Implementing e-Government: widening the lens

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Abstract: In this paper progress towards e-government is perceived as contributing to the ultimate development of a Europe-wide Information Society. We consider aspects of the development EU countries have made towards Information Society status. In the process we review current criteria and demonstrate their strong techno-economic characteristics. We suggest that broader perspectives should be adopted in implementing e-government. We identify some potential societal criteria necessary to attain the vision of an Information Society.

Keywords: Information Society, e-government, technological and social perspectives

1. Introduction

Around the world the topic of e-government continues to attract the attention of governments of every political persuasion. Furthermore, it is quite common for such initiatives to be linked to broader economic and social perspectives relating to such concepts as the Information Society or the New or Knowledge Economy. This paper sets a series of European initiatives in e-government into this broader economic and social perspective. It is argued here that despite explicit official recognition of the importance of these broader developments to any understanding of e-government policies and practices, much of the impetus within national and international e-government initiatives continues to stem from techno-economic rather than social drivers.

2. Methodology

The paper is based on literature reviews, documentary analysis and interviews with relevant officials. The literature reviews spanned the period from the 1960s to the present and one of the common threads running through the literature for this period was dealing with the Information Society (Bell 1963; Masuda 1983; Lyon 1988). The vision of an Information Society continues to attract the attention of researchers and policy-makers today along with more recent concepts such as the Digital or Networked Society (Tapscott 1996; Castells 2000) or the New or Knowledge-based Economy (Drucker 1993; Webber 1993; OECD 1996). Using the relative longevity of the Information Society concept as a benchmark the research identified the commonalities between it and these more recent perspectives and their implications for a range of e-government strategies in Europe. In the process interviews were conducted with government employees in Ireland, and the United Kingdom and with relevant people within the European Commission (EC) and the Organisation for Economic Cooperation and Development (OECD).

The qualitative and interpretive nature of the research project and the relatively small number of interviews conducted precluded any formal hypothesis testing. However two broad assumptions underlay the research assumptions that fed into the interview schedules and which were tested at the analytical stage of the exercise. These were: first, that the vision of society as Information Society continues to exercise widespread appeal and second, that most Information Society programmes, notably in the e-government field, are driven by technological and economic rather than social factors. Using data from the European Commission, the authors have ranked the 15 EU countries on technological indicators. Further, using the rankings of these countries in the World Information Society Index for comparisons, the authors have suggested that this Index is technologically based.

3. Perspectives on Information Society

Despite being around for more than two decades there remains a certain ambiguity, a lack of focus as to what is meant by the concept of an Information Society. Reviews of the literature of the Information Society comment on its fragmentation and a continued instability that denotes a still developing field. This is apparent in the lack of consensus on basic terminology and in fluid and disparate research agendas reflecting different perspectives on the Information Society as respectively Technological, Political-Economic, Social or Educational interpretations of what it means (Alvaraz and Kilbourn

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2002). There is also a major difference of opinion as to the nature of the change involved and likely impact of the Information Society. On the one hand, the organisers of the World Summit on the Information Society to be held in Geneva in late 2003 and then in Tunisia in late 2005, have talked of a fundamental change in all aspects of life and of a revolution that is perhaps the greatest that humanity has ever experienced (ITU 2002). On the other hand, more detached observers maintain that there is no novel, post-industrial society and that changes in occupational structure and related developments simply reflect continuity with the past (Webster 1995). Moreover, for all those who proclaim the Information Society as providing the answer to social inequality, poverty and unemployment there are others who would regard it as likely to widen the gap between information haves and have-nots and to maintain existing socio-economic disparities (Sarker 2001). That this is possible at the global level has been pointed out by the United Nations Economic and Social Council, with warnings that, unless the benefits of the New Economy, including access to and use of information and communications technologies (ICTs) are extended to the developing countries, then the result will be continued inequality, misery and disparities in life chances between the North and the South (Economic and Social Council, 2000). Nor are such concerns confined to the emerging world. In recognising that the Information Society has revolutionised many areas of everyday life and provided new opportunities for citizen-participation, the European Union (EU) has also acknowledged that the Information Society may contribute to the marginalisation of certain sections of society by emphasising social inequalities. Such problems have been specifically addressed in a series of eEurope Action Plans (2000, 2002).

