Encountering the national variations of the information society:
the peculiarities of the ‘Greek model’

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Abstract

Although the contemporary nation state has been facing considerable pressures both from global processes and from sub-national entities, it retains a significant role in socio-economic projects that articulate the national and sub-national level with the regional and the transnational. The recent eEurope programmes for the promotion of a knowledge-based competitive European Union are a case in point. These initiatives have been built on the concept of the ‘information society’, which has been systematically deployed to denote a set of significant economic and social transformations with implications for governance and potential for development and quality of life.

The underlying assumption of this paper is that instead of viewing ‘information society’ as an abstract device, one should examine the rich articulation of information and communication technologies (ICTs) with thick social, political and institutional contexts. Further, it claims that the national frame-always characterised by a historically developed, specific relationship between the state, the economy and the national society-necessarily inflects global information society tendencies and processes towards heterogeneous outcomes.

Examining the case of Greece, the paper attempts to highlight the ways in which the emerging information society (following EU goals and promoted through recent national initiatives) is in historical continuity with certain characteristics of the Greek social formation, namely incomplete industrialisation, complex state/industry relationships, clientelistic relations, anti-development state administration and weak civil society. All these can highlight potential advantages, impediments and implementation prospects and contribute to what can be called ‘a Greek information society model’.

While information society initiatives have been studied in both developed and developing nations, limited research has been undertaken in semi-peripheral middle-income countries. In the context of the EU, the bulk of the research has been hitherto directed towards the European core or Scandinavian countries, while the south-European context has been relatively understudied. This is the gap that this paper seeks to fill by addressing the Greek case.

The paper concludes that the Greek state needs to play a more active/developmental role and that a number of national characteristics have to be taken into serious consideration, if the information society project is to contribute to economic development and welfare.
1. The evolution of information society in the EU

1.1. Early visions
The rapid technological developments in information and communication technologies (ICTs) since the late 1980s gave rise to a vision of the information society articulated by the EU circles since the early 1990s. This vision can be more or less taken to invoke ‘the idea that the information revolution opens a path to new opportunities for sustainable growth and development, new potential for social inclusion and representation, and new ways to achieve social and cultural expression’ (Mansell and Steinmueller 2000, p.9).

The 1993 European Commission White Paper Growth, Competitiveness, Employment: The Challenges and Ways Forwards into the 21st Century has been the first influential policy document communicating the vision of the information society. It reveals the importance attached by policy makers to the opportunities and challenges involved in the emergence of the information society, which it links with European competitiveness and prospects of growth and employment, particularly in skilled jobs and the creation of new services. At the same time, however, it warns of risks of unemployment, notably for people without skills, and potential social segregations, which have to be prevented through appropriate policies (European Commission 1994a).

The starting point of the White Paper is that the march of new technology is inescapable and the pervasive character of ICTs has a transformative role in production, organisation, management, labour relations, work patterns. These production and employment opportunities (including new forms of partnerships between organisations) should be taken up by European countries in order to gain a competitive advantage. The idea is that the information society provides opportunities to overcome chronic European structural problems, but that progressive change will be accompanied by some negative effects, which can, all the same, be tackled through social regulation (Mansell and Steinmueller 2000).

Subsequently, a report was produced for the meeting of the European Commission in March 1994 in Corfu. This report was the so-called Bangemann Report, after Martin Bangemann, the chair of the High-Level Group on the Information Society, which included nineteen senior members from government and industry. The report set out the following priorities: a) promoting the use of information technologies; b) providing basic services at a European level; c) creating an appropriate regulatory environment; d) developing training in the new technologies; e) improving technological and industrial performance (Bangemann 1994).

The need to be aware of the technological potential presented by ICTs across all sectors of society and the economy is also emphasised: managers ‘need specific training to make them aware of the potential of ICTs and their organisational and socio-professional implications; technicians and other workers ‘need to have specific ICT-related aspects better integrated into the training of their basic trade’; companies need to identify the ‘strategic objectives, the functions and support to be provided by the system, and appropriate work organisations’; schoolchildren and students should
use ICTs ‘in order to resolve general education and training problems’ (Bangemann 1994, pp.112-113).

