

GEORGIOS KARAGEORGOS

e-Business in Greek Enterprises

Findings from the European Commission's e-Business W@tch survey (completed in December 2003) show that Greek companies do not trail significantly behind the EU average in terms of basic ICT infrastructure anymore. For example, basic Internet access and some sort of web presence are ubiquitous among Greek enterprises just like among those from other EU countries. More specific indicators reveal, however, that there are still significant differences in the quality of this infrastructure (in particular with regard to broadband connections – i.e. with more than 2Mbps) and that the level of business process automation and integration in a Greek enterprise is less advanced than that on the European average (for example, ERP and SCM systems are diffused to a considerably lesser extent).

These conclusions confirm the results from the previous e-Business Survey that was conducted by the e-Business W@tch in 2002.

The following Exhibit 1 shows the relative positioning of companies from a number of different EU countries on the basis of their e-maturity. It is derived from a proxy developed by the e-Business W@tch on the basis of the eEurope 2005 e-Business Index. It should be noted, that the sector composition differs for Greece where only four sectors have been surveyed instead of nine for the other seven countries [France, Germany, Italy, Spain, the UK (the EU-5), Poland and Estonia].

In 2003, the e-Business W@tch also asked companies to assess the future importance of some standards and e-business related technologies. Results

from Greece show that the use of XML-based standards was considered as the least important among these issues (with 15% of companies, representing 21% of employment, reporting it), while some more companies (20-40%, depending on the sector) believe that web-based services (which, to a large however extent, are based on XML) will be important for them. Mobile solutions are clearly regarded as more important for e-business and even more so are Virtual Private Networks (VPNs), which are already in

from other countries in the kind of connection which is normally used. About 95% of companies with internet access in Greece are connected through ISDN or still use analogue dial-up modems, while less than 5% have more powerful connections (via DSL or other fixed network connections). In other countries, the percentage of companies using DSL or equivalent connections is much higher (about 45% of companies connected on average in the EU).

Another indicator used by the e-Business

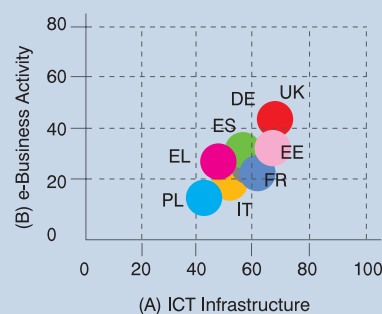


Exhibit 1: Benchmarking the e-maturity of enterprises from European countries: the eEurope 2005 e-Business Index

Proxy to the eEurope 2005 e-Business Index, based on 11 component indicators (5 for ICT infrastructure and 6 for e-business activity). All data used are weighted by employment (enterprises representing ...% of employment). UK=United Kingdom, DE=Germany, ES=Spain, EE=Estonia, FR=France, EL=Greece, IT=Italy, PL=Poland.

Note: Sector configuration for Greece differs from those of the other countries – therefore only limited comparability. Developed by the e-Business W@tch (2004).

Greek enterprises seem to be well connected to the internet

use in many companies and have been identified as the most important development by companies representing more than 50% of employment in the sectors surveyed.

ICT infrastructure and connectivity within the Greek company is well deployed

Greek enterprises seem to be well connected to the internet. More than 90% of the Greek companies interviewed in 2003 had internet connections – a percentage higher than the EU average. However, there is a striking difference between Greek companies and those

W@tch to determine the sophistication of a company's ICT infrastructure is whether employees can access the network remotely, for example from home. 37% of employees in the EU-5 worked in companies that enabled remote access in 2003, while the same applied to only 20% in Greece. The gap is rather consistent across sectors, indicating that Greek companies are usually equipped with simpler ICT networks than their counterparts in other European countries. In general, as indicated by the differences between '% of employment' and '% of enterprises' figures, larger companies are better equipped than their smaller counterparts. In Greece, however, it seems that these differences are less pronounced than for the EU-5 average (see Exhibit 2).

