

Summary Report

**Web-based Survey
on Electronic Public Services**

Results of the first measurement: October 2001

SUMMARY REPORT

Web-based Survey on Electronic Public Services

(Results of the first measurement: October 2001)

For more information about this survey, please contact:

Cap Gemini Ernst & Young

Hugo Kerschot

hugo.kerschot@cgey.be

Introduction

The “Web-based Survey on Electronic Public Services” is part of the eEUROPE programme which aims to bring the benefits of the information society to all Europeans.

This survey is a benchmark exercise for the 15 EU member states, plus Iceland and Norway, which evaluates the percentage of basic public services available online. The objectives of this benchmark are to enable member states to compare performance, and to identify best practices in order to stimulate progress in the field of eGovernment. A list of twenty common online public services has been drawn up by the Commission and the member states. Twelve of the twenty services are aimed at individual citizens and eight at businesses.

1. Context and scope of the survey

The European Commission, DG Information Society, asked Cap Gemini Ernst & Young to carry out a web-based survey on public services on the Internet. This benchmark study is based on one eGovernment indicator from a set of 23 adopted by the Council of Ministers on November 30th, 2000:

The percentage of basic public services available online

This indicator focuses on **online front-end public services**. It will involve a bi-annual measurement of progress in the development of web-based applications for eGovernment by member states within the framework of the Commission’s eEurope initiative and will identify best practices.

The survey covers 17 countries: the 15 member states of the EU, Iceland and Norway. The European Commission has drawn up a list of twenty basic public services to be benchmarked:

- Twelve public services aimed at individual citizens
- Eight public services aimed at businesses

<i>Citizens</i>	<i>Businesses</i>
Income taxes	Social contribution for employeess
Job search	Corporate tax
Social security benefits (1)	VAT
Personal documents (2)	Registration of a new company
Car registration	Submission of statistical data
Application for building permission	Custom declaration
Declaration to the police	Environmental permits
Public libraries	Public procurement
Birth & marriage certificates	
Enrolment in higher education	
Announcement of moving	
Health-related services	

(1) Sub-services: Unemployment benefits, Child allowances, Medical costs, Student grants

(2) Sub-services: Passport, Driver’s licence

In order to measure the level of online sophistication of these services, the following four-stage framework has been defined:



Stage 1 - **Information**: online information about public services;

Stage 2 - **Interaction**: downloading of forms;

Stage 3 - **Two-way interaction**: processing of forms, including authentication;

Stage 4 - **Transaction**: case handling; decision and delivery (payment).

The online availability of public services will thus be determined by the extent to which it is possible to provide a service electronically. As, for some public services, the maximum stage is stage 3, stage 4 being not relevant, the score per public service is recalculated as a percentage of the maximum. Thus the outcome is a percentage for the 20 public services for the 17 countries. The percentage indicates the extent to which each service has progressed towards full electronic case handling.

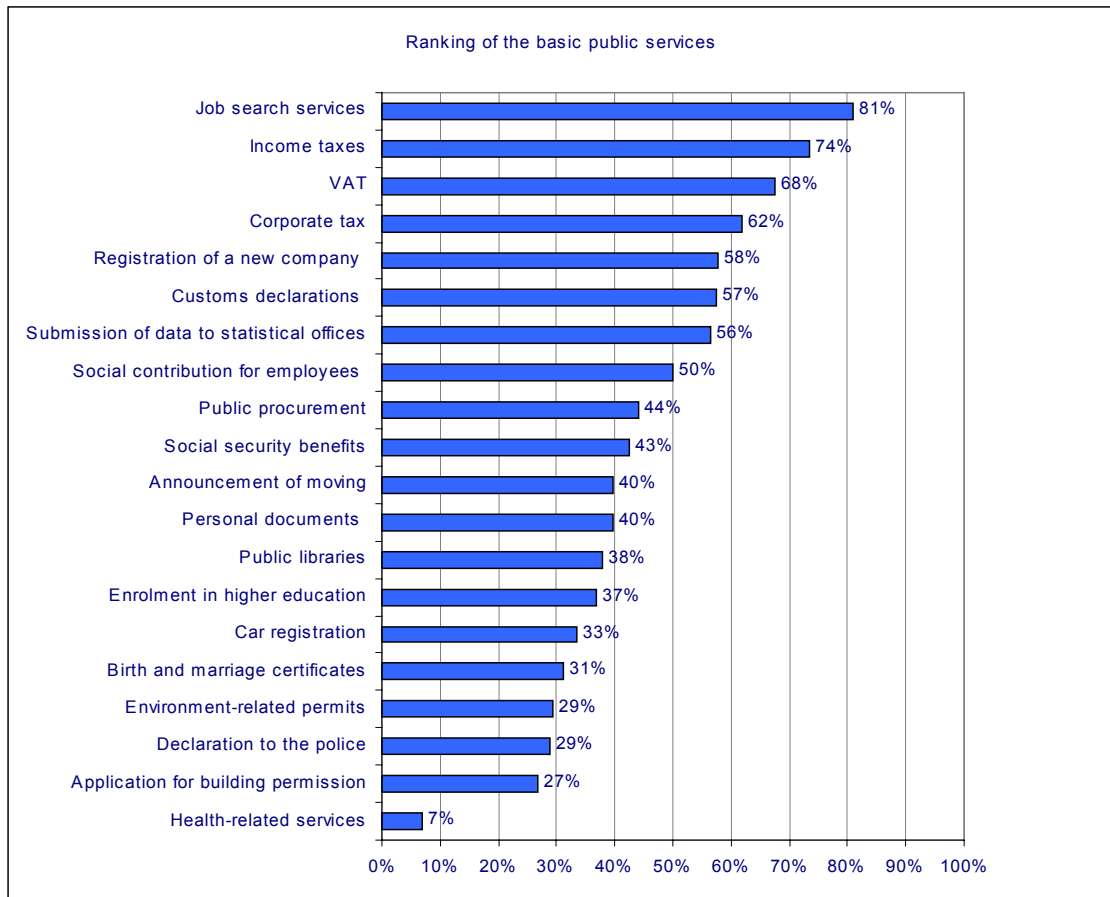
The framework of this project has important consequences for the web-based survey on electronic public services:

- This web-based survey only takes into account the public services that are *supplied via the Internet*. This means that *eGovernment* initiatives which use any other electronic application will not be taken into account;
- This survey evaluates the online accessibility of public services for citizens and businesses. It does not evaluate the redesign of administrative procedures which is often also implied by the term *eGovernment*. This means that initiatives such as the Crossroad Bank of the Belgium Social Security Administration, which is the result of the reorganisation of social security procedures over a period of more than ten years, or in Finland, the reorganisation of taxes from income tax “declaration” to income tax “proposal” are not covered by this survey.

2. Results

2.1 Introduction

The survey produced an **overall average score of 45%** for the 20 services in the 17 countries. When the scores are broken down by service, the results are as follows:



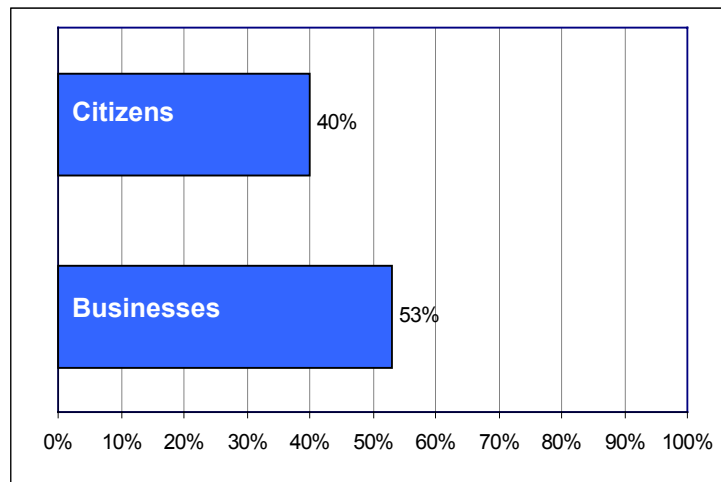
In order to give a more in-depth analysis and to make the results as clear as possible, the 20 services have been grouped in two different ways. In the first section, the services are broken down according to the target group (that is, citizens or businesses). In the second section, the services are divided into four clusters of related services: income-generating services, registration services, permits & licenses and returns.