This paper seeks to place developments in the e-government space within the wider Information Society context. It recognises the possibility that differences in manifestation of the Information Society (in its substance and pattern of distribution) are likely to be as significant as differences in the speed of its adoption. Just such an absence of uniformity was anticipated by Manuel Castells in relation to what he termed informational society, a specific form of social organisation in which information generation, processing and transmission were the fundamental sources of productivity and power. Hence, through the interaction of key factors including the nature and structure of the labour force, networking, social movements and the State, different forms of Informational Society would emerge according to circumstances (Castells 2000). Although Castell's description fits well with the thrust of this paper, the term Information Society is employed here not only because of its widespread currency in academic circles but also owing to its continued prominence within the sphere of government policy.

4. A truly global phenomenon

The recognition of both the opportunities and challenges inherent in the Information Society concept, whether in Europe, Latin America and the Caribbean or in Asia-Pacific points to the truly global nature of the Information Society phenomenon. Initially much of the impetus for this widespread manifestation of national Information Society initiatives was explicitly economic or industrial (Brazil, Ministry of Science and Technology 2001). In Europe during the 1980s and early 1990s, industrial leaders exercised considerable influence on Information Society policies with particular emphasis upon regulatory aspects, technological innovations and infrastructure. The main concern at that time was with economic growth and employment and it was not until the mid-1990s that serious consideration was given to issues such as the digital divide and social cohesion (Anttiroiko 2001). By the end of the 1990s, bodies as diverse as the International Telecommunications Union (ITU), the Brazilian Information Society Implementation Group and the European Union had all begun to recognise the need to accommodate such social concerns in their Information Society strategies. Such developments notwithstanding, the familiar economic and technological factors continued to be prominent, reflecting among other things widespread interest in the so-called New Economy.

5. The new or knowledge-based economy

During the 1980s and 1990s considerable interest developed in the possibilities of a new kind of economy, a knowledge-based economy. The main impetus came from a major challenge to the conventional wisdom on the theory of economic growth. Hitherto, standard neoclassical economics had portrayed growth as dependent on two basic inputs, capital and labour. After a certain point, the employment of additional units of labour to units of capital inevitably resulted in diminishing returns. Technology only featured in this theory to the extent that it was exogenous, a factor external to the major forces, a kind of black box used to account for any changes not attributable to inputs of capital and labour (Sinha 1999). Economists arguing for New Growth theory on the other hand, explained that not only was technology endogenous to growth but also that owing to externalities accruing from

knowledge and human capital, increasing returns to scale were possible (Romer 1986; Lucas 1988; Arthur 1996). These arguments were challenged both in terms of subsequent claims for their positive effect on rates of economic growth (Krugman 1997, 1998) and indeed, for their newness and supposed impact upon economic theory (Aley 1996; Tyson 1999).

Nevertheless in a world where the nexus of technology, globalisation and organisational change was already apparent, the idea of knowledge as perhaps the only meaningful economic resource exercised powerful appeal (Drucker 1992). There was now the possibility of increasing returns from a resource that offered the potential of quasi-monopoly profits to those firms able to exploit it. Likewise those economies capable of creating the right mix of conditions for the creation and exploitation of knowledge could anticipate sustained economic growth (Cortright 2001). It is hardly surprising therefore, that the prospect of an economy grounded in knowledge proved an irresistible attraction to governments and international governments. The term knowledge-based economy was popularised by the Organisation for Economic Cooperation and Development (OECD), which defined it as an economy directly based on the production, distribution and use of knowledge and information (OECD 1996). The Asia-Pacific Economic Cooperation Economic Committee extended this definition to include the production, distribution and use of knowledge as the main driver of growth, wealth creation and employment across all industries (APEC 2000).

As the concept of knowledge-based growth matured, bodies like the OECD promoted the need for extension of the knowledge-based economy beyond the more economically advanced nations to those in the emerging world. Also in step with the dissemination of innovation and new technologies there had to be a range of policy changes in such areas as competition and regulation, labour and capital markets and the style of governance (Worth 2001). Underlying these perceptions was a deeper societal element to New Growth, one involving a tolerance for new ideas and careful attention not only to infrastructure elements such as research and development and education but also to the need for diversity and for openness to trade (Cortright 2001). A subsequent OECD report in emphasising the importance of ICTs as enabling technologies, also called upon governments to engage in e-commerce and related regulatory reforms in order to foster an entrepreneurial climate and enhance the stock of human capital while ensuring that the necessary economic and social fundamentals were in place (OECD 2001).

