Public Services for E.U. Citizens in the Knowledge-Based Society

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Abstract: *The paper focuses on the need for a shift in the knowledge-based society policy from a society driven by technology (mostly ICT) to one driven by a policy vision, enhanced social-economic cohesion. There is a strong focus on the local and regional dimensions. Issues such as e-government and regional benchmarking systems, as well as the exchange of good practice within the context of inter-regional networking, are taken into account in the paper. Disseminating best practice experience through 'networks of excellence' will assist countries like Romania in promoting new forms of governance (including e-government) and democracy (such as e-democracy) based upon a strong role for local authorities as well as for civic society at large.*

Keywords: *Public Services, the Knowledge-based society, e-government, e-democracy, regional benchmarking systems, inter-regional networking*

Introduction

"The adoption of the 2007-2013 package by the Commission is a significant achievement that lays the foundations for the implementation of the new programmes from the beginning of 2007. We are now looking forward to the speedy finalisation of the process by the European Parliament and the Council".
Manuel Barroso, President of the European Commission

The main purpose of this paper is to record a brief overall summary and some conclusions drawn from the existing literature. This paper is intended to contribute to the wider debate about the role of government in the *Knowledge-based Society*, and provides an opportunity for the Romanian' research teams in social-economic research (based on a partnership relation) to the wider research landscape. The 2005 *Spring Council of European Union* (EU) Heads of State concluded that all national and Community resources, including those of *Cohesion Policy*, should be mobilised in order *to renew the basis of Europe's competitiveness*, increase its growth potential and its productivity and strengthen social cohesion, *placing the main emphasis on knowledge, innovation and the optimisation of human capital*. The Council recognised that while some progress has been made since 2000 in moving towards the goals enshrined in *the Lisbon Strategy* there remains a need to create "*a new partnership for growth and jobs*"[1].

In this context, *"i2010",* adopted in *June 2005*, was the first Commission initiative under the renewed *EU Lisbon strategy*. In the framework of the *"i2010" initiative*, the Commission proposes *three priorities*, including:

- the completion of *a Single European Information Space* which promotes an open and competitive internal market for information society and media;
- strengthening *innovation* and *investment in information and communication technologies (ICT)* research to promote growth and more and better jobs;

[1] Communication to the Spring European Council (2005) "Working together for growth and jobs: A new start for the Lisbon Strategy", COM(2005) 141. Available at: http://www.europa.eu.int/growthandjobs/key/index_en.htm

- and achieving *an Inclusive European Information Society* that promotes growth and jobs in a manner that is consistent with *sustainable development* and that prioritises *better public services and quality of life*.

The *2007-2013* package include programmes under Competitiveness for *growth and employment*, such as *the 7th Framework Programmes* (research and technology), *the Lifelong Learning Programme*, *trans-European Networks (TENs)* for transport and energy, and *Galileo (worldwide satellite navigation system*)[2].

The importance of ICT in boosting *economic growth* and providing *more and better jobs* indicate the clear *synergy between ICT policy* (*i2010*) and *Cohesion Policy*. In this context, the overall aim of this paper is to highlight ways in which *Romania*, as before the 10 new Member States can contribute to the pressing challenge to create a *"high productivity, high value-added, high employment economy"* using public funding, particularly *EU Structural Funds*. The focus was placed on *the experience of the Nordic countries*[3], which have the best performers in sustaining their competitiveness. They *provide good practice* in the effective use of public (both national and EU funding) and private funds to stimulate the *development of a knowledge-based economy*[4]. Over the last two decades, economic development in *the Nordic countries* and particularly in *Finland* and *Sweden* has been driven by *strong public-private partnerships* involving larger firms working with governments, research centers and universities and clusters of smaller firms operating in specific technology fields (notably ICT).