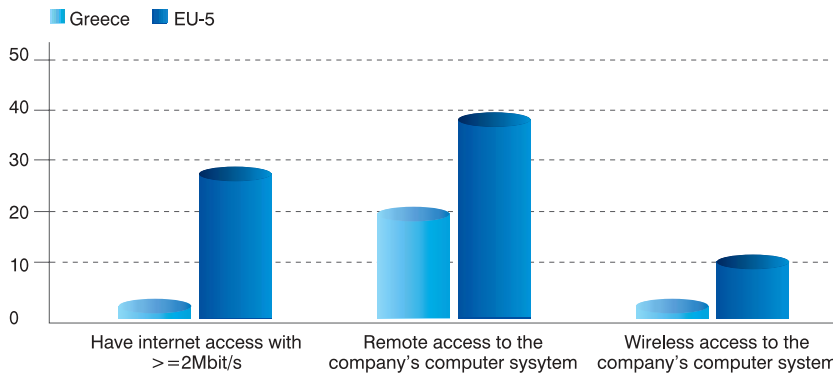
1. Georgios Karageorgos is a national expert seconded to the European Commission, Enterprise Directorate General, where he is responsible for the e-Business W@tch. The views expressed in this article are those of the author and do not necessarily reflect those of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of the information presented in this article.

Basic infrastructure is there, advanced usage is yet to develop

(based on key figures from the 2003 e-Business W@tch enterprise survey)

Exhibit 2: Connectivity in Greek enterprises (2003)

	Have access to the internet		Have internet access with >=2Mbit/s		Remote access to the company's computer system		Wireless access to the company's computer system	
	% of emp.	% of firms	% of emp.	% of firms	% of emp.	% of firms	% of emp.	% of firms
All sectors*								
Greece	96	91	2	1	20	17	2	1
EU-5	88	76	27	11	37	16	10	4



"% of emp." = enterprises representing ...% of employment in the country / EU-5 / sector

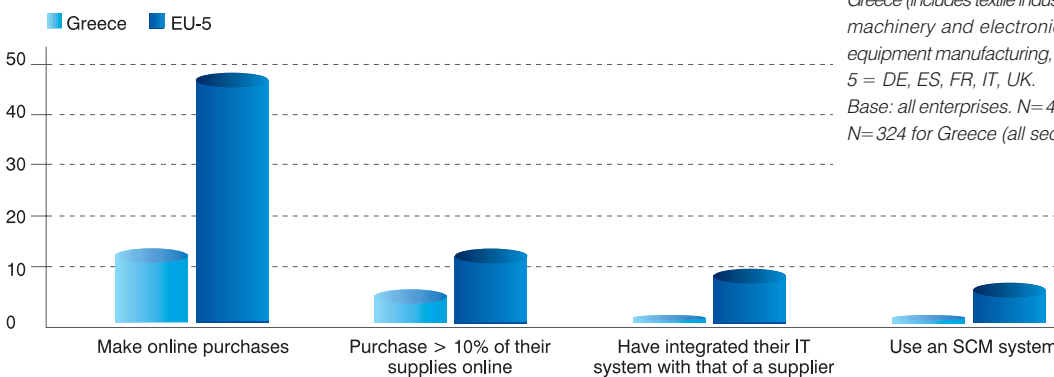
"% of firms" = ...% of enterprises in the country / EU-5 / sector

* Note that the sector configuration differs for the EU-5 (includes 9 sectors) and for Greece (includes 4 sectors only). EU-5 = DE, ES, FR, IT, UK. Base: all enterprises. N= 4516 for EU-5. N= 324 for Greece (all sectors).

Source: e-Business W@tch (Decision-Maker Survey 2003)

Exhibit 3: Online procurement and supply chain integration

	Purchase supplies online		Purchase >10% of their supplies online		Have integrated their IT system with that of a supplier		Use an SCM system	
	% of emp.	% of firms	% of emp.	% of firms	% of emp.	% of firms	% of emp.	% of firms
All sectors*								
Greece	12	9	5	2	1	<1	1	<1
EU-5	46	31	12	10	8	6	6	2



"% of emp." = enterprises representing ...% of employment in the country / EU-5 / sector

"% of firms" = ...% of enterprises in the country / EU-5 / sector

* Note that the sector configuration differs for the EU-5 (includes 9 sectors) and for Greece (includes textile industries, electrical machinery and electronics, transport equipment manufacturing, tourism). EU-5 = DE, ES, FR, IT, UK. Base: all enterprises. N= 4516 for EU-5. N= 324 for Greece (all sectors).