New Growth theories have had a considerable impact not only on economic policies but also, to a lesser extent, on the social fabric within advanced economies. This paper looks at the balance that has emerged between those techno-economic factors aimed at getting the economic structure right and social factors, to do with issues of quality of life and opportunity within societies. It continues with a brief look at developments within the sphere of e-government.

6. Perspectives on e-Government

The potential relevance of e-government to attainment of wider societal objectives is readily apparent. According to the International Telecommunications Union (ITU), e-government offers new opportunities for social and economic development, with the use of ICT as a tool for governance offering the potential to foster democracy, efficiency and transparency and even to increase the possibility of foreign investment and assistance (ITU 2002). This perspective was less apparent at the outset of the OECD Public Management and Governance programme (PUMA), where e-government was defined in more utilitarian fashion as focusing on the use of ICTs, and in particular the Internet and related technologies, to implement the full range of government functions. Clearly given the extensive nature of the information flows between government and citizens and the need to improve both service delivery and government decision-making, there is a major role for these technologies.

However, for e-government to be a success will require more than technology and a preoccupation with on-line transactions. Implementing e-government means that governments must often break out of traditional and hierarchical ways of thinking that may prevent cooperation across departments and perpetuate cultures of information hoarding. Several years ago Caldow emphasised the need to view e-government as a phenomenon with multiple and overlapping dimensions including the regulatory and policy dimensions, the citizen services and community dimensions and the digital dimension (Caldow 1999). Heeks, whose work is particularly authoritative in the context of emerging countries, has outlined three domains of e-government which are respectively e-Administration (improving government services), e-Citizens and e-Services (connecting citizens) and e-Society (the building of interactions with and within civil society) (Heeks 2001). Clearly important to any such considerations

are issues of e-governance wherein open, objective and seamless access to information increases government accountability to citizens, which in turn increases confidence in the democratic process (Riley 2003). Such features would arguably be an essential element in any emerging Information Society.

Within the EU, e-government policies and strategies operate both at the overall EU level and at the level of individual member states. At general Community levels the approach embraces the search for:

- Open Government: Improving the quality of government information for dissemination to the public, with a particular emphasis on electronic access through government portals.
- Customer-orientated government: Aiming for 24 x 7 access to customer-oriented information across the range of government portfolios with electronic authentication, signatures and forms, help desks and increasingly the development of Public Key Infrastructures (PKI) and personal public service numbers.
- Networked government: Aiming to improve internal working procedures within central government and also those between government agencies and regional and local authorities. (European Commission 2000)

Notwithstanding its initial definition of e-government, the PUMA project embodied recognition of what it saw as big picture aspects such as the need to modernise government and to develop services that were citizen-centred. Under the auspices of the OECD, PUMA has sought to address e-government in the context of modernising public sector management, promoting good governance and developing citizen-centred reforms. Its recent research project sought to evaluate the impact of e-government on national administrations within a framework of analysis as presented in Table 1.

Table 1: The PUMA framework for assessing e-government

Vision, Context and Responsiveness	How can e-government make government more responsive?
Reform of Public Administration	What reforms can e-government make possible?
Strategic implementation of e-government	What is required for e-government to work?
Measurement and Evaluation	How do we measure the impact?

Source: OECD 2002

The results of this research would seem to validate the original decision to emphasise the big picture. Discussion continues as to whether what is required is seamless government (as defined in terms of the least number of transaction points) or seamless services which implies an element of accountability in the notion of seamlessness. Discussion continues also on the relevance of cultural and institutional settings for e-government and the fact that, as boundaries between the public and private sectors become increasingly blurred, definitions of e-government are growing increasingly problematic (OECD Focus 2002). This broadening perspective is apparent elsewhere.