The *'triple-helix' model*, adopted for example by the Swedish Innovation Agency "*VINNOVA*", has been essential in strengthening Nordic competitiveness based on the creation and diffusion of knowledge. The *Nordic good practice experience* provides a significant opportunity for Romania as a new coming EU Member States in January 2007, that is currently preparing its development priorities to be financed in the framework of *the EU Structural Funds (2007-2013)*, to foster the development of its own economy and society. The paper is structured around three main themes:

- ***Information and communication technologies (ICT)*** viewed as a powerful driver of growth and employment accounting for a quarter of EU GDP growth and 40% of productivity growth[5]. To ensure *effective investment in ICT* (networks, new technologies, etc.) and the application of such investments in the wider economy requires the involvement of a broad *range of actors*.
- ***E-Government*** defined as the use of ITC in *public administrations* combined with organisational change and new skills in order to improve public services and democratic processes and strengthen support to public policies. In its broadest definition, *e-Government* extends to include the delivery of, health and education services (*e-health* and *e-learning*).
- **Clusters** are a geographically or virtually group of interconnected companies and associated institutions in a particular field linked. Clusters stimulate innovation and productivity growth, foster long-term business dynamics, and generate new jobs and economic growth.

Evidence shows that in previous programming rounds, *Cohesion Policy* has stimulated a greater economic integration across the EU Member States. According to *the Third Report on*

[2] Revised package for EU programmes 2007-2013 – priority for modernisation and economic progress, 24 May, 2006

[3] The Gothenburg Ministerial Conference "Towards A Knowledge Society"–The Nordic Experience, 14th–15th November 2005

[4] Vinnova, Swedish Agency for Innovation Systems, www.vinnova.se

[5] Commission of the European Communities (2005) "i2010 – A European information society for growth and employment", COM(2005) 229. Available at: http://europa.eu.int/information_society/eeurope/i2010/i2010/index_en.htm

Economic and Social Cohesion[6], it has had a substantial macro-economic impact. More precisely, *EU Structural Fund* interventions have been driving the development of ICT, clustering and *e-Government* across the Member States through:

- Financing the *drivers of growth and employment* (e.g. investments in human and physical capital, including *ICT infrastructure*, research capacity and innovation, etc.);
- Raising awareness of *cluster policies* and *supporting cross-border projects* which have led to the creation of clusters;
- Enhancing the development of *e-Government* actions by financing projects and securing *the technical interoperability* of *e-Government services across Europe*.

1. Partnerships for Information and communication technologies (ICT) Development [7]

"Half of the productivity gains in our economies are explained by the impact of ICTs"
Building the Europe of Knowledge

Information and Communication Technologies are vital to creating growth throughout Europe's economy and achieving its social and environmental goals. Development of Information and Communication Technology (ICT) was launched in 1999 in a period of *societal optimism* driven along by the rapid diffusion of ICT. *The eEurope 2005 Action Plan* is part of *the Lisbon 2010 strategy for the European Union to become the most competitive and dynamic knowledge-based economy in the world, providing not only sustained growth with more and better job creation but also social cohesion*. ICT offers opportunities to enhance citizenship experiences (hence the focus on *e-Governance*) and *quality of life* by facilitating the provision of more and better products and services (for instance through the application of ICT across the whole range of functions that affect *e-Health*) to larger numbers of people. In this context, while it is encouraging that Europe currently accounts for around *one third of global ICT sales*, *annual growth rates of 5%* contrast with double-digit growth in emerging markets such as India and China[8]. Similarly, while Europe is also a global leader in electronic communications, accounting for 40 to 50% of the revenues of the world's largest players, our future position is undermined by under investment in ICT research compared to major competitors. Moreover, developing and producing new ICT is only one part of the story. The diffusion these pervasive technologies by government administrations, by the enterprise sector, by the health, education and training sectors and by individuals as citizens and consumers is equally important. Real gains in terms of growth and employment and consequently quality of life can only be attained when ICT developments are fully exploited as part of *a broad and inclusive European information* society. Accordingly, and within the framework of *the revised Lisbon strategy*, the EU Member States have reaffirmed *the pivotal role of knowledge and innovation as the engines of sustainable growth* and stated that it is essential to build *a fully inclusive information society*, based on the widespread use of ICT in public services, in businesses (especially SMEs) and households.