2.2 Citizens versus businesses

When we look at the results of the survey, it is obvious that public services for citizens and public services for businesses are not achieving similar scores.

On an aggregate level, as shown in the following graph, public services for businesses score significantly higher (53%) than public services for citizens (40%).

Moreover the same trend can be identified when the scores are broken down. In almost every country included in the survey, public services for businesses score significantly higher than public services for citizens. The exception to this is the Benelux countries, where more emphasis is put on online services for individuals.



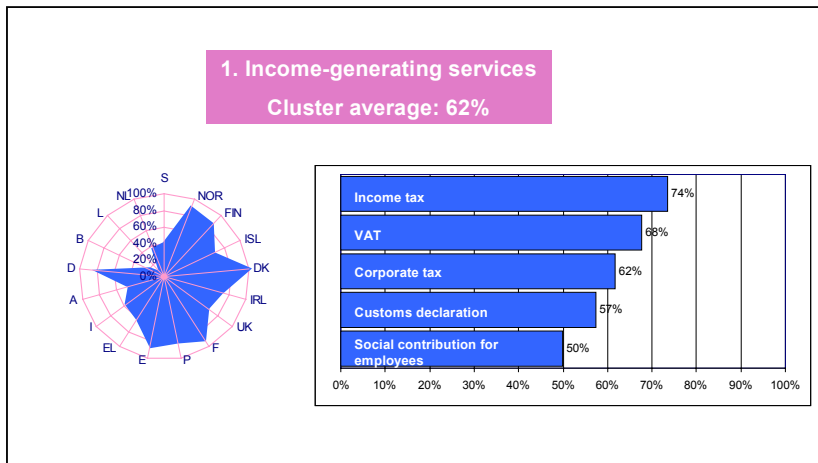
2.3 The four service clusters

In order to identify common trends within groups of related services, four service clusters have been created: income-generating services, registration services, permits & licenses and returns. These can be defined as follows:

- *Income-generating services*: services where finance flows from citizens and businesses to the government (mainly taxes and social contributions)
- *Registration services*: services related to recording object- or person-related data as a result of administrative obligations
- *Returns*: public services given to citizens and businesses in return for taxes and contributions
- *Permits & licences*: documents provided by governmental bodies giving permission to build a house, to run a business etc.

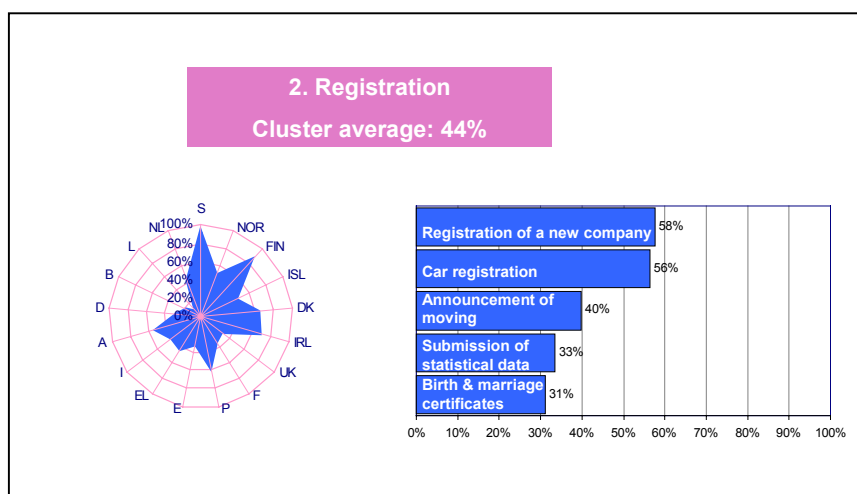
1 Income-generating cluster

With a cluster average of 62%, the income-generating cluster is the best performing cluster, in which every service scores higher than the global average of 45%. On a country basis (see the diagram) Denmark, Norway and France are the best performing countries in the cluster. The best scoring public service within this cluster is “income taxes” with a score of 74%.



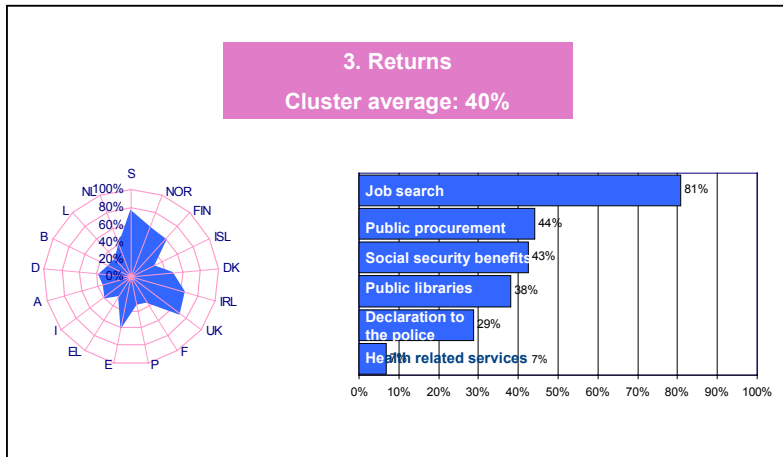
2 Registration cluster

With a cluster average of 44%, the cluster of registration services scores slightly below the total average of 45%. Compared to the other countries, Sweden and Finland score significantly higher in this cluster. Within this cluster, “Registration of a new company” is the best performing service.



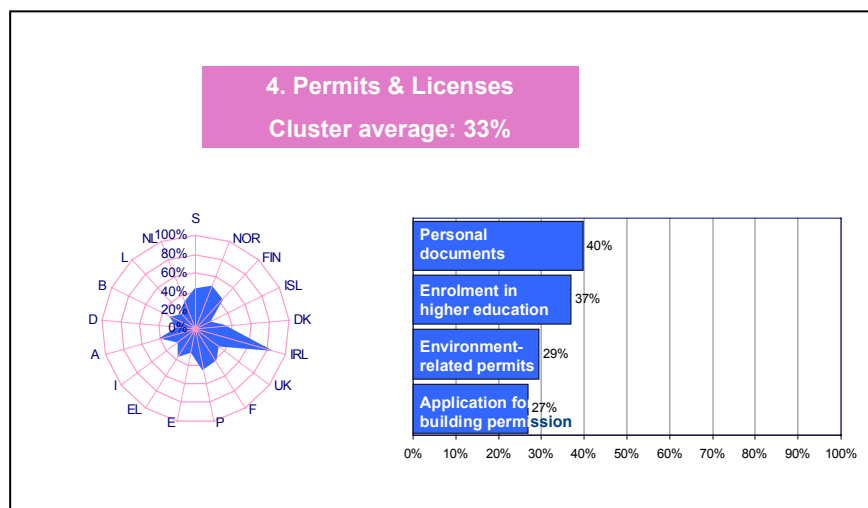
3 Returns cluster

With a cluster average of 40%, this cluster has a rather low score. However, it is clear that this average is the result of very high and very low scores, which include the overall best score for job search (81%) and the overall worst score for health related services (7%). Sweden, UK, Ireland and Norway are the best performing countries.



4 Cluster Permits & Licenses

This cluster is the worst performing cluster, with a cluster average of only 33%, that is, substantially below the overall average of 45%. On the country level, Ireland is the only positive exception in the cluster with a score of more than double the cluster average (71%). This is clearly shown in the diagram below. Within this cluster, “Personal documents (birth and marriage certificates)” is the best scoring service.