The White Paper and the Bangemann report therefore present a specific vision of the information society, which comprises the following elements:

- The process of technical change involving the diffusion of ICTs is irreversible
- Adopting and promoting these processes of change will bring economic growth, competitiveness and reduce unemployment in Europe
- To be at the forefront of these changes, policies are required in order to create a suitable regulatory environment, improve training and education, so that a common technical infrastructure is developed and deployed across Europe that will support information exchange and the production of new services
- Steps need to be taken to mitigate or prevent processes of exclusion that accompany these changes, as well as to preserve a European character of the information society
- Awareness of the scale and importance of the changes involved needs to be raised at all levels of society in Europe (Mansell and Steinmueller, pp.16-17)

This approach is inescapably based on specific discourses emphasising certain dimensions, while concealing alternative scenarios. Goodwin and Spittle point out that ‘Political debate over the information society…is firmly rooted in, and oriented to, a set of discursive, material and power relations articulated with reference to an historically established order of discourse’ (Goodwin and Spittle 2002, p.244).

To this direction, the tone of the White Paper and the Bangemann report is quasi-deterministic, in the sense that the potential of ICTs to restructure production processes and to lead to new goods and services is taken as given. Moreover, the opportunities involved in the information society are highlighted, but at the same time the need to adapt to and exploit these technological capacities through building new regulatory frameworks and new skills is stressed. This is the rationale behind the creation of a common (pan-European) information area. This rhetoric clearly involves a dialectic of both opportunity and threat, in the sense that immediate action is required to reap significant benefits, while inertia will mean missing out on potential competitive advantages and as a result lag behind other major players like the US or Japan.

Given the lack of supra-national political resources, it was only the public sector at the national state level that could undertake certain dimensions of the vision, namely the creation of new skills through education and training programmes and the prevention of new forces of exclusion and geographical disparities, the promotion of institutional changes for the adoption of ICTs, the design of legal and regulatory frameworks suitable to the flexible, competitive and dynamic nature of ICTs. Still, the role of the state was not stressed enough in this early vision; on the contrary, it was the market that was given a prominent position to drive the process. Furthermore, although citizens’ rights featured in the Bangemann document, citizens were often referred to as ‘consumers’, while their rights were rights of choice in the consumption of products and services and their quality of life was again synonymous with universal access to new commodities through new technologies.
The liberalisation of telecommunications is a very prominent feature in the Bangemann report, as it was considered instrumental in the evolution of the information society. Private initiatives were seen as a central source of communication infrastructure funding, while national and European authorities were to open up the sector by means of new regulatory frameworks. These proposals were followed in the action plan “Europe towards the information society” designed by the Commission in July 1994. It contained four action lines: a) the adaptation of the regulatory framework for telecommunications to facilitate infrastructure liberalisation b) the promotion of network, services and content applications c) the harnessing of the social and cultural impacts of the information society d) concrete actions to promote the information society (European Commission 1994b; Sancho 2002). This plan was updated in 1996 (European Commission 1996).

The following years indeed witnessed a decline in the importance of the state in ICT policy through the liberalisation of traditionally state-protected national telecommunication sectors under continuous pressures from the private sector, which has been the main driver behind ICT diffusion in Europe, as well as from European Community authorities, during cycles of negotiation and strong contestation. These liberalisation, deregulation, and privatisation processes in Europe were placed in a framework of neoliberal thinking emphasising the inadequacy of the nation-state and the public sector to deal with new technological necessities and the need to introduce competition and let the market forces operate under independent regulatory authorities. They were also compatible with the overall market-driven approach to the European project, which has consistently sought economic rather than political integration.