The EU has been funding research into ICTs since 1986, and is preparing its *Seventh Framework Programme and Structural and Cohesion Funds* to fund research from 2007-2013 "*focusing maximum effort into the most critical areas where 'European added value' can have the greatest effect*."

[6] Commission of the European Communities (2004), Third report on economic and social cohesion "A new partnership for cohesion: convergence, competitiveness, cooperation", pp. 149

[7] Understood to mean "*the ability of an economy to provide its population with high and rising standards of living and high rates of employment on a sustainable basis*". Commission Communication on Productivity: the Key to Competitiveness of European Economies and Enterprises

[8] In 2002, the EU spent 18 per cent of total R&D on ICT research, a much lower figure than in the United States and Japan, respectively 34 and 35 percent. Ibid. COM(2005) p.229

The Commission has recently launched a number of major proposals to strengthen Europe's position in ICT including *the Seventh Research Framework Programme (FP7*), the *Competitiveness and Innovation Programme (CIP*) and "*i2010–A European information society for growth and employment"*. Within this framework, Member States are asked to define *National Information Society Priorities* in their *National Reform Programmes* to contribute to the objectives of *i2010*. Certain messages, relevant to *the i2010 initiative* stand out in *Cohesion Policy*'s support for:

- efficient and effective delivery of public services–in particular *e-government* and *e-health*;
- facilitate and stimulate *private investment in ICT*;
- *investment in the skills needed* in *the knowledge-based economy*;
- provision of a *communication infrastructure* across the Union at an accessible cost.

The new EU Member States are faced by the challenge of using national and EU funding (notably from *FP7* and *the Structural Fund Programmes for 2007-2013*). The public sector has a driver role (through '*intelligent procurement'* of ICT intensive goods and services).

Nordic countries occupy four out of six of highest positions in the latest ranking of the world's most advanced nations for exploiting ICT[9]. *Iceland, Finland, Denmark* and *Sweden* appear in second, third, fourth and sixth place respectively, while the fifth Nordic country, Norway is in 13th place. The ICT sector employs 8.6% of the employment in the private sector in the five Nordic countries. The ICT sector is largest in Sweden accounting for 10.3% of total employment in the private sector, followed by Finland (8.8%), Denmark (8.7%), Norway (6.4%) and Iceland (5.6%)[10]. Drawing on these Nordic strengths in key ICTs, there are some crucial technologies:

- *Transport telematics*: 70% of innovations and 50% of the development costs of modern airplanes are related to ICT. There is a rising demand for *"infomobility*" services and in vehicle safety devices. The provision of *more intelligent transport systems* will improve not only overall economic competitiveness but also the European transport industry in global markets. The experience of leading Swedish companies and research institutes in co-operating in this field is particularly pertinent (notably the *cluster in Gothenburg* centred around *Lindholmen Science Park*[11]).
- *Mobile communications:* Europe (and particularly the Nordic countries) has been at the forefront of the development of mobile communications. Technology change is rapid with the current *3G technologies* (based on the universal mobile telecommunications service) being challenged by new broadband wireless technologies that could coexist with 3G or even compete with it.

The '*triple-helix'* model, adopted for instance by *the Swedish innovation agency VINNOVA* has been crucial in building up Sweden's expertise in communications, telematics, microelectronics, industrial IT and communications software. A number of '*ICT competence clusters*', based on an extended triple-helix model, have been developed. Similarly in *Finland*, ICT development has been driven forward by the powerful growth of *Nokia* and of *the telecommunications cluster*, but it has also been founded on *long-term investments in knowledge and competence*, public sector activities and

[9] The World Economic Forum's global information technology report 2004-2005 features a *'networked readiness index'*, which measures the relative level of ICT development in 104 nations, see www.weforum.org.