3. Conclusions

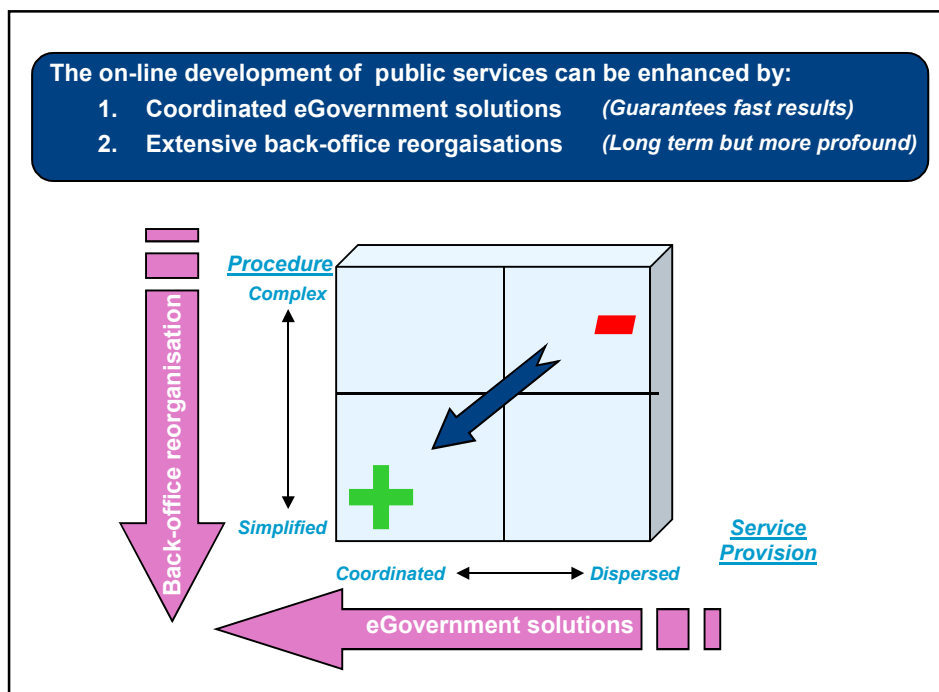
Two main conclusions can be drawn from the results:

- *The online development of public services is enhanced by coordinated service provision.*
- *Complex administrative procedures require important back-office reorganizations*

It was obvious that the best results were achieved by public services with simple procedures and centrally coordinated service provision, for example, job searches, income tax, VAT, corporate tax and customs declarations. On the other hand, building permissions, environmental permits and enrolment in higher education are more complex administrative procedures which are coordinated by local service providers. These services received the lowest scores in the survey.

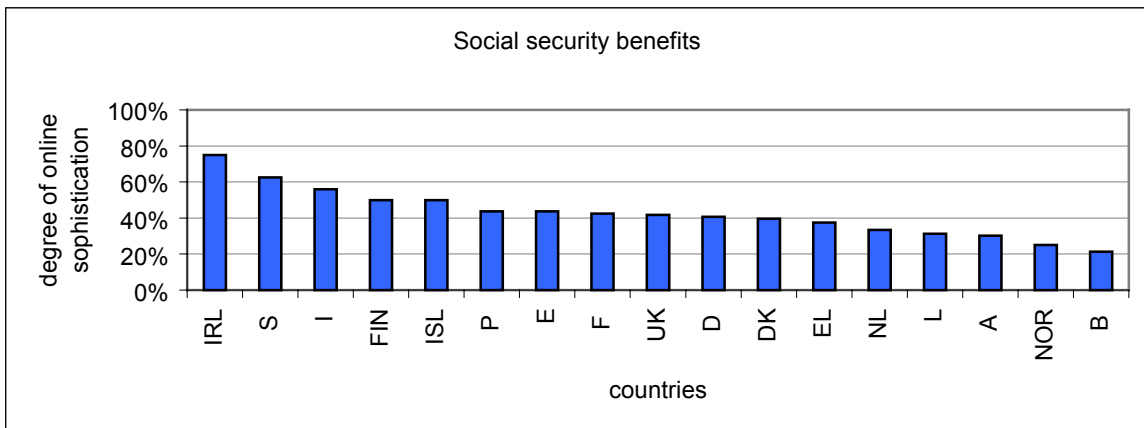
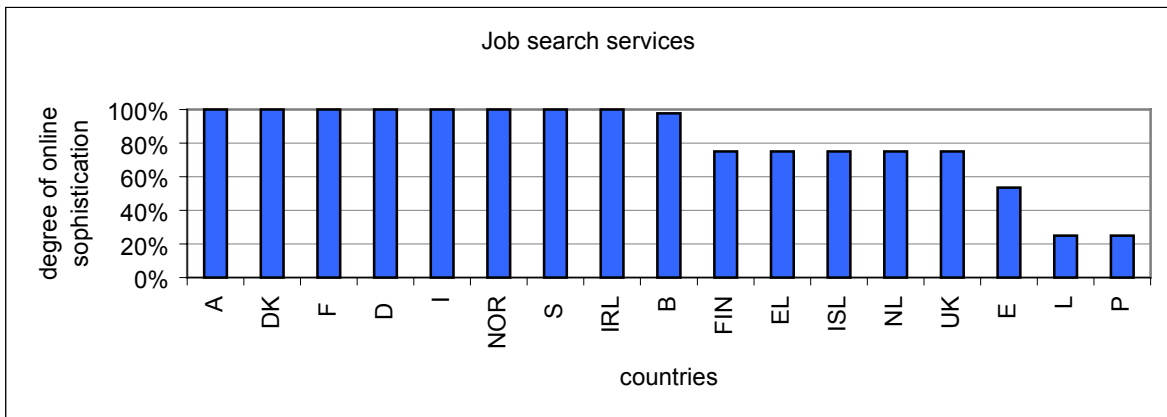
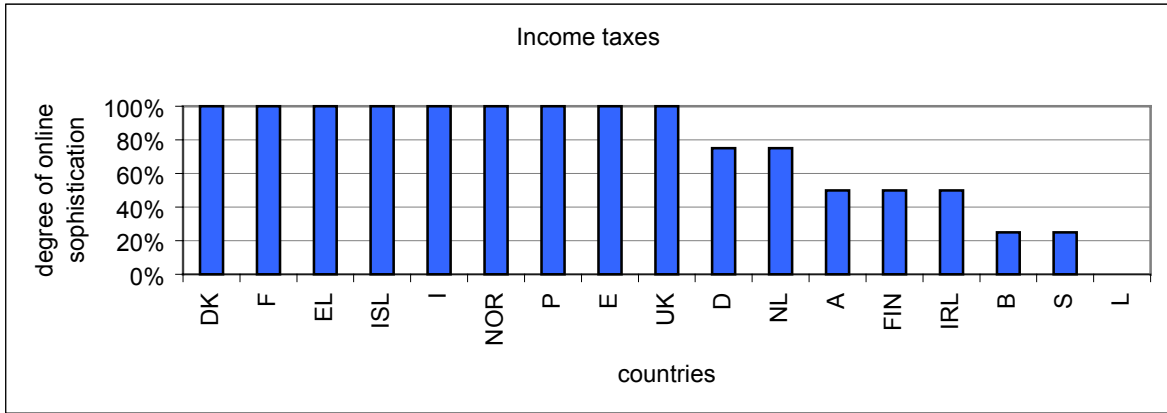
As a result of these observations, we have concluded that the online development of public services can be enhanced by:

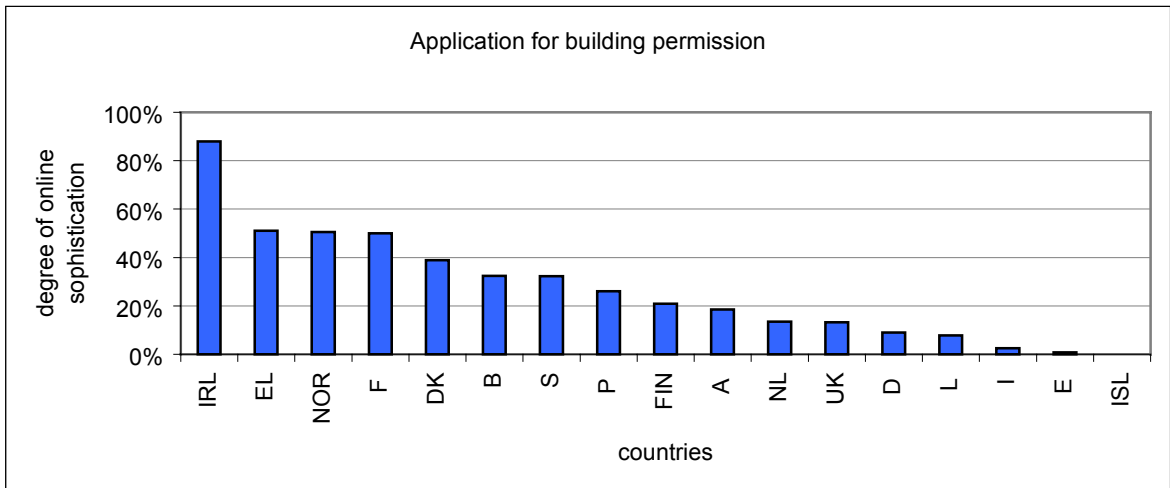
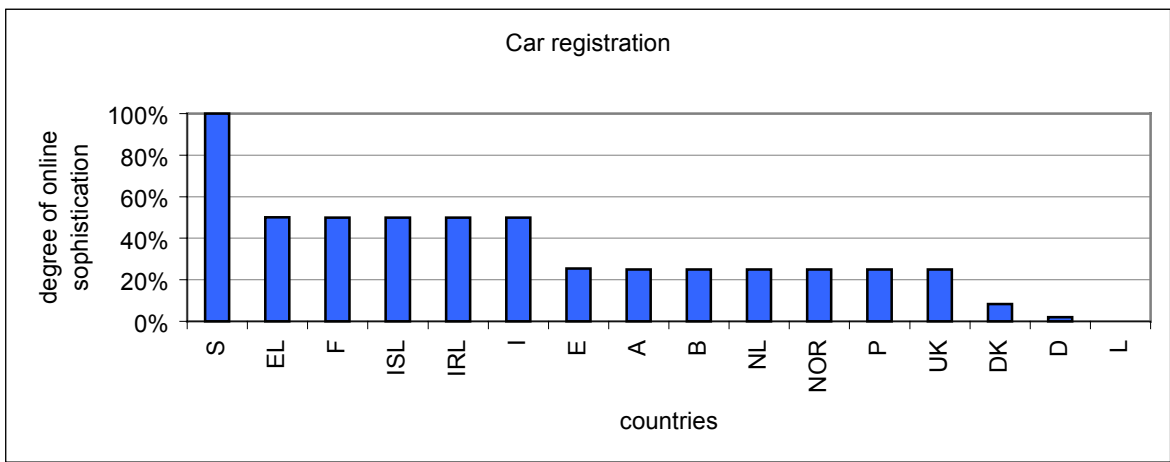
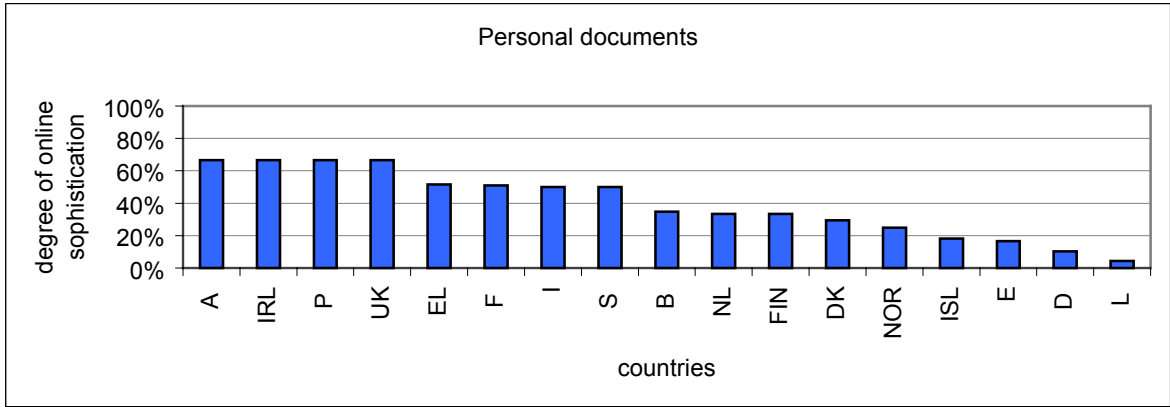
- Coordinated eGovernment solutions which allow local service providers to take advantage of centralised online initiatives offering a single point of contact in the form of e-portals or ASP-related solutions (Application Service Providers), with a citizen/customer-oriented approach rather than a procedural approach
- Extensive back-office reorganisations to transform complex transactions into simple procedures. This is a long-term operation.

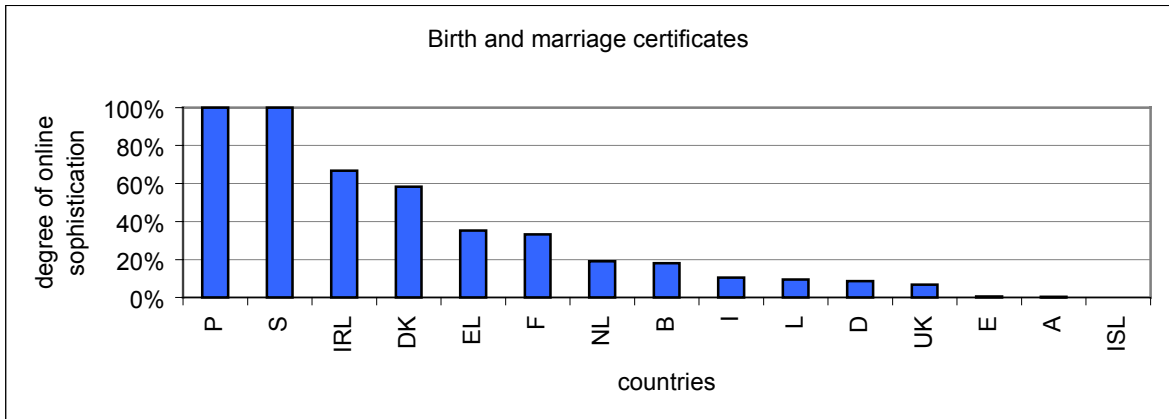
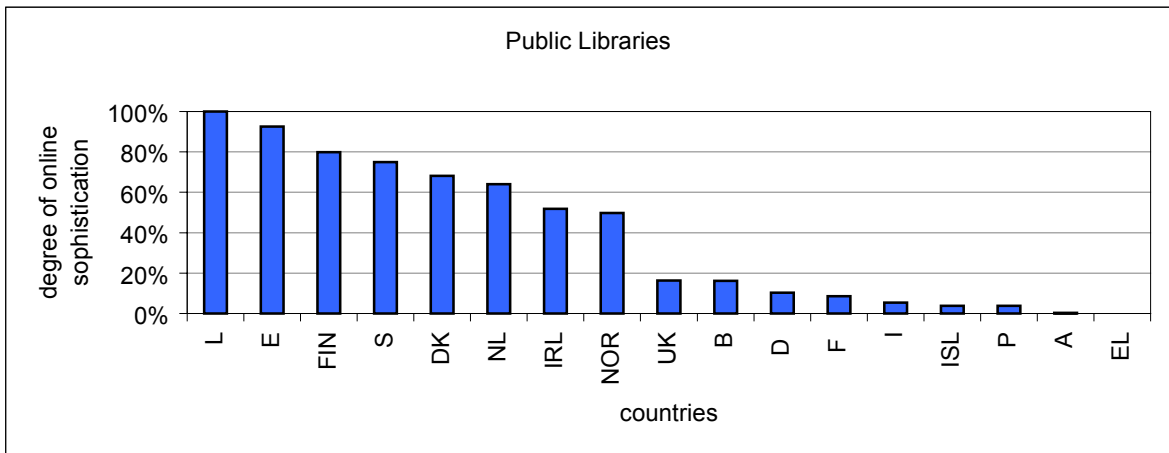
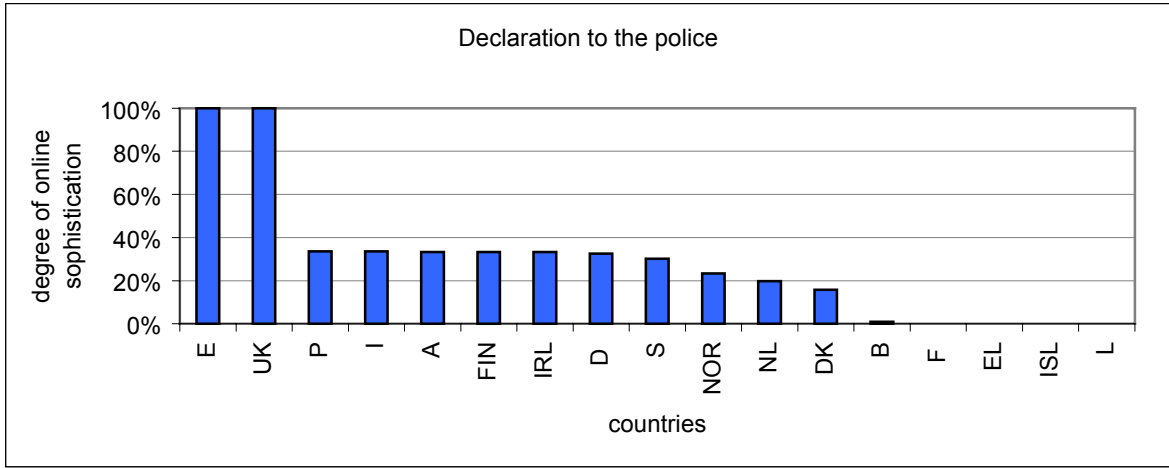