In parallel, however, and in response to the 1994 Action Plan, the Commission set up in April 1995 a High-Level Expert Group so as to address the social aspects of the information society. This group, which involved a number of prominent academics and experts in ICTs challenged the doxa of technological determinism and prepared a report which approached technology as a social process, stressing its organisational, social and cultural embeddedness and moving away both from the uniformity of the information society and from the imperatives of deregulation that were ostensibly imposed by the dynamic technological properties of ICTs (High-Level Expert Group 1997).

Despite these alternative voices, however, the early debate over the information society in Europe was overall structured in terms of a series of discourses that privilege the economic at the expense of social and cultural factors, with resulting implications for the type of information society to be implemented. These derived from an institutional context that was not putting its emphasis on the social sustainability of the information society and should be seen as part of the overall character of the EU integration processes (Goodwin and Spittle 2002).

1.2. The Lisbon Strategy and the eEurope initiatives
The EU Lisbon summit in March 2000 signified a qualitative change in the unfolding of the information society. It starts with the realisation that Europe faces the
challenges of a transition to a knowledge society\textsuperscript{1} and the need to set up a competitive platform that would at the same time sustain the European social model, maintaining social cohesion and cultural diversity. According to the conclusions of the summit, the Union seeks ‘to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion’ (Council of the European Union 2000).

The summit adopted a new open method of inter-state coordination for the acceleration of the translation of European goals into national policies: ‘This method combines European coherence and respect for national diversity. It defines the required European guidelines in each policy domain, subsequently identifying best practices and reference indicators and, finally, materialising in national plans consisting of concrete targets and measures fitting each nation’s case. Its purpose is to set up a vast process of innovation, learning and emulation between European countries, in which the European Commission may play a new role as a catalyst’. The aim is to develop a knowledge economy with social cohesion and to promote real convergence in Europe (Rodrigues 2003, pp.18-19).

This method initiates a decentralised approach in policy implementation, involving actively the Union, the member states, the regional and local actors, as well as social partners and civil society and NGOs in various forms of partnerships. The method of coordination is called ‘open’ because: a) European guidelines can be adapted to the national level b) best practices should be evaluated and adapted to the national and local context c) there is a distinction between reference indicators set up at the European level and concrete targets set by each member state for each indicator, in accordance with their point of departure d) monitoring and evaluation takes the national context into consideration e) the development of the method is open to the participation of civil society actors. The method contributes to the resurgence of a significant role for the national state, the participation of which is more than essential; its position into a context of governance arrangements involving national, subnational and transnational entities in reinforced, while its role assumes a kind of flexibility, as it can now function through intervention, regulation, enforcement, or as facilitator in new and indirect ways.

The new open method of coordination has been applied to a number of policy domains, including information society policies in the context of the ‘eEurope 2002: An Information Society for All’ initiative, which had been launched by the European Commission in December 1999. It initially set out ten priority areas for joint action by the Commission, the member states, industry and citizens. These included:

1) Bringing the Internet and multimedia to schools
2) Increasing competition to reduce prices and increase consumer choice

\textsuperscript{1} A knowledge-based society has been defined as one where knowledge is being created, diffused and deployed in accelerated ways through ICTs; where increasingly sophisticated products codify and manage knowledge; and where there is a perception of knowledge as a strategic asset for individuals, firms and nations. Under these circumstances, one can speak of ‘knowledge policies’, namely policies regarding: knowledge creation (supporting basic and applied research, the culture industries, promoting interchanges between different cultures and groups); knowledge diffusion (promoting broadband networks, Internet access, content industries, education reforms); knowledge utilisation (supporting product and process innovation, knowledge management and learning in firms and public organisations, international partnerships for innovation) (Rodrigues 2003).
3) Advancing the necessary legal framework and expand the use of e-commerce
4) Ensuring high-speed Internet access
5) Facilitating the establishment of a European-wide infrastructure
6) Promoting the availability of risk capital for high-tech SMEs
7) Address the needs of the disabled in the information society
8) Maximising the use of ICTs for health monitoring, information access and care
9) Establishing safer and more efficient transport
10) Ensuring online citizen access to government information, services and decision-making processes