[10] The ICT Sector in the Nordic countries, 1995-2000 (joint publication of the Nordic national statistics offices, available at: www.dst.dk/ict). Sweden represents 36% of the total turnover of the ICT services sector in the Nordic countries, followed by Norway (26%), Denmark (22%), Finland (15%) and Iceland (0.7%).

[11] Within *Lindholmen Science Park's knowledge-intensive cluster*, a unique, pioneering and growth-oriented interplay is being developed. The three main areas of expertise are: mobile data communications, intelligent vehicles and transport systems and media and design. Within the three areas of expertise, interaction will eventually lead to the development of a "*Centre of Excellence*" that will promote both industrial and academic excellence. This makes the park *an attractive alternative for R&D-intensive companies* working internationally.

citizens' active interest in new ITC[12]. To maintain Finland's lead, *Tekes*[13]*, the national technology agency*, continues to invest significant amounts in internationally recognised good practice '*Technology Programmes*'. The key lesson from the Nordic experience of boosting ICT development appear to be that building up a competitive position in ICT and strengthening the information society cannot be done by one actor alone. *Partnerships* have been key to creating and sustaining the Nordic lead in ICT.

2. eGovernment–modernisation and innovation in the public sector to strengthen the knowledge economy. Regional benchmarking

E-government is Europe's next big challenge because it results from emerging research and can be considered as a development area. In the recently adopted *Community Strategic Guidelines for the period 2007-2013*, the Commission has emphasised that the efficient and effective delivery of public services–in particular–*e-Government*, *e-learning* and *e-Health*–has a significant potential impact on economic growth and for enabling new and effective delivery of services to citizens. In general, there are at least five factors that influence the progress of *e-Government*[14]:

- ✓ connectivity and technology infrastructure;
- ✓ *e-Government vision*, purpose and efficient strategy development;
- ✓ business and legal environment;
- ✓ education and skills; and
- ✓ adequate financial resources.

On *the 25th of April 2006*, the European Commission adopted *the i2010 eGovernment Action Plan (Accelerating e-Government in Europe for the Benefit of All). The new i2010 eGovernment Action Plan* defines five priorities:

- ♦ *No citizen left behind*: advancing *inclusion* through *eGovernment* so that by 2010 all citizens benefit from *trusted, innovative services and easy access for all*;
- ♦ *Making efficiency and effectiveness a reality*-significantly contributing, by 2010, to high user satisfaction, transparency and accountability and efficiency gains;
- ♦ *Implementing high-impact key services for citizens and businesses*-by 2010, 100% of public procurement will be available electronically, with 50% actual usage, with agreement on cooperation on further high-impact on-line citizen services;
- ♦ *Putting key enablers in place*-enabling citizens and businesses to benefit, by 2010, from convenient, secure and interoperable authenticated access across Europe to public services;
- ♦ *Strengthening participation and democratic decision-making*-demonstrating, by 2010, tools for effective public debate and participation in democratic decision-making("*e-democracy"*). *Availability measurements* will be combined with measurement of government transformation to allow the assessment of the impact of *the i2010 eGovernment Action Plan.*

[12] The Information Society Council's report to the Finnish Government: towards a network Finland (2005). Available at: http://www.vnk.fi/tiedostot/pdf/en/91989.pdf

[13] www.tekes.fi

[14] Economist Intelligence Unit (2004) "E-government in Central Europe: Rethinking public administration". Available at: http://europa.eu.int/idabc/en/document/3598/254

e-Government is the use of ICT in public administrations combined with organisational change and new skills in order to improve public services and democratic processes and strengthen support to public policies[15].

e-Government:

- improves quality of information and information supply;
- contributes to cost reduction;
- increases efficiency; and increases customer satisfaction.[16]

The focus in *e-Government* has shifted from "*supply of services through the internet"* over "*the uses of all these new delivery models by citizens and special groups"* to "*the impact of e-Government programmes in delivering better services to the clients, more efficient in an inclusive society*".