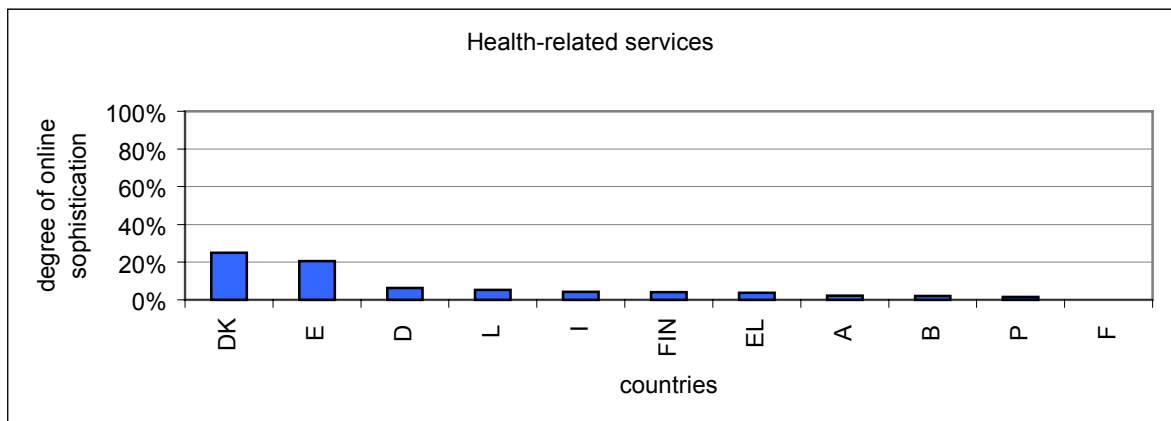
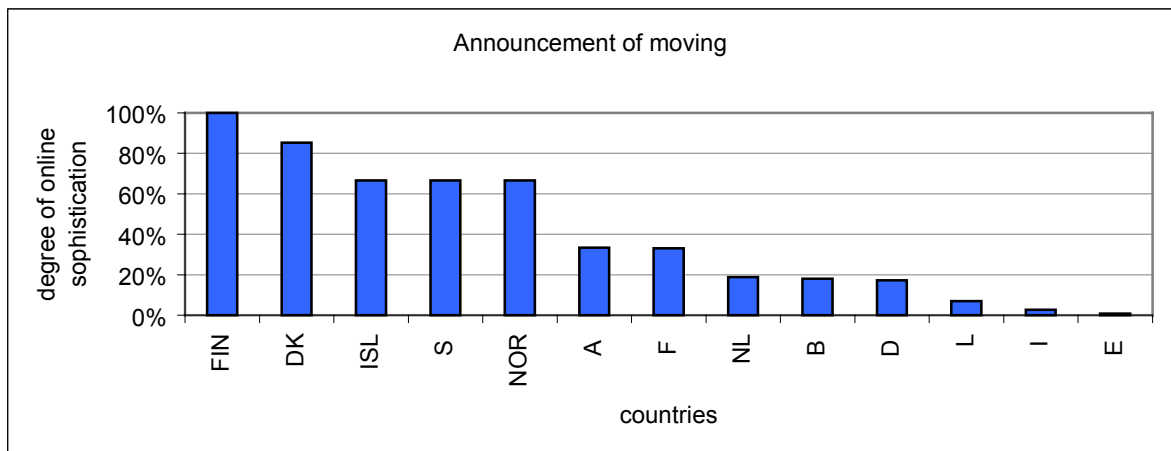
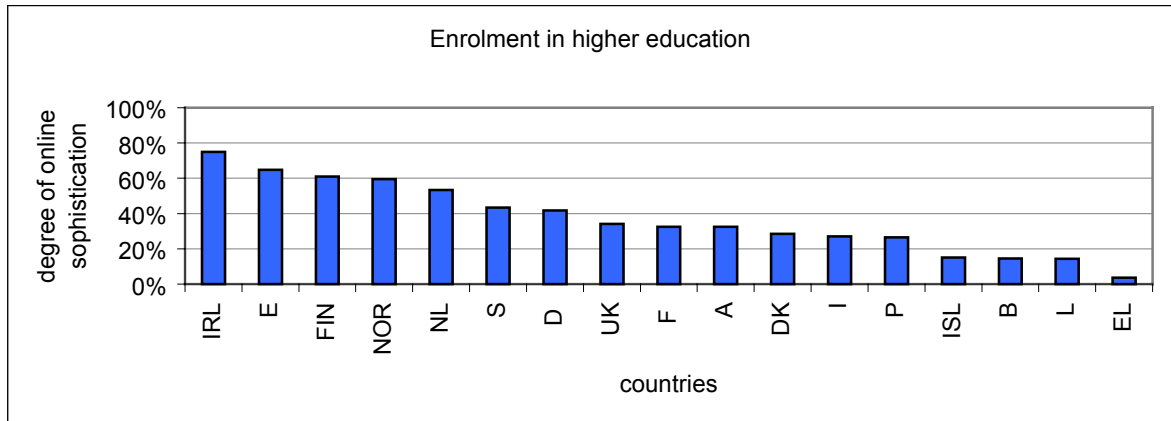
The nature of the service is not the only determining factor. The (re)organisation of back-office procedures in the country in question is also of considerable significance. Some countries were excluded from the calculation of the results for some services because those services were not relevant for them. In some cases, the reason for this was not that the service does not exist on the same level as in other countries, but rather that the active involvement of individual citizens is no longer necessary (e.g. car registration carried out by third parties using non-web-based automatic procedures, common income tax declaration sent out by the tax authorities to the individual in the form of a tax proposal). This means that a web presence for these services would be completely redundant in these countries. This leads to the conclusion that the concept of eGovernment should focus more closely on the modernisation of government, and more particularly on the transformation of government authorities into customer-oriented service providers. Citizens deserve to be treated as customers and to form the central focus of administrative service provision.