(European Commission 2000)

Placed under the open method of coordination, the eEurope initiatives have been operating under state consensus, i.e. acceptance on the part of the member states of the political commitment to implement it, in cooperation with other states, the European Parliament, the European Commission and other actors, according to predetermined schedules and national priorities (Sancho 2002). After the Lisbon summit and the informal Ministerial Conference on the Information and Knowledge Society a month later, the eEurope priorities were clustered around three main aims: a) cheaper, faster and secure Internet b) investment in people and skills c) stimulation of the deployment of the Internet. An Action Plan was prepared afterwards by the Commission and was endorsed at the Feira Summit in June 2000, setting specific targets to be reached by specific deadlines by the public administration and the private sector in member states.

At the end of May 2003, the European Commission released a Communication entitled, 'eEurope 2005: An Information Society for All'. This initiative aims at providing favourable conditions for private investment, job creation, increased productivity, modernised public services, as well as circumstances for inclusion of firms and citizens in the global information society. In order to achieve this, the plan includes two actions, firstly to stimulate Internet services, applications and content and secondly to improve the underlying infrastructure through the promotion of broadband and increased awareness of security matters. The eEurope action plan also stresses the need to promote ICT skills and ICT-based opportunities, something that has been termed 'e-inclusion' (Eurostat 2003).

1.3. From the EU to the national context
The EU information society programmes, particularly the eEurope initiative, have had an impact on the formulation and introduction of strategic national programmes in the member states. At the same time policies have been transferred between European countries depending on successful examples and practices. Recently there have been certain degrees of convergence with regard to the tone and content of the information society policies adopted, which suggests that structures at a supranational level (mainly the EU, but indirectly political forces going beyond the EU level) influence significantly national policy directions. In parallel, the expansion of European professionals exchanging national examples and best practices has led to adoption, avoidance or modification of certain policies in accordance with the international experience. At the same time, the implementation of the initiative still rests with the authority and power of the member states.
Nonetheless, this does not mean that one should speak of a uniform information society in Europe. The image presented in quasi-deterministic terms in the early EU documents—based on a combination of technical infrastructure and human skills and emphasising the need for active policies to overcome impediments to its realisation—conceals the differentiations of this information society on a national or local level: ‘There are many different configurations of the European information society. These configurations involve different industrial structures, different roles of users, and different approaches to policy in both the private and public sectors’ (Mansell and Steinmueller 2000, p.18).

National variations have indeed been inescapable and have often been highlighted in comparative studies. Such variations are attributed to different pre-existing national political and socio-cultural circumstances, as well as different institutional structures and traditions, which are seen to influence the outcome of policy (Sancho 2002), but also of practice; as a result, ‘we need to be able to talk of the ways in which ICTs interact with multiply determined, social, technical, cultural and political relations to produce an unavoidably mixed set of outcomes—some good, others bad’ (Goodwin and Spittle 2002, p.235).

2. The evolution of information society in Greece

2.1. Early vision: The 1995 White Paper
The first policy document regarding the information society in Greece was a White Paper titled ‘The Greek Strategy for an Information Society: A Tool for Employment, Development and Quality of Life’ (1995), which was presented in 1995 by the then Minister of Industry Costas Simitis and raised four goals to be pursued within the following 10-15 years. Specifically:

a) to limit the gap between Greece and the other EU countries in the use of advanced ICT infrastructure within 10 years
b) to ensure that a considerable proportion of Greek firms would have access to markets associated with the information infrastructure within 15 years
c) to ensure that family units increasingly have access to the information infrastructure within 15 years
d) to see that the greatest part of transactions with the state be carried out electronically within the following 15 years


A number of actions were proposed in the 1995 White Paper to pursue these goals, namely the development of a national infrastructure backbone, the establishment of a parliamentary committee to deal with the information society, the development of information networks for firms, the introduction of electronic transactions in public administration. Some of these actions have been pursued in the context of initiatives that are underway, while others have been subsequently revised in the light of new technological, political and institutional developments. Most of the actions have been funded by the second Community Support Framework Programme: the development of a national infrastructure linking universities, technological institutes and public research institutes, or the promotion of an e-commerce environment for business with
the establishment of a National Committee on Electronic Commerce, the application of EDI systems among enterprises, or actions to raise public awareness of e-commerce.