A common *typology of e-Government services* distinguishes information, communication and transaction services as well as *three generic application areas* –administrative affairs:

- *e-administration*,
- political participation (*e-democracy*)
- and everyday needs (*e-Assistance*).

Taking the qualitative aspects separately, obvious progress is made in developing *new innovative service delivery models*. A good example is *the Swedish tax services*, combining the online channel with phone and SMS services. *Online public service supply* as it was defined 5–6 years ago is now a mainstream service delivery model in the EU. Now a new one is emerging: the most advanced governments are developing *intelligent user centrice services.*

E-government at regional level. Nordic countries as best practice examples

Within overall EU policy, the regions are '*big business'*. In order to spend money effectively and responsibly a policy and a vision for regional development. There are some regional priorities

E-government for the regions; *Regional benchmarking (illustrating mostly nordic countries as the first in the class example)*;*Regional networking*; *Candidate Countries* (CCs). In this context, the 2000-2006 Structural Funds operational programmes are incorporating the CCs, in order to move towards a *Knowledge-based Society Integrated Strategy*.

The Nordic countries are now consistently rated one of Europe's top *eGovernments performers*. According to the 2005 *e-readiness rankings*[17], a study from *the Economist Intelligence Unit*[18], Nordic countries still remain at the top with Denmark and Sweden in particular, leading the way in *e-Government* implementation. In the group of the new EU Member States, the best examples are *Estonia* (26th rank), *Slovenia* (27th rank) and the *Czech Republic* (29th rank) with their strong development of *e-Government* services. *The Nordic countries* are well placed in terms of *online sophistication of public services*, the most advanced being Sweden (with a score of 89% based on a set of criteria). Overall, seven countries reach a score higher than 80%, including Sweden, Austria, the UK, Ireland, Finland, Norway and Denmark. In terms of the percentage of services that offer complete

[15] Commission of the European Communities (2003) "The Role of e-Government for Europe's future", COM (2003) 567 final. Available at http://europa.eu.int/information_society/eeurope/2005/all_about/egovernment/communication/index_en. htm

[16] Capgemini and TNO (2004) "Does e-Government pay off?" Available at: http://europa.eu.int/idabc/en/document/3818/254

[17] A country's 'e-readiness' is a measure of its e-business environment, a collection of factors that indicate how amenable a market is to Internet-based opportunities. Countries such as Luxembourg, Malta and Cyprus have not been included.

[18] *Economist Intelligence Unit (2005)* "E-readiness rankings". Available at: http://europa.eu.int/idabc/en/document/4187/194

electronic case handling, the three best performing countries are Sweden (74%), Austria (72%) and Finland (67%)[19].

In January 2002, *the Danish Government* published the ***e-Government strategy***, entitled *"Towards e-Government: Vision and strategy for the public sector in Denmark"*, setting out *the vision* to systematically use digital technologies to improve the quality of service and efficiency. The *Finnish e-Government strategy* is set out in the paper "*Public services in the new millennium*", published in December 2001. In *Sweden*, as early as spring 1999 the government presented an action programme, entitled "*A public administration in the service of democracy*", stating that services to citizens and businesses should be provided through the Internet.