However, as the OECD PUMA project has shown, e-government is an enabler and not an end in itself. It needs to be integrated into broader policy and service delivery goals and indeed, into broader Information Society activity. This point was emphasised in a United Nations-funded study (United Nations, DPEPA 2002) where a clear link was established between the development of national e-government programs and the social, political and economic composition of the individual countries concerned. As a consequence of such concerns it seems axiomatic that governments must address the digital divide that exists in terms of access to ICTs, online media and the Internet, by adopting policies that will reduce this divide (OECD Observer 2003). Nevertheless, the United Nations DPEPA report documents actions by some emerging nations to accelerate e-government activities aimed at certain sectors, such as the business community, and often at the expense of citizen-centric approaches (UNDPEPA 2002) Nor is this just a feature of emerging countries. A recent study in the United Kingdom, while recognising the paradox that those in most need of e-government are least likely to avail of its services, also identified a potential tradeoff between universal provision and service viability (Curthoys and Crabtree 2003). The point was not that the digital divide should be ignored but rather than the wider benefits of e-government should not be lost owing to a failure to fully engage minority elements in society. It seems clear that for e-government to be anything more than automated service provision it needs to reach far beyond the conduct of routine government business to embrace social, economic and political change. The Curthoys and Crabtree paper in

acknowledging a deeper social purpose to e-government also pointed to a general absence of theory and philosophy behind the phenomenon (Curthoys and Crabtree 2003). The focus of the paper now shifts to specific aspects of the relationship between e-government and the Information Society by looking at some recent developments first at a global level and then in Europe.

7. Benchmarking e-Government: A Global Perspective

This exercise was conducted jointly by the United Nations Division for Public Economics and Public Administration (UNDPEPA) and the American Society for Public Administration (ASPA). The result was an e-government profile for member states of the United Nations based on a benchmarking exercise that first, categorised member countries in terms of their stage of online development and second, placed them on a global index of e-government readiness. Table 2 displays the overall picture for online presence.

Table 2: U.N. member states and stages of online development 2001

Stage of Development	Explanation	Number of states involved
Emerging	Formal but limited website presence, mainly static information	32
Enhanced	Numerous websites with more dynamic content and links to other sites	65
Interactive	More sophisticated sites with citizen interaction	55
Transactional	Enabling complete and secure transactions, often using digital signatures	17
Seamless or fully-integrated	Lines of demarcation between departments removed; seamless access to sites clustered around common needs	0

Source: UNDPEPA/ASPA 2002

The information in Table 2 is largely meant to be indicative as individual countries continue to make progress towards e-government. More useful in an Information Society context is the e-government Index which is much more widely based. The major element in the combined index are presented in Table 3

Table 3: Elements used for compiling the global e-government Index

Elements	Explanation
Web Presence	As outlined in Table 2 above
Telecommunications indicators	PC's per 100 individuals, Internet hosts per 10,000 individuals, percentage of the population online, telephones, mobile telephones and televisions per 1000 individuals
Human capital	Levels of education and healthcare, access to and dissemination of information, urban/rural population balance

Source: UNDPEPA/ASPA 2002

As with the World Information Society Index, which features below, there would be concerns over both the choice of human capital factors for the global index and with the identity of some of the countries emerging on this index as global leaders in e-government. Less surprising is that of the 35 countries identified as having a high e-government capacity, with a score of over 2.00, 25 are OECD members. The United States is in the lead as the only country to register a score of over 3.00 on the index. At the opposite end of the spectrum are those 35 countries deemed to be deficient in e-government capacity, 31 of which are among the least developed nations in the world (UNDPEPA 2002). It must be borne in mind that this is an index of e-government capacity rather than of Information Society status but it does go some way towards presenting an Information Society perspective. This perspective is much more clearly defined within a European context.

8. Public strategies for the Information Society in the European Union

The EU is a particularly rich source of material on trends towards the development of the Information Society. Although there are country specific aspects to the range of current Information Society strategies, the search for concerted European action is reflected in a common core which includes quality of life and rights protection concerns, as well as those dealing with ICT access and digital disadvantage, with education and skills gaps and with infrastructure development (European Commission 2000). The impression nevertheless remains that much of the emphasis in many national Information Society strategies derives from the continued prominence of earlier economic and technological drivers. An attempt has been made here to weigh the balance between the techno-economic and social components of contemporary Information Society strategies by looking at indicators of Information Society status in the EU based on the two Action Plans eEurope 2002 and eEurope 2005 and associated benchmarking activities. All the 15 countries covered by this analysis also featured in an unofficial World Information Society Index where they were ranked according to a mix of technological and social criteria. In fact, on this index, Sweden and Finland ranked at 1 and 3 respectively, Denmark and the United Kingdom at 5 and 6 and Netherlands, Ireland and France at respectively 10, 20 and 21 (World Information Society Index 2002) Another European country but neither then nor now a member of the EU, Norway, featured as number two on the World Index.