This first document served as a means of setting the information society agenda in the Greek context. It echoed the discourse of opportunity associated with the new technology, as well as the dangers of being left behind, and it presented the whole issue as a great challenge for Greece. It was mainly concerned with the inadequate national infrastructure, which limited electronic transactions and access to new products and services both for firms and for households in comparison with the other EU countries. In this respect, it was mainly orientated towards the developmental goal of limiting the technological gap, rather than being preoccupied with the social and cultural implications of the information society (Constantelou 2001).

2.2. Liberalisation of telecommunications

The main development related to ICTs in the 1990s in Greece (as in most EU countries) and the first major step towards the implementation of the information society has been the liberalisation of the telecommunication sector. Until the late 1980s the telecommunication sector in Greece as in most countries was based on a state monopoly in the provision of telephone and telecommunication services. In the wake of the early EU information society documents, where ICTs were articulated as providing new opportunities for growth and investment, as well as the general realisation of the poor performance of the public telecommunication operator (OTE), the Greek governments engaged in the gradual liberalisation of the sector. The deregulation of value-added services and mobile telephony services was enacted by Law 1892/90. Subsequently, Law 2075/92 served as a framework for the partial opening of the market, since it determined the provision of mobile telephone services by private operators (OTE was excluded). Following a public tender, two mobile telephony licenses were granted to STET Hellas S.A. and to Panafon S.A.

In 1994, Law 2246/94 replaced Law 2075/92 and initiated the liberalisation of all telecommunication services, apart from voice telephony and provision of the telecommunication infrastructure, both of which remained with OTE. Furthermore, this law enacted the full liberalisation of mobile telephony, allowing OTE to compete as well. It also determined the responsibilities of the Ministry of Transport and Communications, while it introduced the establishment of an independent regulatory authority, the National Telecommunications and Post Commission (EETT). Subsequently, a new Law (2860/2000) was passed by the Greek Parliament in December 2000. This new law has five objectives: a) to protect the consumer b) to safeguard competition c) to safeguard personal information d) to ensure provision of universal service e) to ensure the growth of telecommunications (OECD 2001 for a more detailed presentation).

2 OTE indeed entered the mobile telephony market in April 1998 with its subsidiary company COSMOTE.

3 While the EU deadline for full liberalisation in the provision of voice telephony and the associated network infrastructure was 1 January 1998, the Greek government had requested an extension until 1 January 2003 on the basis of the need of OTE to complete its modernisation programme. An extension was granted until 31 December 2000; after that date all restrictions on the provision of voice telephony and the network infrastructure have been removed.
2.3. The 1999 White Paper
In April 1999, a second White Paper was prepared by ten policy experts and advisors to the Prime Minister, based on international experience and feedback from the Ministries regarding the actions and steps that had been taken vis-à-vis the information society. This was more strategic and comprehensive and was titled *Greece in the Information Society: Strategy and Actions*. It declared the following:

‘Information and telecommunication technologies change rapidly the way we work, play, communicate, and transform the bases of economic competition. They constitute a tool for the modernisation of the state and the competitiveness of enterprises, while creating new ways of work, new skills, and the need for continuing learning and adaptation of the education system. At the same time they allow the provision of better health, welfare, and environmental services, and contribute to the promotion of our cultural heritage and the Greek language. The government’s concern is to ensure that the emerging Information Society will be a society for all, without discrimination between information haves and have-nots, and while safeguarding citizens’ rights and the freedom of expression and information.