Evaluation and benchmarking of e-government in the European Union

Regional benchmarking of e-government is important because:

- *e-government* is a priority for the development of the ITC
- *benchmarking progress* is an essential tool to allow monitoring and strategic guidance
- without it there is lack of evidence of the benefits and impacts
- there is a risk of losing momentum unless benefits and impacts are documented

The measurement was carried out for *the first time in 2001* and *in April 2006 it was the sixth measurement.* The Member States of the European Union-thus also the 10 '*new*' Member States since 2004-plus Norway, Iceland and Switzerland participate in this study. The 2006 *survey registers new progress* in the overall results of the supply and sophistication of e-Government services in the EU. During this 6th survey[20], 12,590 service providers were recorded for the EU(28), of which about 92% had a web-site. Compared to the previous measurement, this is a global increase of 8%. The percentage of service providers present online for those 17 countries back in 2001, compared to the result in 2006 shows a remarkable increase of 20%-point (74% in 2001 up to 94% in 2006). 2006 is the second year of *benchmarking the e-Services*[21] in the 10 new Member States and therefore this 6th measurement is highly impacted by the progresses made in these countries. An eloquent example is that the second and third ranking places have been allotted to two of the new Member States: *Malta* achieved the most outstanding progress recorded ever and moved from rank 16 to 2nd place while *Estonia* has moved from 8th to 3rd place and successfully entered the top 3. The common key success factor in these countries can be attributed to the *e-Government programmes* that have been implemented with great success these last two years. *Hungary* is now ranked 14 moving up nine places from last year. *Slovenia* as well made significant progress and has entered the top 10, moving from the rank 15 to 7 (+8).

What is the Maturity of Online Public Service Delivery?

The measurement of year 2006 resulted in a score for the online sophistication of 75%. A similar increase is noted for the EU(18), where the percentage rises from 87% to 95%. The EU(10) rise about 6%-point, resulting in 84% of the service providers present online.

How many services are fully transactional?

In general, almost 50% of the *public services* are fully available online. For services, mostly delivered on a national or regional level, the change from low to *fully transactional* has become easier because of more advanced technological possibilities. With a large increase compared to the previous

[19] Capgemini (2004) "Online availability of public services: How is Europe progressing?" Available at: http://europa.eu.int/information_society/eeurope/2005/

[20] Online Availability of Public Services: How Is Europe Progressing? Web Based Survey on Electronic Public Services Report of the 6th Measurement, June 2006

[21] The EC's Benchmark Study: Electronic Public Services in Europe

measurement, *Austria* leads in the country ranking. *The Austrian 'eGovernment platform'* launched different *new e-service initiatives* resulting in a final score of almost complete full sophistication.

What about the target groups: Citizens versus Businesses?

2006's results show a wide gap in the performances in *the public services for businesses against those for citizens*. There is a clear difference between citizens and businesses: a score of around 2/3 for businesses, compared to 1/3 for citizens.

Percentage of services with full availability online

For about half of the participating countries, more than 50% of the public services have full availability online. For Austria, Estonia and Malta, this is even the case for 75% of their public services.

Benchmarking and the Holistic Measurement Model

This is a complex and moving landscape. Today the *eGovernment indicator systems* include:

- The actual availability indicators are supply output indicators
- The *'Lot 2'* indicators will be qualitative supply indicators, focusing on user-centricity
- The '*eGep*' indicators are supply, organisational and use indicators, meant to *monitor the implementation of the i2010 eGovernment Action Plan*.
- Data from the *Eurostat Household s and Enterprises surveys* monitor take up of online public services.

The integration of these different systems in *one measurement model* should be the outcome of the actual European consultation process. There is an increased potential for quality and efficiency in the *public administration (PA*). *Key drivers for e-government*, include:

- ✓ stimulating new ways to increase efficiency and performance within public agencies
- ✓ restructuring of public sector functions and service provision along with the trend towards privatisation and outsourcing ('*reinventing government*')
- ✓ changes to management philosophies and their application on public sector activities ('*New Public Management*')
- ✓ demands for service improvements by the public in societies which are increasingly penetrated by the use of the Internet in all spheres of life
- ✓ a growing demand for government transparency, democratic participation and legitimacy, including the need to convince citizens of political projects and decisions, especially in the European Union ('*a Europe of the citizens*').