8.1 eEurope 2002

The eEurope initiative was launched in 1999 with Action Plans 2002 and 2005 appearing in 2000 and 2002 respectively. Fully cognisant of wider developments in the New Economy and the Information Society, Action Plan 2002 was quite wide in scope and sought to put the Internet at the top of the European political agenda. More specifically it sought to attain the following objectives:

- Develop cheaper, faster and secure Internet access
- Invest in people and skills
- Stimulate use of the Internet

To help in achieving these outcomes, key targets were set in such areas as the legal and regulatory environment and infrastructure. Moreover using the key objectives and related indicators as benchmarks, performance would be monitored across the EU (European Commission 2002 b). When the final verdict on eEurope 2002 came in it was perceived to have achieved significant success in the foregoing categories of objectives.

Table 4: Objective 1, Develop cheaper, faster and secure Internet access

Country	Internet penetration % of households	Off-peak dial-up costs (Households)	Off-peak dial-up costs (Businesses)	Core speeds of national research networks	Secure servers per million inhabitant
Austria	7	9	8	8	6
Belgium	10	14	15	9	10
Denmark	3	4	4	12	7
Finland	4	1	1	5	4
France	12	5	5	7	11
Germany	9	3	3	3	8
Greece	15	15	6	4	15
Ireland	6	11	11	10	5
Italy	11	7	7	2	13
Luxembourg	8	13	14	11	1
Netherlands	1	10	12	1	9
Portugal	13	12	13	15	14
Spain	14	6	9	14	12
Sweden	2	8	10	13	2
United Kingdom	5	2	2	6	3

Source: European Commission 2002

Table 5: Objective 2, Invest in people and skills

Country	Fewer pupils per PC	Internet PCs per 100 pupils	% workers with computer training	% workers who use computers at work
Austria	8	6	8	7
Belgium	10	8	12	9
Denmark	2	1	1	1
Finland	3	3	2	3
France	9	9	10	10
Germany	14	12	6	10
Greece	12	14	14	14
Ireland	7	7	9	13
Italy	13	13	11	8
Luxembourg	1	2	5	4
Netherlands	5	10	4	5
Portugal	15	15	15	15
Spain	11	11	13	12
Sweden	4	4	2	2
United Kingdom	6	5	6	6

Source: European Commission 2002

Table 6: Objective 3, Stimulate use of the Internet

Country	% Internet users purchasing online	% companies selling online	% companies buying online	Basic government services online
Austria	8	4	4	9
Belgium	11	10	9	14
Denmark	6	6	1	4
Finland	7	8	2	2
France	10	11	14	8
Germany	2	2	6	9
Greece	14	14	13	11
Ireland	5	3	3	1
Italy	12	12	12	11
Luxembourg	4	9	10	15
Netherlands	9	5	5	13
Portugal	15	15	15	5
Spain	13	13	11	6
Sweden	3	7	7	3
United Kingdom	1	1	8	7

Source: European Commission 2002

On conducting an analysis of performance against leading benchmarks, the authors were able to rank the EU countries in terms of those indicators. Tables 4, 5 and 6 present overall rankings under each of the three objectives mentioned in the 2002 Action Plan. Where countries obtain the same score on an indicator this was reflected in joint rankings on that indicator.

The data in these tables are drawn from a range of sources and date back in some cases to 2000 and in others to 2001. There may have been changes to performance in the interim but, given the European-wide construction of these benchmarks, the data are still sufficiently reliable as to reflect the trends towards Information Society status in the then 15 member states of the EU.

9. Ranking Information Societies on techno-economic criteria

We now wish to demonstrate that current World Indices are largely technologically based. To support our assertion, we ranked the EU countries on the basis of their positions in a suitable World Index (World Information Society Index 2000). The result is shown in Table 7. The 2000 World Index, rather than the 2002 World Index, was used so that the correlations calculated with criteria in Tables 4, 5 and 6 would be temporally consistent.

Table 7: Ranks of EU countries on World Index

Country	Rank
Austria	8
Belgium	7
Denmark	3
Finland	2
France	10
Germany	6
Greece	15
Ireland	9
Italy	12
Luxembourg	11
Netherlands	4
Portugal	14
Spain	13
Sweden	1
United Kingdom	5

Source: World Information Society Index, 2000

We calculated the Spearman rank correlation coefficient between the EU country rankings shown in Table 7 and the rankings of each EU country on the criteria included in Tables 4, 5 and 6. The results are shown in Table 8.

