AN ANALYSIS OF PUBLIC POLICIES FOR THE DEVELOPMENT OF THE INFORMATION SOCIETY

The European Union as a study case

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Structure

- Why public policies for advanced telecommunications?

- What public policies for information society development *should be* considered?

- What public policies *are being* adopted?

- The case of the European Union

  ▶ Review of the different programmes

  ▶ An assessment of the results

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Introduction

Generalised access to telecommunication services has been an objective of every government during the last century

√ These policies took a new shape in the early nineties following the release of the agenda for the construction of a Global Information Infrastructure

"New generation communication networks would be the arteries through which the information required to transform the industry would flow"

Advanced telecommunication services have become since then the centre of much speculation and attention

What should be the role of governments on this regard?

A rationale for public intervention

Should governments take an active role in generalising advanced telecommunications access and use?

Interference in free market activity $\Rightarrow$ Existence of "justifying" circumstances

Presence of "*market failures*"

- ➤ Characteristics of the good itself $\Rightarrow$ public goods, merit goods, externalities

- ➤ Market situation $\Rightarrow$ imperfect competition, information failures, incomplete markets

- ➤ Macroeconomic arguments (development, employment)

- ➤ Equity

Public goods

Usual definition $\implies$ non exclusion, non rivalrous consumption

√ Traditional telecommunications services

    ➢ Exclusion is possible

    ➢ Non rival goods when there is no congestion (small probability)

How does this situation change for *advanced* services?

    ➢ Broadband accesses are solving previous congestion problems

    ➢ Access to contents and services is "architecturally" non-excludable

        $\implies$ Their usage by the next person represents zero costs

            ★ *"Impure"* public good

Merit good

"Positive" consumption $\Rightarrow$ Public judgment differs from private evaluation

Do telecommunications deserve to be considered as merit goods?

➤ economic growth

References to other epigraphs ➤ equity

➤ externalities

★ How about *advanced* telecommunications?

➤ Reinforced arguments about economic growth

➤ ***Tool*** role $\Rightarrow$ Provision of other public good or services

Externalities

√ "External"

⟹ Reduction of transaction costs, alternative to physical transportation ...

√ "Internal" (network-based activities)

◆ Usefulness is a consequence of the number of users

▶ Direct

◆ "Call received" externalities

▶ Indirect ⟹ Portfolio of services grows with the number of users

★ How about *advanced* telecommunications?

⟹ The club characteristic is extraordinarily strengthened

Market situation

- Failure of competition

  $\Longrightarrow$ Incumbent operators maintain very high market shares

  $\Longrightarrow$ Slow development of alternative local loops

- Information failures

  $\Longrightarrow$ *"Experience goods"* (require a previous experience)

- Incomplete markets

  $\Longrightarrow$ Demand of Information Society services is not socially, neither geographically, segmented

  Lack of supply

Economic development

√ Cause and consequence of the level of development

  ➤ Productivity improvements

  ➤ Efficiency growth

  ➤ Better location decisions

  ➤ Increase of competition

√ *Endogenous* economic development

  ★ *Advanced* telecommunications

    ⇒ Engine of the *networked economy*

    → Its absence is considered a sign of underdevelopment

Equity

√ "Basic social" goods

⟶ *Connatural right to communication*

√ Equal "base capabilities"

▶ Economic integration

◆ employment opportunities

◆ qualifying training opportunities

▶ Social integration

◆ access to educational resources

◆ access to cultural resources

◆ development of shared values

◆ support of democracy itself

Conclusions

Almost all the arguments are, to a variable extent, applicable

The decision of adopting policies for generalising advanced telecommunication finds coverage in economic rigor

Finding coverage does not imply *being forced* to intervene

However, this intervention, *should it be carried out*, cannot be inconsistent with the assessment made of the analysis' results

Portfolio of reasons that, duly valued and ordered, make up a solid base on which to base each action

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Meaning and elements of the digital divide

The *digital divide* is not an issue exclusively limited to ICT access

It also includes any inequality regarding opportunity, as well as expertise, when exploring what ICT can provide