E-government services development in the future

Today there are many local developments in e-government, but in fact they do not *"know about each other*", nor are they always compatible under a policy/legal perspective. *Integration* needs to be achieved at four levels:

- *organizational* (e.g. between public agencies, through PPPs-Public Private Partnerships etc.)
- under *a service perspective* (i.e. an integrated service view)
- *content oriented* (e.g. through the development of a common understanding and ontology, data exchange, etc.)
- integration of electronic media and IT systems (system interoperability, equal options for means of access, etc.)

In addition, *the active participation of citizens in government and democracy* has become a pivotal criterion. In *future e-government*, services will be offered to the customers of public administrations through a wide range of means of access: Internet portals, mobile access facilities, integrated in virtual market places, etc. In fact communicating with public agencies is only the tip of the iceberg. If we really want ICT to enable effectiveness, quality, efficiency and legitimacy of public action, the entire Government requires *re-thinking*. *e-Government* is a way for governments to use new technologies to provide people with more convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in democratic processes.

3. A key role of cluster initiatives in fostering economic growth

"Creating a virtuous cycle between ICT, research, innovation and socio-economic benefits is a key drivenm force now"

The last decade has witnessed an extraordinary growth, across all regions and countries of the world, in attempts by governments and other public sector agencies to bring about regional economic growth through the sponsorship of so-called cluster initiatives. In particular, the *Nordic countries* were some of the first to realise that the challenge for an economy is to move from isolated firms to *clusters based on exchange of know-how*. For instance, *the NOVI Science Park* accommodates one of the largest clusters of *R&D-based companies in Denmark* and *the Structural Funds* were essential to the success of *NOVI*[22]. Recently, countries such as the *Czech Republic, Estonia, Latvia, Lithuania* and *Poland* have started to adopt the concept of clusters in their policies in recognition of the importance of clusters as vehicles for economic growth. The cluster approach had already been used in order to identify *Slovenia's relative competitive position* and it serves as a tool for policy formulation. With regard to benefits, innovative clusters:

- stimulate innovation and productivity growth;
- foster long-term business dynamics; and
- generate more new jobs and more economic growth.

The Nordic countries have some of the best examples of cluster development practices worldwide. According *to the 2004 World Economic Forum report on Global competitiveness*[23], clusters are most common in Finland, Italy, Denmark and Sweden. To get a better view on the evolution of services, experts have combined different services into *clusters*:

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

How do Public Service Clusters Evolve?

- *Income-generating Cluster*

The average for this cluster is 94% for the EU(28). The score for the service "*social contribution for employees*" is lower within the EU(10) for the indicator *"fully available online*". The

[22] Commission of the European Communities (2004), Third report on economic and social cohesion "*A new partnership for cohesion: convergence, competitiveness, cooperation"*, pp. 151.

[23] World Economic Forum (2004) *"The global competitiveness report: 2004-2005",* Plagrave Macmillian, 2005

number of income-generating services supplied online is high, but the question remains on the impact on the efficiency of these services knowing that efficiency is linked to its usage. The usage of *tax services* is certainly an interesting topic for measuring in terms of impact.

- *Registration Cluster*

The average for this cluster is 72% for the EU(28). The ability for businesses to provide data to the government through the web is both for the EU(18) as for the EU(10) well developed (public services to business).

- *Returns Cluster*

The average for this cluster is 71% for the EU(28). *Health related services* still score rather poorly.

- *Permits and Licenses Cluster*

The average for this cluster is 61%. These services are mostly found on a decentralised level. As not many services already use electronic signatures, many of these services still require human interaction, while interoperability of its systems is not much developed either.

- *Non-quantitative results*

During the survey some additional research has been performed on more qualitative aspects of the e-services on aspects like:

- multi-channel delivery;
- pro-activity;
- service integration;
- accessibility.

