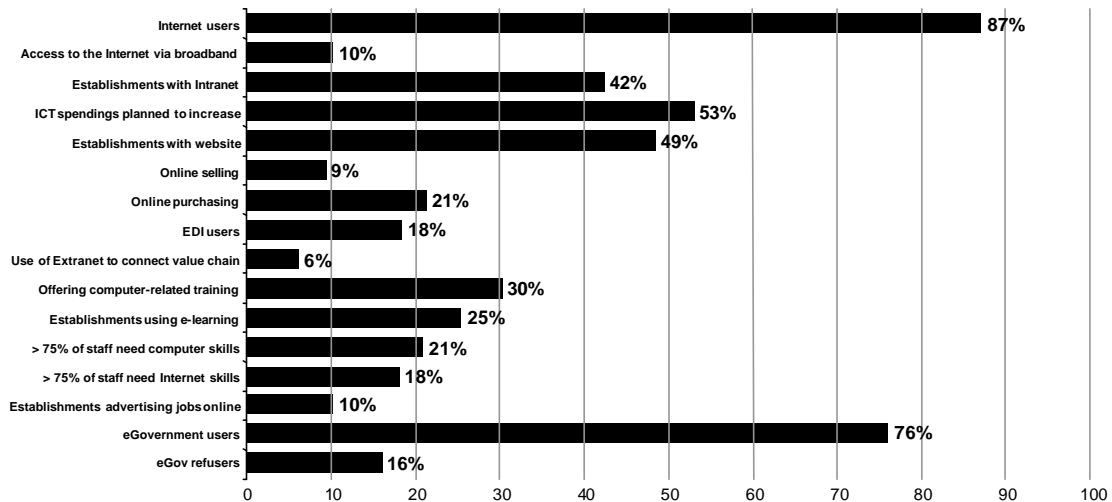
* = scale inverted in figure below

¹ All values weighted by employment

Relative performance (BISER EU = 0)



Absolute Values



Note: In the upper figure (relative performance), 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 “eGov refusers”, for example, this means that in this region below average shares of establishments are classified as eGov refusers.

8 Sources

<http://www.statistics.gr/>

http://www.ebusinessforum.gr/content/downloads/teliko_paradoteo_B3.pdf

http://www.pepkm.gr/business_plan.html

<http://www.gmet.gr>