Table 8: Spearman rank correlation coefficients

Indicator	Coefficient
Internet penetration (% of households)	0.90
Off-peak dial-up costs (households)	0.53
Off-peak dial-up costs (businesses)	0.30
Core speeds of national research networks	0.13
Secure servers per million inhabitants	0.67
Fewer pupils per PC	0.63
Internet PCs per 100 pupils	0.67
% of workers with computer training	0.88
% of workers who use computers at work	0.80
% of Internet users purchasing on-line	0.68
% of companies selling on-line	0.68
% of companies buying on-line	0.76
Basic government services on-line	0.32

There are two points to be made from the above table. First, although all correlation coefficients are positive it is clear that three particular criteria will act as proxies for the World Index; Internet penetration, percentage of workers with computer training and percentage of workers using a computer at work. Second, in view of such high correlations between very strong technological indicators and the World Index, it may be argued that insufficient attention is being paid to societal indicators in building such indices.

There would be few surprises in the foregoing tables with Northern European nations all in leading positions. This view is reinforced by that presented in the 2002 World Information Society Index. On this index the leading performers, with two or three exceptions, were all members of the OECD. Of greater significance however, could be the nature of the indicators employed which, despite the presence of a social dimension were strongly related to the Internet and the ICT industry, and the dissemination and uptake of associated technologies such as mobile telephony and business activities in the e-commerce domain. This is unsurprising in view of the wider social, democratic and liberal market philosophies within which such strategies are presented, along with the belief that by democratising access to ICT and its associated opportunities major structural problems within society could be redressed.

10. Missing elements

Societal elements are clearly important to the prospects for Information Society strategies across Europe. Nonetheless, while not underestimating the achievements to date, both in Europe and elsewhere, activities such as infrastructure building, whether in the regulatory or technology spheres to some extent at least represent the easier options. Finding the answers and not least the political will to address problems of systemic poverty and disadvantage will present much more of a challenge. So far as Europe is concerned, this challenge is likely to be intensified by the necessity to provide the resources for infrastructure enhancement across an expanding European Union. Recognising that the impact of digital technologies on society is a much more complex and subtle problem for social analysts, the European Union has acknowledged the need to confront the Digital Divide and the growing dangers of social exclusion (European Commission 2001).

Although European governments individually and collectively accept that there are limits to public intervention, they also recognise that Information Society issues have become a key component of political discourse. Governments are increasingly active in communicating their Information Society policies in a range of public and public-private forums and have expressed a willingness to listen to and act in accordance with feedback from the general public (European Commission 2000). That such feedback includes comments on wider social issues is encouraging. Less so is the fact that it seems to have made relatively little impact on the choice of indicators for current Information Society programmes in the European Union, for example those set out in eEurope 2005.

10.1 eEurope 2005

This latest Action Plan seeks to extend the achievements of its predecessor by building a European-wide broadband infrastructure as a prerequisite for both the new competitive Knowledge Economy and an inclusive Information Society. In acknowledging the importance of focusing on those areas where government can realistically expect to make a contribution and in the process seeking to create a favourable environment for private investment, eEurope 2005 identifies as priorities:

- Modernisation of public services to make them more productive, accessible and equitable
- Further promotion of a favourable environment for e-business
- A secure broadband infrastructure (European Commission 2002 c)

None of these categories of priority would appear to offer much in the way of radical approaches to the solution of problems of poverty and disadvantage. However, the expectation is that by ensuring the widespread availability of broadband networks and of access to electronic government, learning, health and business, there will be a focus on the users of these services, a focus characterised by e-inclusion and e-accessibility (European Commission 2002 b). Clearly there is potential in all of these areas for the alleviation of hardship and disadvantage. In the sphere of e-government for example, the potential of value-added information for improved public services and the delivery of basic services online, not least for citizens with special needs, could have major social impact. Likewise an e-Education sector capable of not only closing skills gaps, but also of empowering currently disadvantaged adults inside and outside the workforce, could offer benefits far beyond those accruing in terms of human capital for a knowledge-based economy. When to such initiatives is added that wider body of social legislation and associated strategies for the alleviation of poverty and disadvantage across the European Union then the social outlook may be much more positive. Nevertheless it remains a truism that for all its wonders, information and communications technology is simply an enabler of social and economic change. If the goal of these European programmes is the attainment of an Information Society rather than an Information Technology Society, then the role of these social factors must be more prominent and explicit within the policy agenda.