National, regional and *local public service* providers developed a new delivery channel, first only to provide information and later to facilitate interactive service delivery to the public, the citizens and the business. At that time concepts like "*inclusive design"* of online services, "*channel choice"* had not yet shifted from the private to the public sector.

A number of European programmes, including *the Regional Innovation Strategies (RIS)* and *the Regional Innovation and Technology Transfer Strategies (RITTS)* have helped raising awareness of cluster policies as an instrument of innovation policy at the regional level. The *INTERREG IIA programmes*, supported by *the EU Structural Funds*, also facilitated new possibilities for co-ordinated policies across borders. *Denmark* was among the first countries to integrate a cluster approach in its national enterprise policy[24]. Danish cluster analyses started in the early eighties with a view to defining mega-clusters and then subsequently moved toward small-scale cluster approaches. Evidence suggests that there are several critical factors that underpin the development of successful clusters. Critical factors for successful cluster development are:

- participation of the business sector;
- cooperation, dialogue and bottom-up approach;
- linkages between the members of a cluster;
- strong skills base;
- innovation and R&D capacity.

A main feature of *Danish cluster policy* is *cooperation* and *dialogue between public authorities and cluster members*. Such dialogue has given policy makers access to unique knowledge and understanding of specific framework conditions as well as how to improve these conditions. Fostering linkages between the members of a cluster is a crucial element of any cluster initiative. Many practitioners highlight the importance of a strong skills base for the development of successful clusters. Accessing and nurturing a qualified and skilled labor force is seen as a key factor in attracting and retaining companies as well as contributing to the successful development of companies within a

[24] Danish Agency for Trade and Industry (2001) "A new economy and its new clusters". Available at: http://www.ebst.dk/publikationer/rapporter/gb_klynge/efspup0202/index.htm

cluster[25]. *Innovation and R&D capacity* are also vital for a dynamic cluster. Innovation maintains the cluster at the forefront of the market whilst a strong R&D base can provide the ideas and products for future development. In addition to this, four other factors also are seen to contribute to successful development including an adequate physical infrastructure, the presence of large firms, a strong entrepreneurial culture and access to sources of finance.

Innovative clusters are an integral feature of the national innovation system contributing to overall country competitiveness and fostering economic growth. Increasingly, policies that support the development of clusters are perceived as key instruments of governments to boost economic development.

Conclusions

The world is not changed by technology…or by the supply of e-services, but *by those using them or not using them*. Governments realize that huge budgets are invested in eGovernment programmes and e-public services that are used by too few people. When we compare the results of the supply indicators with the most recent (2005) available *Eurostat indicator on the use of online public service*, there seems to be *a low correlation between the availability and the use of online services for citizens*[26] Taking *the qualitative aspects* separately, obvious progress is made in developing new innovative service delivery models, but one could wonder whether governments are ready to make full use of the recent technological evolutions in order to deliver better inclusive service for less.

Selective reference[27]

1. **SUCIU, MARTA-CHRISTINA,** *Economie. Noua economie şi societatea bazată pe cunoaştere. Partea a II a /Economics. New Economics & Knowledge-based Society. Part II,* Editura ASE, Bucuresti, 2004, ch.14
2. *Online Availability of Public Services: How Is Europe Progressing? Web Based Survey on Electronic Public Services Report of the 6th Measurement*, June 2006
3. *Revised package for EU programmes 2007-2013–priority for modernisation and economic progress*, E.U. Commission, 24 May, 2006
4. *the i2010 eGovernment Action Plan (Accelerating e-Government in Europe for the Benefit of All). The new i2010 eGovernment Action Plan, 25th of April 2006*

[25] Department of Trade and Industry (2002) "A practical guide to cluster development", pp. 29. Available at: http://www.dti.gov.uk/clusters/ecotec-report/dti_clusters.pdf

[26] For 2006 EUROSTAT will provide separate information on the use of each of the 20 basic pubic services, but this information will only be available by the end of the year.

[27] Chronologically Arranged