The overall government strategy for the Information Society is based on some basic principles: equal opportunities and access for all, the creation of an environment that is conducive to entrepreneurship and innovation, and safeguarding of personal freedoms and of the operation of democratic institutions.’

*(White Paper 1999, p.5)*

From the outset, the rhetoric reifying the potential of ICTs for competitiveness and better public services, present in the early EU documents, is prominent, together with the requirement of building human skills to take advantage of these opportunities. The imperative of universal access and the prevention of new types of social exclusion, reminiscent of similar concerns in EU documents, are also emphasised. In parallel, a particular character of the Greek information society is envisaged, one involving the promotion of Greek culture and language.

The requirement to adapt to new imperatives by advancing regulatory reform and broad institutional changes is time and again stressed in the White Paper: ‘The changes that technology brings with it put to the test the adequacy of existing laws and impose their re-orientation from the institutions of the industrial society to those of the Information Society’ *(White Paper 1999, p.7)*. Again, the rhetoric of radical, qualitative shift to a new epoch reminds of the determinist tone of the early EU documents, as well as the inadequacies of existing institutions to accommodate these transformative effects of new technologies. However, new technologies are also referred to as a ‘tool’ to achieve certain objectives.

The information society is defined in a way to highlight the potential benefits for Greece:

a) in terms of transparency and democracy, which presents opportunities for modernisation of the public administration

b) in terms of economies directly based on the generation, distribution and use of knowledge and information, something that provides opportunities for equal participation in the global marketplace for smaller countries like Greece
c) in terms of new types of employment, new skills, flexible employment structures, lifelong learning and education, something that could suit to the long-standing education ambitions traditionally encountered in the Greek family

d) in terms of quality of life, including better health and welfare services, better and safer transportation, conservation of the environment, preservation of cultural heritage, all domains in which Greece has to a smaller or larger extent traditionally suffered.

(White Paper 1999)

In parallel, certain aspects of the Greek society and culture that could contribute to the passage to an information society are also to be taken advantage of: e.g. resourcefulness and willingness to take risks, finding solutions through experimentation, deploying young people enthusiastic about technology within the family in order to overcome the technophobia of the older generation, taking advantage of the strong social fabric to communicate ideas about new technologies.

The bottom line is that ‘In the emerging Information Society, Greece has a unique opportunity to upgrade its position in the global economy and to improve the quality of life of its citizens’ (White Paper 1999, p.8) and that ‘the largest benefits will go to societies that will be first in putting the new production tools to use for improving the quality of life of their citizens and their position in the international economic and political environment (ibid, p.10).

Given the relatively weak position of Greece in the global information society direction, the opportunities presented are accompanied by great challenges to which the state has to respond in order for benefits to be materialised:

a) modernisation of the economy, which is largely focused on traditional manufacturing and services, while there is a lack of research and investment in new products and process innovation, low rates of technology diffusion and a small ICT sector, single-product industries in many sectors and areas and geographical fragmentation, all of which are taken to inhibit development

b) more dynamic macroeconomic policy and structural interventions in the capital, labour and product and service markets so as to enhance investment, growth and employment in new technologies

c) initiatives to reform the operation of public administration, which is seen as a major impediment to the implementation of the information society, since obsolete structures, bureaucracy, lack of planning and staff, lack of feedback mechanisms prevent the assimilation of ICTs and the improvement of service provision

d) acceleration of the creation of appropriate telecommunication infrastructures under conditions of deregulation and a flexible regulatory framework supervised by the state

e) state interventions in the domain of education and vocational training in order to supply both material infrastructures and suitably qualified human resources with new skills and adaptability