Source: e-Business W@tch (Decision-Maker Survey 2003)

E-procurement and supply chain integration: The B2B revolution is delayed in Greece

As already observed in the results of the previous (2002) survey, Greek companies are lagging considerably behind the EU average when it comes to purchasing on-line and the electronic integration of related business processes. According to the 2003 survey, 12% of

Greek employees work in companies that reported making purchases on-line, as compared to 46% on the EU-5 average. Admittedly, this figure is heavily influenced by results in the tourism sector, which accounts to about 70% of employment among sectors surveyed

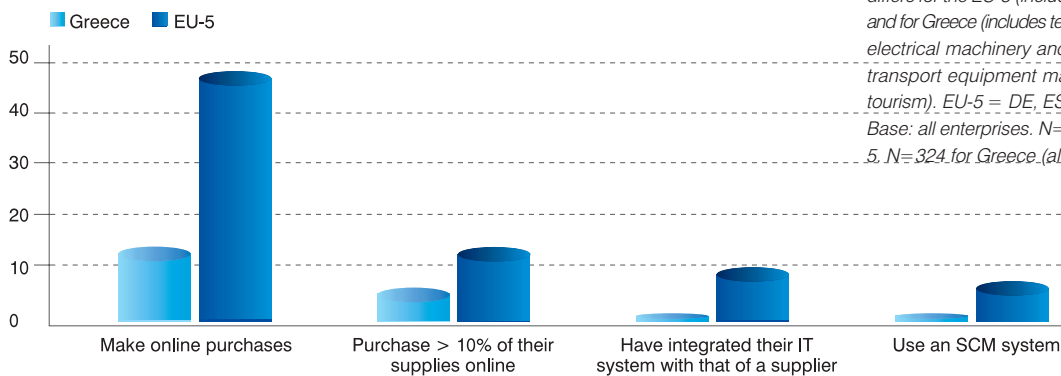
2. The European Commission, Enterprise Directorate General, launched the e-Business W@tch to monitor and analyse e-business developments across different sectors in the enlarged European Union and in EEA countries. Since January 2002 the e-Business W@tch has surveyed and studied e-business impacts in 17 manufacturing, financial and service sectors of the European economy. All the statistical data, the sectoral and synthetic reports, as well as plenty of other relevant information from the e-Business W@tch are available at www.ebusiness-watch.org (also accessible via the Commission's Europa web-server at www.europa.eu.int/comm/enterprise/ict/policy/watch/index.htm).

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Exhibit 4: Electronic marketing and sales

	Have a website		Make online sales		Sell > 10% of their products / services online		Use a CRM software system	
	% of emp.	% of firms	% of emp.	% of firms	% of emp.	% of firms	% of emp.	% of firms
All sectors*								
Greece	76	60	37	24	9	6	3	1
EU-5	66	36	16	10	5	3	13	4



"% of emp." = enterprises representing ...% of employment in the country / EU-5 / sector

"% of firms" = ...% of enterprises in the country / EU-5 / sector

* Note that the sector configuration differs for the EU-5 (includes 9 sectors) and for Greece (includes textile industries, electrical machinery and electronics, transport equipment manufacturing, tourism). EU-5 = DE, ES, FR, IT, UK. Base: all enterprises. N= 4516 for EU-5. N= 324 for Greece (all sectors).

Source: e-Business W@tch (Decision-Maker Survey 2003)

in Greece. However, similarly significant differences have also been noted in manufacturing sectors (where the management of supply chains is more important) and they were even wider in respect to more advanced and sophisticated applications that demonstrate the level of ICT-supported business process integration (like ERP or SCM systems and, in particular, the degree of integration of a company's system with that of its suppliers) - see Exhibit 3.

Electronic marketing and sales: More intensive than the EU average?

The e-Business W@tch survey results indicate that the percentage of Greek companies having a web presence and making online sales is higher than in the

Greek companies having a web presence and making online sales is higher than in the European average

into account, figures for on-line sales in Greece seem to be remarkably high to a degree hardly identified in other countries (see Exhibit 4).

As far as the platform for conducting these on-line sales is concerned, the company website appears as by far the most important for Greek companies – a pattern similar to the EU average. In fact, about 90% of Greek companies that reported selling on-line said that they do so through their own website. Electronic marketplaces operated by third parties are also used by just over

European average. Even when the already noted different sector composition in the sample between the EU-5 and Greece (where it was dominated by the - leading in e-commerce- tourism sector) is taken

a quarter of online sellers, while other platforms or protocols (like EDI connections) seem to be less significant for companies in the sectors surveyed in Greece.