More than digital *divide*, we should talk about digital *divides*

√ In the interior of countries, the divide separates rural, isolated or depressed areas

The most obvious division is the global one, which threatens with increasing the distance separating countries

This "International" digital divide is essentially an outgrowth of pre-existing socio-economic divides

Basic actions to fight against the digital divide

- Two are the key factors on which actions should be taken to fight against the digital divide

  - ► *Access* ⟹ providing connection to the appropriate infrastructures

  - ► *Adoption* ⟹ encouraging their usage considering the social, economic and political characteristics of the targeted clients and communities

- From the market perspective, the issues of access and adoption are inextricably interwoven

The digital divide in developed countries

- The *access* problem $\Rightarrow$ universalisation of broadband infrastructures

  Isolated and rural areas may have to wait quite some time until they can enjoy, not the arrival of effective competition, but any broadband connection

- The *adoption* problem is much broader

  √ It extends to groups which, despite having access to the infrastructure, do not use it

  √ It will be important for policy makers to identify strategies that may encourage a faster adoption among these groups

The digital divide in developing countries (I)

- The number of lines has grown substantially during the past few years

  $\Rightarrow$ Nevertheless the task of achieving an *universal network* is still far from being achieved

- The task is now quantitative as well as qualitative
  - ▶ They must continue to move forward in the expansion of basic networks
  - ▶ They need to start generalizing the access to advanced services, currently only available in capitals and major cities

The digital divide in developing countries (II)

- As in any other country, the final purpose must be the *integration* of the technologies into the overall economy

- The efficient *adoption* of ICT needs

  ▶ "hard" physical capital $\Longrightarrow$ computers, network infrastructures, etc.

  ▶ but *also* "soft" social capital $\Longrightarrow$ relatively efficient factor and product markets, well-functioning financial and regulatory institutions, etc.

- The element differentiating the members of this *second group* is the significance of the challenge

  Many of these countries have sufficient resources to, with the appropriate strategy, move towards the first group

The digital divide in less developed countries (I)

- Western models for the telecommunications sector reform were "exported" to poorer countries

    $\implies$ Was their validity universal when national conditions differ so profoundly?

- Two difficult challenges to deploy networks
    - ► Attracting foreign capital to subsidize their network construction
    - ► Finding ways to compensate the reduction in one of their main financing channels brought on by the modification of the rules regulating International communications

- *Aids* and *loans* become the primary, if not the only, solution.

The digital divide in less developed countries (II)

- Any access-related progress achieved, regardless of how small it may be, must move in parallel with the *encouragement of usage*

- Grassroots intermediaries and the involvement of the community

  ⟹ Key factors that foster the availability of content and services that respond to the most pressing needs of the poor

- Additionally, network construction must be merged with a *joint development strategy*

  An aggressive programme of investments in ICT, neglecting other critical developmental priorities, may turn out to be mere wasteful investments

General recommendations (I)

√ Moving towards an effectively *functioning and inclusive information society* requires more than changes in the economic system

Policies need to address a wide range of social, political and cultural issues in a way that both accommodate and facilitate economic change

√ The plans of action need to act on *solid grounds* to be really efficient

Knowing what the initial situation is and what the intended (feasible) objectives are represent the base for the programme to be successful

Any access to advanced technologies is useful only when it is provided with a true sense

General recommendations (II)

There is *no single road* towards the Information Society

All countries should not try to charge down a single path
emulating the perceived leaders in technological development

Even when a policy is correctly defined, it needs an adequate
management of the related programmes

The ultimate test for every country will be the *economic and social
efficiency* of the investments undertaken

If they are to be efficient, they must be demand-led, not supply-forced

Practical recommendations

1. A clear priority in the political agenda
2. Need of leadership
3. Careful design of organisms, agencies and departments
4. No more diagnosis
5. Balance public – private
6. Politics, regulation and innovation. Imitation versus imagination
7. The initiatives already exists
8. "Virtual" budgets and its execution
9. Indicators and benchmarking
10. The successes are local
11. The Information Society is Society