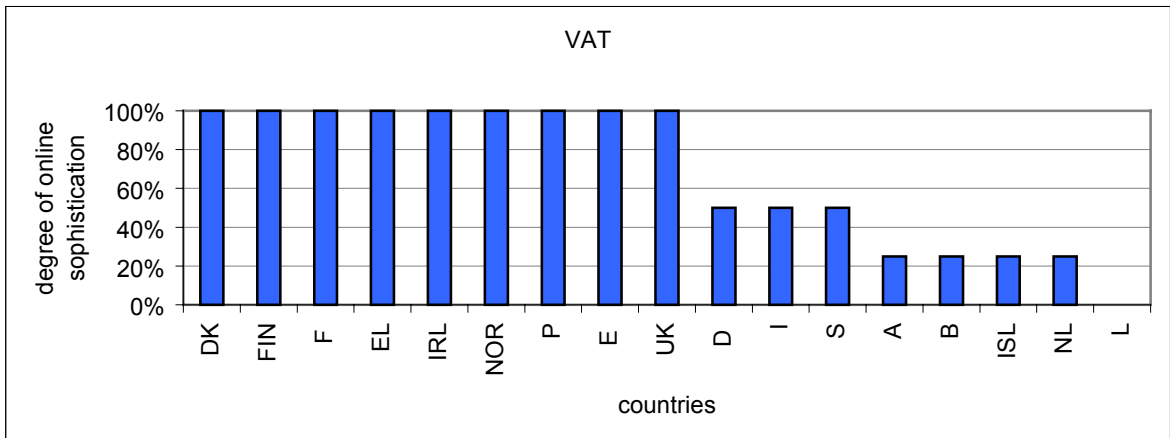
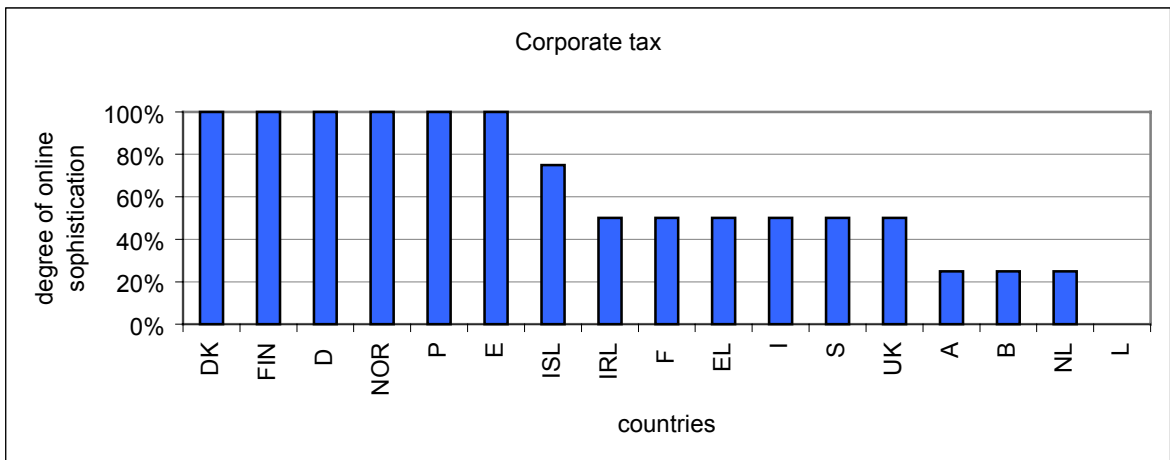
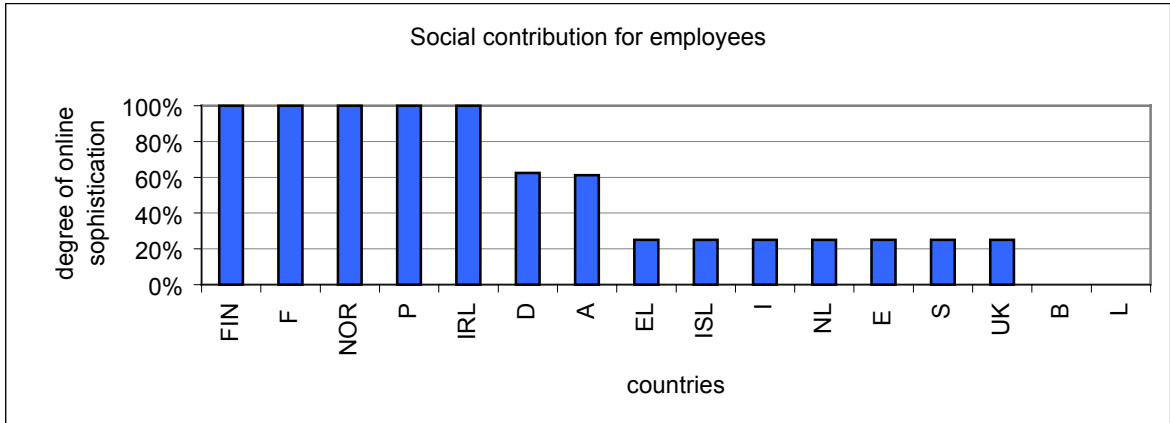
Annex 1: Results per service

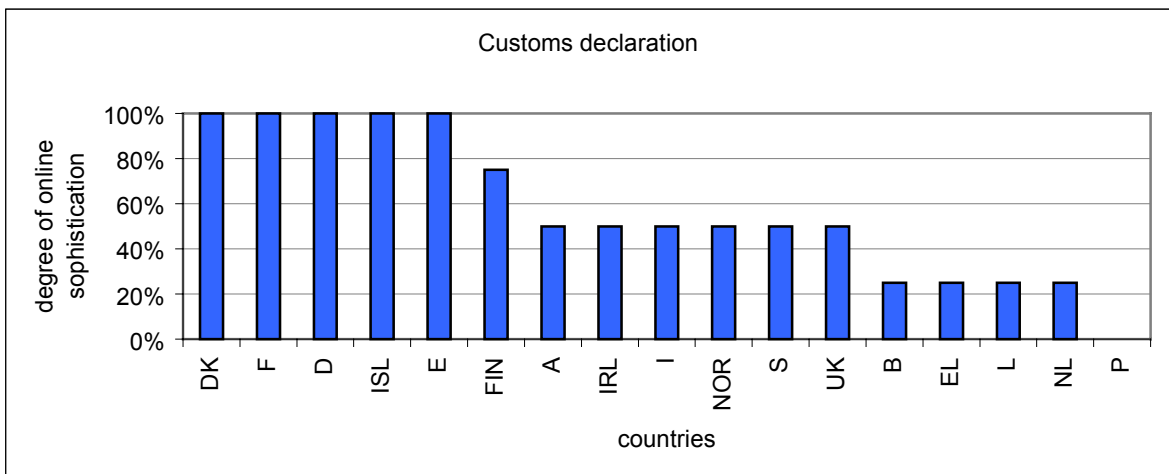
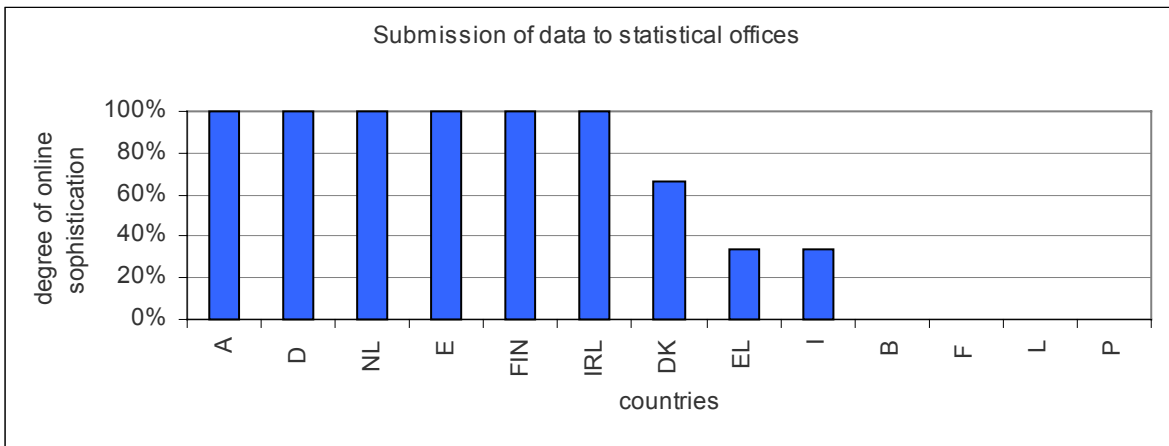
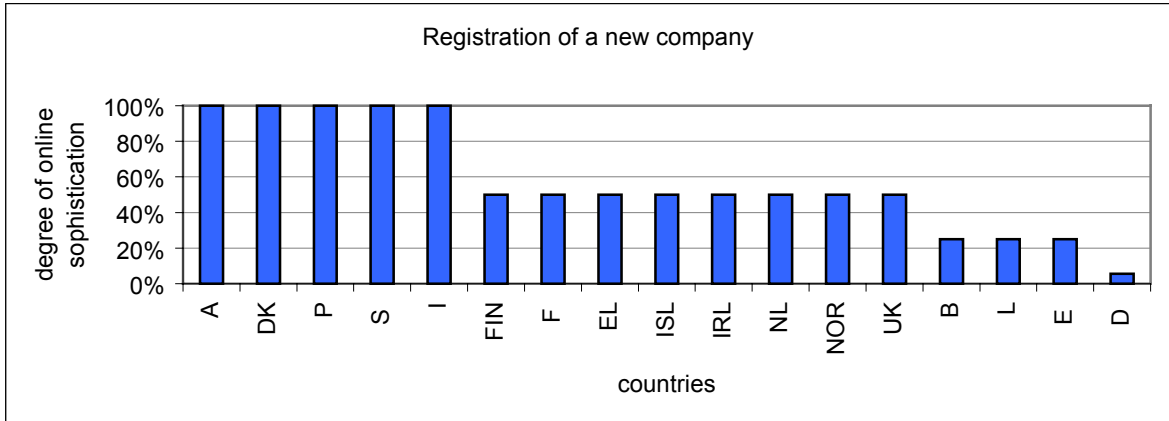