A sector in focus: Tourism

With almost 13 million people visiting Greece in 2002, tourism is an important sector for the Greek economy, generating revenues that accounted for about 7% of the GDP . The level of e-business maturity of tourism enterprises in Greece appears as relatively more advanced than that in other sectors but also across different countries. This holds in particular true for marketing and sales activities, to a lesser extent for electronic procurement and the usage of related software applications, while it is still lagging behind in respect to more advanced ICT infrastructure (like broadband connectivity) and internal integration of processes– see Exhibit 5.

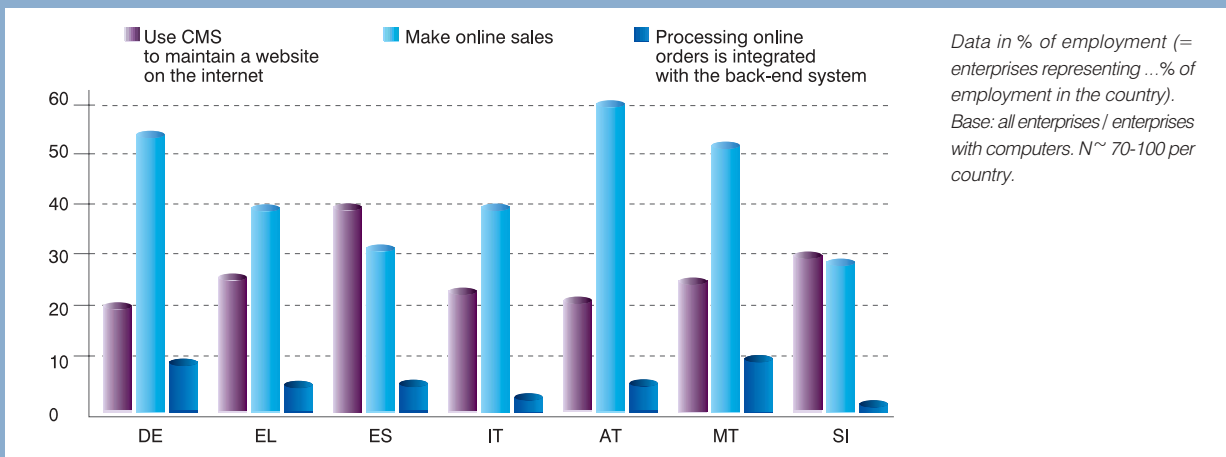
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Exhibit 5: Diffusion of e-business in the tourism sector

	DK	DE	EL	ES	FR	IE	IT	AT	UK	CZ	EE	MT	PL	SI
Connected to the internet	100	95	96	93	66	89	98	99	92	100	97	100	72	97
Connected with >2Mbit/s	49	16	2	27	19	5	19	23	21	20	15	21	10	24
Remote access to company's network	55	30	21	26	20	35	27	28	37	20	29	46	24	46
Use CMS to operate a website on the internet	32	20	26	38	10	29	23	21	31	21	26	25	20	30
Make online sales	60	54	39	31	29	42	39	60	32	34	33	52	25	29
Processing online orders is integrated with the back-end system	26	8	5	5	11	9	2	4	9	1	8	10	3	1
Have connected their IT system with that of a customer	19	9	9	11	4	3	11	14	7	11	28	9	9	11
Use a CRM software	17	11	2	8	8	13	9	12	24	2	12	3	0	2
Make online purchases	76	58	12	39	19	22	44	54	58	77	27	44	9	14
Have connected their IT	11	6	1	14	0	4	9	12	6	13	8	11	0	4



Source: e-Business W@tch (Decision-Maker Survey 2003)

More than 25% of Greek tourism enterprises (employment-weighted) said that they operate a website with a Content Management System, compared to a 28% EU average. Almost 40% of Greek tourism enterprises said that they sell on-line, with a 10% reporting that they have sold more than 10% of their services online (EU average: 13%) and 9% having integrated their IT system with that of a

customer (EU average: 9% also). In contrast, however, the level of involvement in on-line purchases and of integrating e-business practices (like connecting the ICT system of the company with that of a supplier) seems to be significantly lower than for the average company in the EU tourism. Overall, the e-business activities of Greek companies in the tourism sector

are very much in line with their counterparts in other EU countries. With respect to marketing and sales, in particular, the pattern among Greek tourism firms is very similar to that in Italy and comparable the one among companies from Germany, the UK or Austria, which would usually be expected to be more advanced in using e-business. SEPE