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Introduction

√ Programmes have been drawn-up in most countries with the goal of facilitating the adaptation to the Information Society

➤ The general objectives are almost identical, regardless of the specific situation of the country

However, the existence of a global vision on what the path towards the information society should be does not imply absolute uniformity

Apart from possible discrepancies in the *orientation* chosen, the *specific design* and *application* of the policies holds disparate results in every case

The evolution of the Information Society development plans

√ The first reflections around the transition towards a new socioeconomic model ⟹ start of last century's seventies

√ Policies did not take a central role in the public discourse until the early nineties ⟹ release in 1993 of the US agenda for a G.I.I.

√ In last years, almost all countries, including the less developed ones, have its own programme for the development of the IS

★ Apparently the only difference among countries is that some have much farther to go than others along the path to the *IS wonderland*

Notwithstanding the propagation of this true and unique version ...

... *Differences* in motivation, ideological orientation, extension and contents

Motivation

- Dominant economies ⟹ IS is a path towards returning to economic prosperity, securing the country's standing in the world pecking order while tackling deep-seated social problems at home

- Less developed and newly industrialized countries ⟹ IS is a path towards future prosperity through accelerated economic growth

√ Common cause for the launch (and advertising) of the public actions

In a period where the "great narratives" are said to be vanishing, IS visions have become such a **new narrative**

Ideological orientation (I)

- Neo-liberal ideological positions
  - ► Private capital, operating through efficient markets, is the driving force
  - ► The state acts as facilitator $\Rightarrow$ its essential role is to create the conditions that will enable the markets to flourish
  - ► The emphasis is placed on the introduction of competition to boost the liberalisation and deregulation processes

- Interventionist model
  - ► The State is in charge of leading by itself the actions needed to achieve the objectives that have been defined
  - ► The market continues to play a complementary role which in many cases is really basic
  - ► Regulation is not seen as an evil to eradicate, but as a policy instrument

Ideological orientation (II)

- Neo-liberal ideological positions have oriented most plans for managing the information society development

- Existence of interventionist model examples, basically in the Asia-Pacific region

√ Intermediate solutions are very frequent, with different degrees of public interference, which we could define as *dirigiste models*

This approximation or combination of the two extreme models is particularly obvious in most of the *new* plans designed in this century

Catalogue of actions

Two key factors on which actions must be taken

Access *Adoption*

√ The technological (access) vision presided all the initial plans

This idea combined with the neo-liberal vision led to policies being based on (limited to) the *liberalisation of the telecommunications sector*

√ Recent plans have extended the **catalogue** of actions

Conviction of the decision-taking agents

The liberalisation reaching a level considered satisfactory

From the market perspective, the importance granted to intervention in the *demand side* rises to levels close to those of the offer

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From Delors' White Paper to the launch of *e*Europe

- The neo-Keynesian **Delors' White Paper** (1993) stressed the urgency of developing a Pan-European information infrastructure

- Oppositely, the **Bangemann Report** (1994) starts from a clearly neo-liberal position, stressing the liberalisation of the telecommunications and the role of the private sector

  ⭐ In practice, the Bangemann vision won…

  … to the extent that one can question whether information society policies have not just functioned as the *sugar* around a policy of telecommunication liberalisation

- In 1998, the Council adopted the short-life programme PROMISE

Second stage: the *e*Europe strategy (I)

- On December 1999, the European Commission launched "*e*Europe An Information Society for All"

- *e*Europe was set out as a basic piece of the so-called **Lisbon strategy**, targeted at turning the European Union into *the most competitive and dynamic knowledge-based economy* by 2010

- The *e*Europe 2002 Action Plan had three main lines of action:
  - ► a cheaper, faster and more secure Internet
  - ► investment in people and skills
  - ► a greater use of the Internet

Second stage: the *e*Europe strategy (II)

- The *e*Europe 2005 Action Plan two main objectives were that in 2005 Europe should have:

  - ► modern online public services (e.g. eGovernment, eLearning, eHealth)

  - ► a dynamic eBusiness environment

  As an enabler for these, both a widespread availability of broadband access at competitive prices and a secure information infrastructure were necessary

- The *e*Europe+ Plan, launched for the candidate countries, mirrored the priority objectives and targets of *e*Europe

The present programme: i2010

- The "*i2010 – A European Information Society for growth and employment*" initiative was launched by the Commission on 1 June 2005

- It is a framework for addressing the main challenges and developments in the information society and media sectors up to 2010

- Three pillars of i2010 Initiative:
  - ▶ Single European Information Space
  - ▶ Investment and Innovation in Research
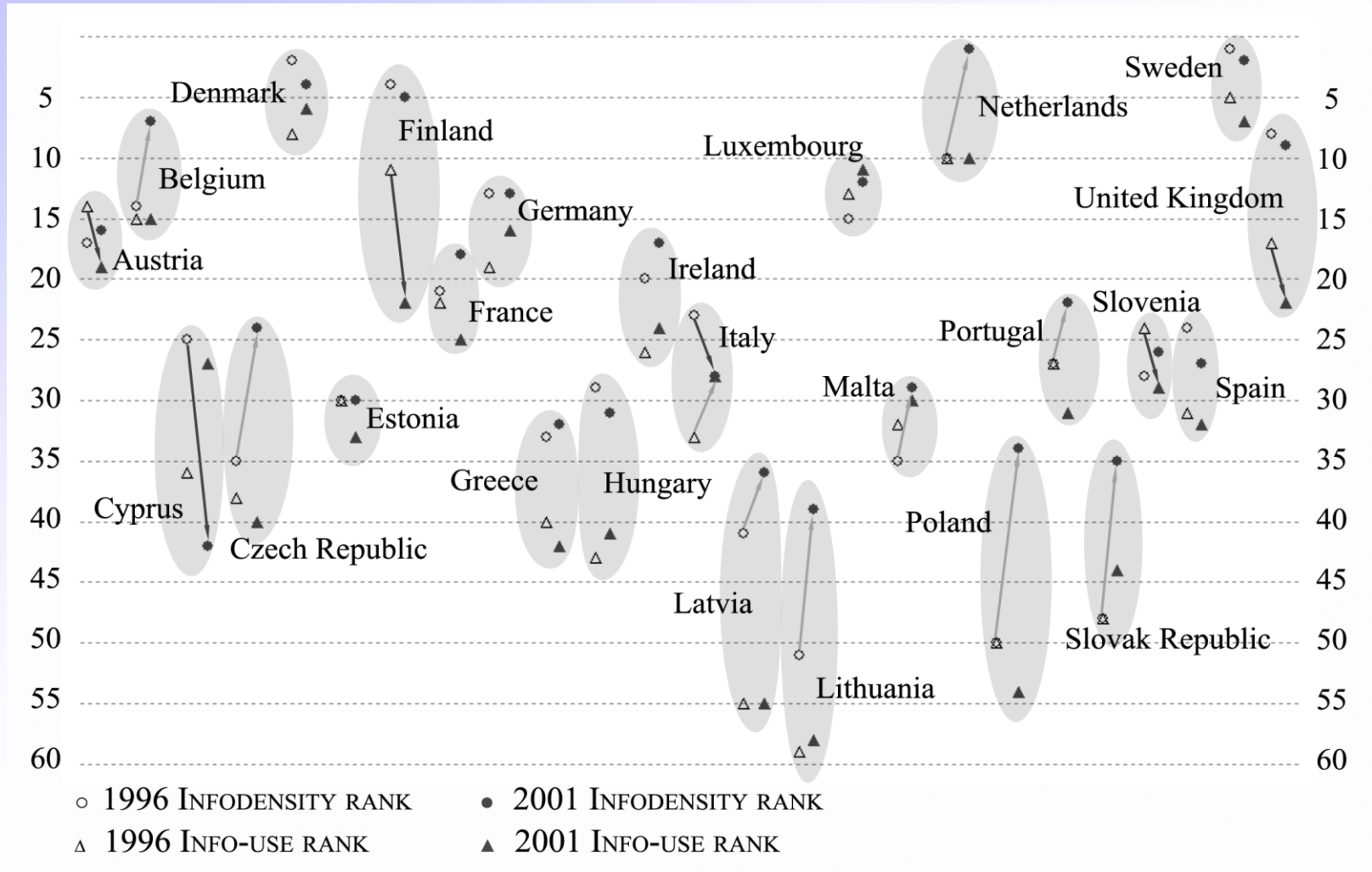 - ▶ Inclusion, better public services and quality of life