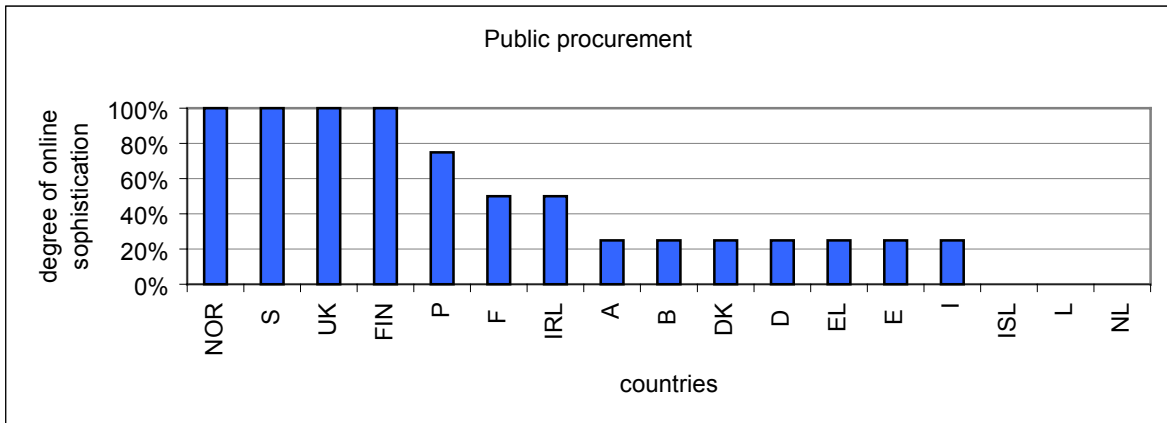
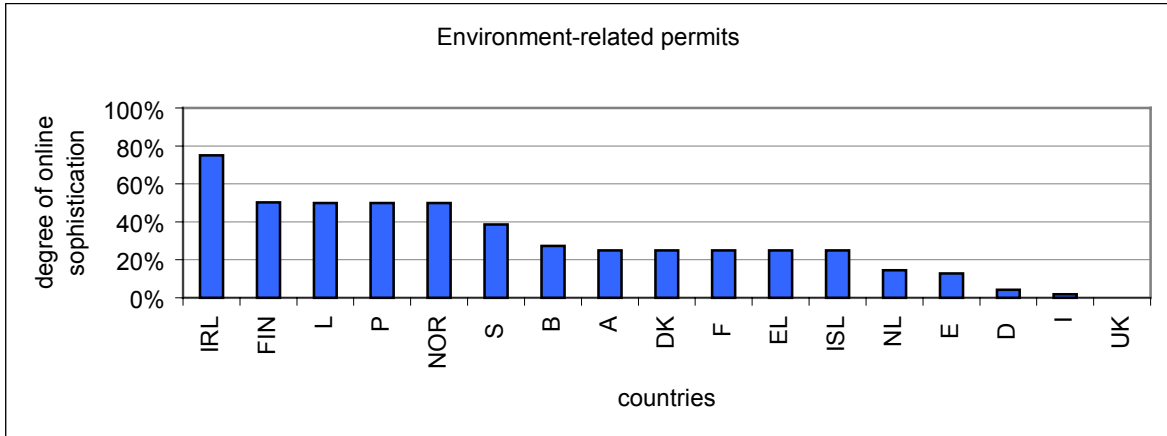












S	Sweden
NOR	Norway
FIN	Finland
ISL	Iceland
DK	Denmark
IRL	Ireland
UK	United Kingdom
F	France
P	Portugal
E	Spain
EL	Greece
I	Italy
A	Austria
D	Germany
B	Belgium
L	Luxembourg
NL	Netherlands

Annex 2: Methodological framework of the survey

1. Preparation and input of the survey process

In order to ensure the validity of the web-based survey, CGE&Y divided the survey into four steps:

- The scope of the 20 public services and of the 4 stages of online sophistication was refined to produce operational definitions;
- Via the CGE&Y network of government experts in the 17 countries, the governmental structure in every country was screened, so that each public service could be linked with its relevant administrative level and its service provider;
- A statistical methodology was developed to draw representative samples, where multiple service providers supply a public service (e.g. local authorities);
- A scoring scenario and a web-based scoring tool were developed to allow the content of all the websites to be analysed in a uniform way and, therefore, to obtain comparable scores suitable for benchmarking.

Each of these four steps will now be explained briefly.

Operational definitions of services and stages

The definitions of the four stages and of the 20 common basic public services, as drawn up by the European Commission, needed to be clarified in order to make sure that they could only be interpreted in one way. This was an absolute necessity in order to ensure that the results were valid and were understood correctly. Correct benchmarking requires comparable results.

The CGE&Y-team produced operational definitions of the services by introducing the principle of generality: in each case the most common, most general case has been analysed. This means that the standard procedure will be evaluated, i.e. the procedure for an official inhabitant/business in a country qualifying for the service under general conditions.

A set of operational questions for each of the four stages has been identified, in order to ensure that the scores can be interpreted unambiguously. These questions were used in the scoring scenario.

Screening of the governmental structure

A network of government experts in each of the 17 countries was consulted to obtain an overview of the different ways in which the 20 public services are organised and the variety of Internet applications being developed.

This screening provided a complete overview of the service providers to be evaluated.

In some cases a public service for certain countries was not relevant for the survey, since the individual citizen or the company was not responsible for the service (e.g. in some countries, companies do not have to submit any statistical data to the government). In these cases the scoring for the country was adjusted so as to neutralize the effect of this irrelevant public service.

Sampling of multiple governmental units

Some public services are typically provided by more than one official provider (e.g. birth and marriage certificates are mostly issued by local authorities). Given the availability of finite resources in terms of budget and time, a fully exhaustive survey of the complete lists of multiple service providers was not feasible. Therefore, we developed a statistical methodology to draw a representative sample if the number of units was too large. This methodology also allows the calculation of a scientifically valid aggregate score from the scores for the individual websites of multiple service providers.

Scoring scenario

Firstly, for each service provider participating in the web-based survey, we checked to see whether it maintains a publicly accessible website. To do this, we developed a search procedure which would guarantee the maximum probability that the URL in question would be found if it existed. From the 10,000 service providers included in the survey, 7,400 have a publicly accessible website.