10.2 Looking for the missing elements

In looking for evidence of this explicit social dimension an obvious place to start was the most recent community-wide report on Information Society strategies (European Commission 2000). This document also covered the same 15 Member States that featured in eEurope 2002 and 2005 and had the additional advantage of ensuring that both the techno-economic indicators depicted in the foregoing tables and any social ones emerging from the analysis would be drawn from the same source. Unfortunately in many cases either there was no or very little mention of disadvantage or poverty or even of disadvantaged groups. Indeed, on this basis it would be possible to rule out

perhaps half the 15 member states concerned and certainly Austria and Belgium who ranked 14 and 17 respectively on the 55 nation strong World Information Society Index (2002). A much more significant omission on this basis would be that of the Netherlands, which even on prima facie grounds would be likely to feature on most lists of those nations with a strong emphasis on social and political equality within their society. Accordingly it has not as yet proved possible to identify a sufficient number of softer social-type indicators represented in all or even a majority of the 15 countries examined to enable the same kinds of comparisons possible in the case of techno-economic indicators. The best that can be done at this stage is to point to a number of emerging trends or social foci within the 15 nations concerned.

11. Trends in the emergence of social criteria

In analysing the Information Society strategies of the 15 EU member states, the most common indicators of social concern mentioned were to do with particular groups within the community notably women, the elderly and youth. All the strategies involved had some reference to these groups and the need to help them with full access to the benefits of the Information Society. Although the unemployed could have been treated as an additional group within this category the fact that not every country mentioned either the unemployed or unemployment militated against this. Two other patterns emerged in published strategies that may be significant. First, all those countries exhibiting attention to issues of poverty and disadvantage tended to lean towards a wider interpretation of Information Society clearly influenced by an appreciation of the value and likely role of knowledge. Second, within the more advanced countries there were signs of a difference of perspective reflected in the inclusion or otherwise of indicators to do with sustainability and internationalism. France, Germany and Sweden were all notable examples of countries whose Information Society strategies included these dimensions.

Through the emergence of this range of social indicators in the 15 countries concerned, three groups of nations can be identified. The first is a group comprised of Austria, Belgium, Germany, Luxembourg and the Netherlands all of which reported the least attention to social indicators in their published strategies but all of which are strong on the techno-economic indicators. The second is a group of those countries that on the basis of their published strategies seem to be making most progress towards Information Society status. These are Denmark, Finland, Ireland, France, Sweden and the United Kingdom. The third group includes those countries in an intermediate position on the road to an Information Society comprising Greece, Italy, Portugal and Spain. Finally, as their status as Information Societies increases, nearly all of the 15 nations involved have sought to add a knowledge dimension to their social and economic policies. In the United Kingdom in particular, strenuous efforts are being made to implement a series of knowledge management initiatives across central and local government. As to when if ever this focus on knowledge will lead to these countries being labelled Knowledge Societies as opposed to Information Societies time alone will tell. One point seems clear however, unless the efforts of national and international governments to implement e-government and e-Commerce strategies fall within this wider societal context then they are unlikely to attain any great degree of success.

Table 10: Social indicators emerging in Information Society strategies

Access for all	North-South Divide
Citizens' rights	Poverty
Democratic participation	Social cohesion
Digital Divide	Social inclusion
Disadvantaged groups: women	Sustainability
Disadvantaged groups: the elderly	Unemployment
Disadvantaged groups: youth	Welfare
Lifelong Learning	

Table 11: Performance against selected social indicators

	Digital Divide	North-South Divide	Poverty	Social cohesion	Sustainability	Unemployment	Welfare
Denmark	Yes			Yes	Yes	Yes	Yes
Finland	Yes			Yes	Yes	Yes	Yes
France	Yes	Yes		Yes	Yes	Yes	
Ireland	Yes		Yes	Yes		Yes	Yes

	Digital Divide	North-South Divide	Poverty	Social cohesion	Sustainability	Unemployment	Welfare
Portugal	Yes			Yes	Yes		
Sweden	Yes	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes	Yes		Yes	Yes

A list of these social indicators is presented in Table 10. Table 11 shows the performance of some of the EU countries against some of the selected social indicators. All apart from Portugal perform well against both sets of indicators, social and techno-economic.

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