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How can the efficiency of the policies be measured?

- Two main problems:
  - ► There is no single and comprehensive vision on what the information society implies or on the transformations it brings
  - ► Lack of available data $\Rightarrow$ the "traditional" national statistics are clearly unsuitable
    - √ A Regulation on information society statistics will ensure harmonized data for all Member States from 2006 onwards
- Possible options:
  - ► In-house reports
  - ► Classifications regarding the penetration of the information society in societies and economies that are published by different International organisations, both public and private
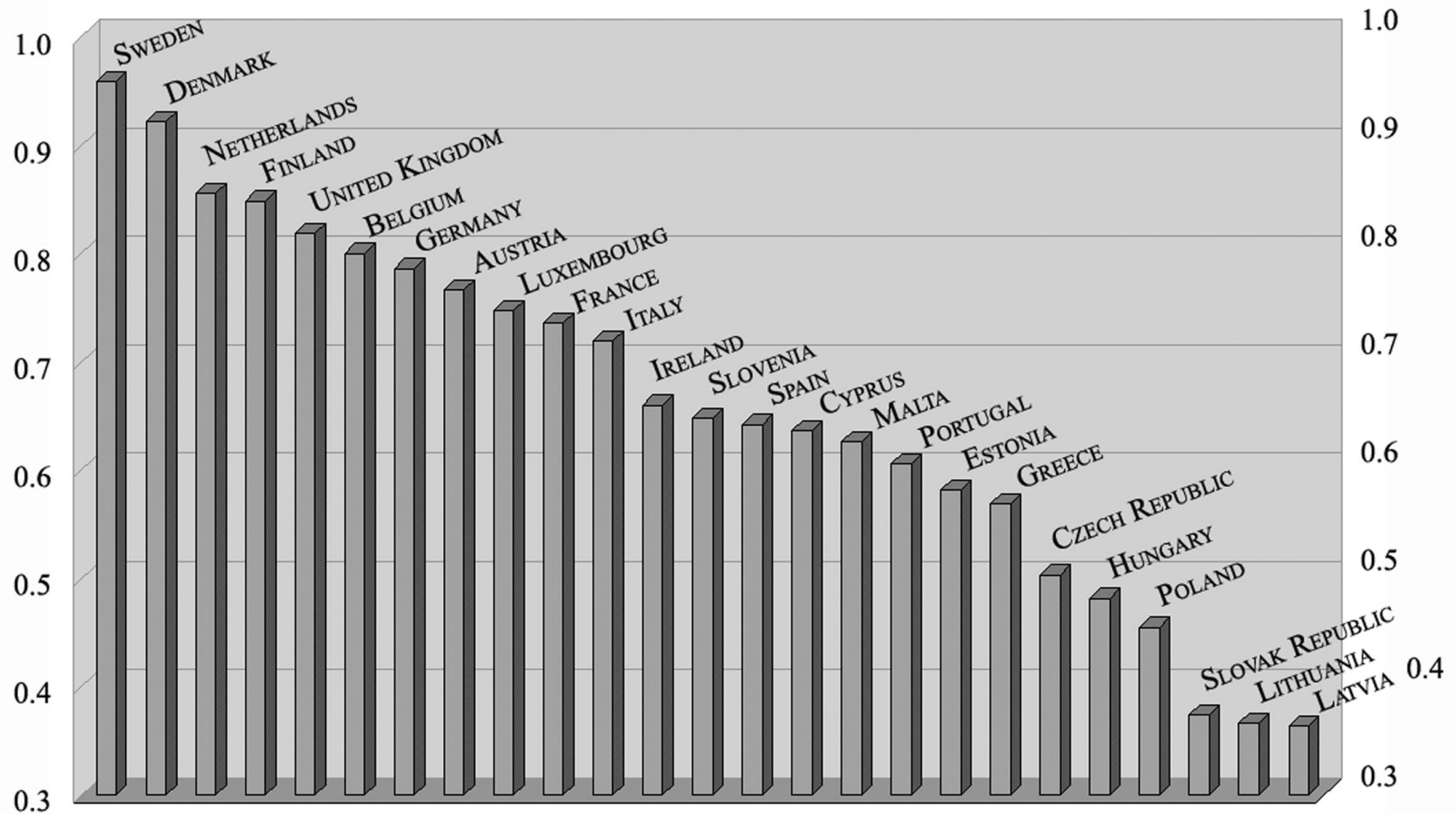
The period prior to *e*Europe: Info-states Index (Orbicom)