2. Content analysis

The content analysis of the selected websites was done in a uniform and structured way. CGE&Y developed a web-based scoring tool that was used by the research team to carry out the content analysis and scoring of the URLs. As the number of URLs to be scored per country is significant and the exact interpretation of the different stages is crucial, the tool involves a very precise and structured procedure. The scoring tool guides the researcher through a well-defined path that leads to a score per service.

The implementation of the content analysis of the 7,400 websites was centrally organised in Belgium by Cap Gemini Ernst & Young. The research team consisted of at least one native speaker for each participating country.

The choice of using one centralised multinational research team in Belgium was made for various reasons. This type of research organisation offered the following advantages:

- **Multinational:** The initial advantage is that the researchers were all native speakers, with the obvious consequence that they fully understand the content of the websites. The second important advantage is that this way of working also implied that the researcher was familiar with the country itself.
- **Support:** The second main reason why a centralised research team was chosen is that it was possible to centralise the support for the team. The research managers were able, when confronted with specific questions or problems by members of the research team, to share the solution with all the researchers at once. This meant that all the researchers had the same kind of support and, more importantly, received the same instructions.
- **Control:** The centralised organisation of the research team within one physical location allowed the research manager to exercise centralised control. The computing infrastructure made it possible for the research managers to carry out quality checks on the performance of any researcher at any time during the research.

Finally, an important element of the survey is the quality control of the results. Checks and controls were built in and performed at various stages and in different ways during the research process. The function of the checks and controls in the research project was to guarantee the maximum level of accuracy in the results.

3. *Output: calculation of the final scores*

For the calculation of the final scores for the public services, the URLs were divided into two levels: the main responsible authority or unique service providers formed the higher level, the multiple service providers formed the lower level.

We introduced the following scoring rules to calculate a unique score per service per country:

- If there is one website for a unique service provider or for the main responsible authority on the higher level, the score of this site becomes the final score for the service (examples: income tax, the site of one federal ministry of finance)
- If there is more than one website for service providers or for the main responsible authority on the higher level, we took into account the score of the website of the highest-scoring service provider, as this site is accessible for each applicant in one country.
- In case of one or different unique responsible authorities and different multiple service providers at a lower level, the aggregated score of this higher level is then introduced as the minimum score of the sites of each multiple service provider. Then the average score of the multiple service providers is calculated to produce the final score for this service.
- In case of a list of URLs of multiple service providers, where there is no higher-level site, the average score of these service providers is used to produce the final score.
- For those service providers organised on a regional level (i.e. local authorities, regional administrations, libraries and police stations) a weighting factor based on the population is introduced and the final score is then weighted using this factor. For other multiple service providers (hospitals, universities etc.), an arithmetical average is calculated.

As requested by the European Commission, the different stages used to measure the level of online sophistication of the services were converted into percentages:

Stage	Intervals		Definition
	Score	Percentage	
Stage 0	0 – 0,99	0% - 24%	No publicly accessible website(s) or the website(s) do not qualify for any of the any criteria for the stages 1 to 4.
Stage 1	1 – 1,99	25% - 49%	Information necessary to start the procedure to obtain the service available on the website(s).
Stage 2	2 – 2,99	50% - 74%	Interaction: downloadable or printable form to start the procedure to obtain the service on the website(s).
Stage 3	3 – 3,99	75% - 99%	Two-way interaction: electronic forms to start the procedure to obtain the service on the website(s)
Stage 4	4	100%	Transaction: full electronic case handling of the procedure by the service provider (incl. Decision, notification, delivery and payment if necessary)

If the score for a service in a country is based on the analysis of the website of a unique service provider, the calculated percentage always will be in the following ranges:

- 0% or stage 0
- 25% or stage 1
- 50% or stage 2
- 75% or stage 3
- 100% or stage 4

If the score of a service in a country is based on the analysis of the websites of multiple service providers, or a combination of unique and multiple service providers, the calculated percentage is an aggregate of the average scores of the websites and will be positioned on the scale between the starting points of the ranges.

The conversion of the stages into percentages is also necessary, as for certain services the maximum stage was set at Stage 3. (This is because a complete electronic transaction is impossible given current technological developments.):

- Personal documents
- Declaration to the police
- Certificates (birth and marriage)
- Announcement of moving
- Submission of data to statistical offices

The calculation of the percentages is then as follows:

Stage	Intervals		Definition
	Score	Percentage	
Stage 0	0 – 0,99	0% - 32%	No publicly accessible website(s) or the website(s) do not qualify for any of the any criteria for the stages 1 to 4.
Stage 1	1 – 1,99	33% - 66%	Information necessary to start the procedure to obtain the service available on the website(s).
Stage 2	2 – 2,99	67% - 99%	Interaction: downloadable or printable form to start the procedure to obtain the service on the website(s).
Stage 3	3	100%	Two-way interaction: electronic forms to start the procedure to obtain the service on the website(s)

The final percentage per country is calculated as the average of the percentages of the 20 services for that country. The percentage per country for public services for citizens is the average of the percentage of services 1 to 11. The percentage per country for public services for business is the average of the percentage of services 12 to 20.

4 Non-relevant services

Some public services are classed as “not relevant” for certain countries.

- *Birth and marriage certificates*: in Norway and in Finland, these certificates are not commonly used and are not generally needed by citizens.
- *Announcement of moving*: in Greece, Ireland, Portugal and the United Kingdom there is no obligation to officially inform the local authorities of a change of address.
- *Health-related services*: in some countries individuals do not make their own hospital appointments, this is done by a doctor. This is the case in Iceland, Ireland, the Netherlands, Norway, Sweden and the United Kingdom.
- *Submission of data to the statistical office*: in certain countries businesses are not obliged to submit data to the national statistical office or the statistical office obtains this data directly from other administrative authorities. This is the case in Iceland, Norway, Sweden and the United Kingdom.
- *Car Registration* in Finland this is not done by individuals but by third parties (insurance companies and car dealerships).

As the final percentage per country is calculated as the average of the percentage of the scored services, the non-relevant services are not taken into account in this final percentage.

The percentage of the public service no. 3, social security benefits, is calculated as the average scored percentage of the following services:

- Unemployment benefits
- Child allowance
- Reimbursement of medical costs
- Student grants

In some countries some of the last three sub-services are not relevant.

- *Child allowance*: In certain countries citizens do not have to apply directly as an individual for this allowance. They receive it automatically after the registration of a child. This is the case in Belgium, Denmark, France, Iceland, the Netherlands and Sweden.
- *Medical costs*: In Denmark, Finland, Ireland, Italy, Sweden and the United Kingdom, there is no system of reimbursement of medical costs, only a system of direct settlement, which means that the citizen does not have to use a public service.
- *Student grants*: In Germany and Iceland there is no system of public student grants, only a system of student loans. This does not correspond to the definition of this service.

Where some of these sub-services were classed as not relevant in certain countries, the percentage of social security benefits was calculated as the average score of the relevant sub-services.

be.cgey.com

Cap Gemini Ernst & Young Belgium

Bessenveldstraat 19
B-1831 Diegem
Belgium
Tel. : +32 2 708 11 11
Fax : +32 2 708 11 10

Cap Gemini Ernst & Young Belgium

Moutstraat 140
B-9000 Gent
Belgium
Tel. : +32 9 240 15 11
Fax : +32 9 240 15 10

Cap Gemini Ernst & Young Belgium

Advanced Development Center
Parc des Collines, Rue Einstein, 4
Bâtiment E, B-1300 Wavre
Belgium
Tel. : +32 10 23 66 11
Fax : +32 10 23 66 22

Cap Gemini Ernst & Young PSI

Bessenveldstraat 19
B-1831 Diegem
Belgium
Tel. : +32 2 708 11 11
Fax : +32 2 708 11 10

Cap Gemini Ernst & Young PSI

Rue de la Grande Campagne, 6
B-7301 Hornu
Belgium
Tel. : +32 65 71 52 11
Fax : +32 65 71 52 00

Cap Gemini Ernst & Young Luxembourg

Rue de Longwy, 36
L-8080 Bertrange
Luxembourg
Tel. : +352 44 04 98 41
Fax : +352 44 04 98 38



CAP GEMINI
ERNST & YOUNG