- During the period 1996-2001 (EU 15)

  ▶ Infodensity $\Rightarrow$ Eight countries had improved while six had fallen

  ▶ Info-use $\Rightarrow$ Five countries had improved while eight had fallen

- Info-use / Infodensity comparisons

  ▶ In 1996, only two countries had better records in usage than in density

  ▶ In 2001, only Luxembourg had better records in usage than in density

    $\Rightarrow$ In ten of these cases the difference was of at least five positions !

  Focusing on the deregulation aspects had improved (not spectacularly) the positions regarding density but had led the members to losing positions in the use classification

The situation in 2002: Digital Access Index (ITU)
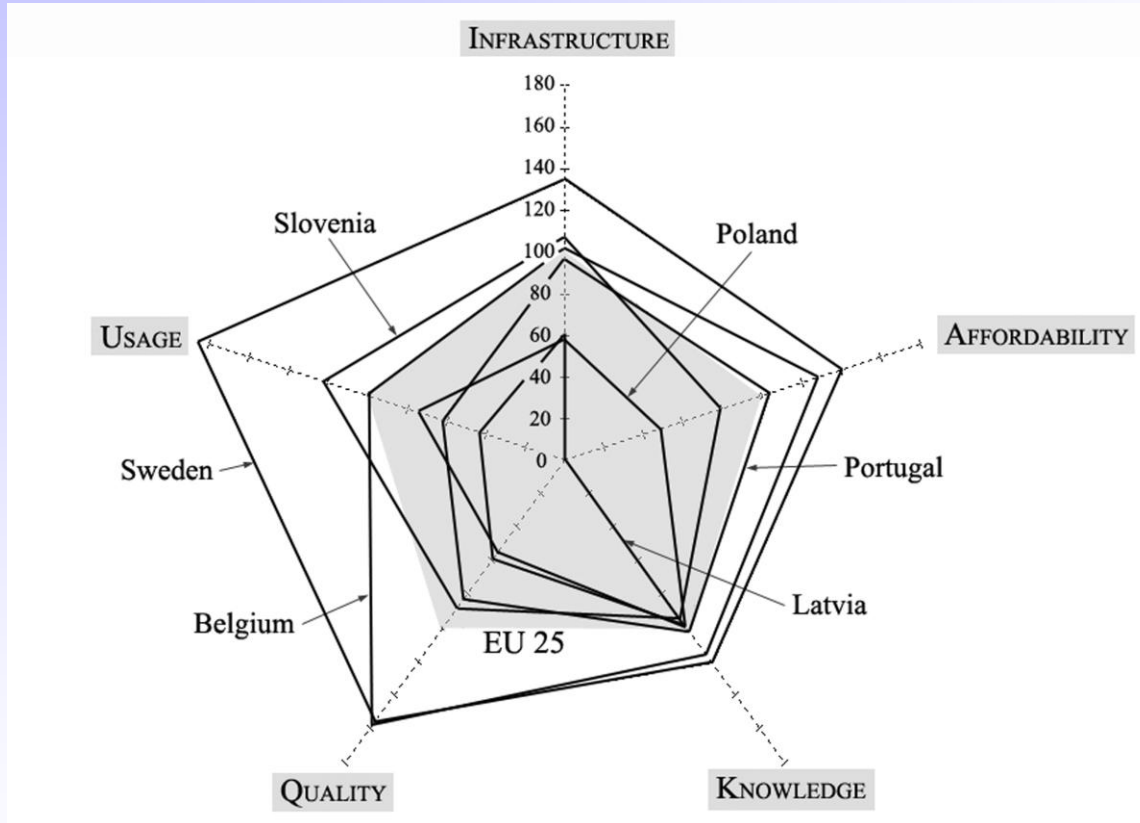
Each country needs to focus on diverse factors and monotonic actions cannot represent the best "recipe"

e2005 results: e-Readiness Ranking (The Economist – IBM)

- As regards the absolute value of the index (2002-2005)
  - ► Only five of the 18 countries have improved
  - ► Apart from the Slovak Republic, these have been the four European "leaders" (Denmark, Sweden, the United Kingdom and Finland)

- Focusing on the position
  - ► Only four have improved ⟹ Denmark and Finland (more than three positions) plus Sweden and the Slovak Republic

★ Those countries that were on the right path have continued to improve

The remaining states had not significantly improved, or in many cased had worsened, their capability of making the most of Internet-based opportunities

e2005 results: Networked Readiness Index (World Ec. Forum – INSEAD)

- From 2001-2002 to 2002-2003

  ⟹ One six out of 22 countries climbed positions, thirteen fell

- From 2002-2003 to 2003-2004

  ⟹ Six countries climbed positions, fourteen fell

- From 2003-2004 to 2004-2005

  ⟹ Four countries climbed positions, sixteen fell

Headlines ⟹ Nordic countries improve or at least maintain themselves in the leadership, backward steps of central Europe (specially Netherlands and Belgium), lethargy or loss of positions of the southern countries and similar results (continuance or fall) of most of the new members

Conclusions (I)

The results are quite similar in all cases $\Rightarrow$ Most of the member states *are not* moving forward *on the correct path* or are at least not doing so with the vitality of countries from other geographic areas

- ▶ Only the Nordic countries are on the right path, distancing themselves from the rest
- ▶ Central Europe is stagnated and in some occasions, even moving backwards
- ▶ Southern Europe does not manage to correct its imbalances and shortages
- ▶ The new members are also unable to achieve the improvements that would be expected

Conclusions (II)

The responsibility does not fall exclusively on the policies adopted by the European Commission

The Commission's programmes are but an *orienting framework* for the policies adopted by the member states

The fact that the member states (and sub-national levels) are the final responsibles of defining the policies is not only counterproductive but also seems to be convenient

Accepting all of the above, in some cases the Commission's design can indeed be made responsible for a major part of the errors

√ *Background political problems*

√ *Moderate effectiveness of the "open method of coordination"*

The precision of the *"new start" for the Lisbon strategy* took shape in a communication, of summer 2005, called "Common actions *for growth and employment*" where the i2010 initiative is only mentioned once, and by chance

However, paradoxically, low usage of ICT services is one of the main reasons of low growth rates in comparison with a number of other (non-EU) countries

In fact, only a few months before the "new start", the Commission itself had mentioned the ICTs twice among the three main problems hindering the increase in productivity

Looking forward: how i2010 should be managed?

Each programme have not established solid foundations on which to base their successor

Two are the *main problems* that should be urgently dealt with

√ Promoting the effective usage of broadband connections which do increase in number

√ Reduce the digital divide between and within the member states

Last, and despite the "official shift" of the ICT from the central core of the economy, it seems necessary to recover this idea

Stronger connections needed between the information society policies and other policies such as education, social inclusion, internal market or employment and enterprise

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