The role of the state is consequently given prominence, in contrast with the EU documents. The role of the private sector is also considered very important in terms of
investment in new products and services and in the generation of growth and employment. As a result, the provision of a suitable environment for entrepreneurial activity is of capital significance. The implementation of the information society measures requires co-operation between the public and the private sector, firms and professionals active in the domain; it also proclaims that the shape of the information society will depend on how actively citizens participate in its formation. For the implementation of the strategy, interventions are foreseen on the organisational level (restructuring of IT services in the public sector, improvement of the legal framework for public IT projects), the regulatory level (reinforcement of regulatory bodies, reviewing of support mechanisms, improvement of evaluation procedures), as well as the executive planning and follow-up (Governmental Committee for the Information Society under the Prime Minister, establishment of an Informatics Board made up of public and private sector representatives). Finally, the establishment of an Observatory for the Information Society is foreseen so as to transfer relevant knowledge and practices from international experience.

The White Paper was a quite broad policy document, without specific focus on certain actions. Moreover, while it echoed some aspects of the early EU documents, it was also in line with the eEurope initiative, it reflected a wider concern about social implications and it was relatively tuned into the Greek reality, rather than merely repeating generalisations about the information society. Subsequently, nonetheless, it turned out that the government was less determined to implement it than originally thought (Constantelou 2001). Still, the advent of the third Community Support Framework and the launch of the eEurope initiative at the end of 1999 enabled the design of a more detailed information society approach.

### 2.4. The Operational Programme for the Information Society

Following from the White Paper, through the eEurope initiative and the Feira Summit of June 2000, the Greek government proposed a systematic Operational Programme for the Information Society (OPIS), linking it to the structural funds within the framework of the third European Community Support Framework. This is an innovative horizontal programme, involving a number of government departments, and aiming to implement the essential features of the White Paper.

The OPIS aims to achieve two main objectives over the period 2000-2006: a) to provide better services to the citizen and improve the quality of life through the deployment of ICTs in public administration, health and welfare, transport and the environment; b) to promote development and build human potential through actions to increase competitiveness and employment and to put into place a suitable educational system (Constantelou 2001). To do so, it sets out the following four lines of action (shown with the corresponding shares of the total national and EU funding):

- **Education and Culture (17%)**
- **Citizens and Quality of Life (37%)**
- **The Digital Economy and Employment (24%)**
- **Communications (19%)**

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4 The Community Support Framework Programme for Greece consists of seven operational programmes, namely Improvement of Human Potential, Transport, Competitiveness, Agricultural Economy and Fishery, Quality of Life, Information Society, Regional Development. These are funded at 75% from national and EU funds. The OPIS develops synergies with actions of other programmes.
More specifically, the breakdown for each action line is as follows:

**Education and culture**
- Equipping all schools with the necessary IT, network and audio-visual equipment, creating or upgrading IT labs in universities and colleges.
- Establishing access to the Internet and multimedia resources by all Greek schools by the end of 2001 and a complete Intranet for the education system by 2006.
- Infrastructure development for tele-education for teachers and students throughout the country.
- Training of all teachers in the use of Internet and multimedia resources as an educational tool
- Creation of public Internet access points to ensure the access of youth to the Internet in less favoured areas.
- Administrative documentation and management of Greek cultural heritage, development of digital content and Internet resources with Greek cultural content
- Support of new forms of cultural expression that use IT-based media.

**Citizens and quality of life**
- Improved quality services to citizens and firms by the central, regional and local public administration
- Development of on-line applications, as well as use of ICTs to streamline and re-engineer procedures and communication within and between government departments, covering all of public administration (notably the fiscal, finance, social insurance, justice, regional development and emergency services domains)
- Use of ICTs in view of public sector modernization; training of public sector employees in new technologies and organisational methods
- Creation of geographical and environmental mapping and management information systems, linking central to regional and local government
- Use of ICTs to implement a comprehensive strategy for higher quality health and welfare services provision to all citizens and for the reform of the management of the health sector
- Introduction of telematics applications in land, sea and air transport

**The Digital Economy and Employment**
- Encouragement of the use of ICT applications by SMEs (in the primary, secondary and tertiary sector) in order to increase their productivity and competitiveness
- Developing infrastructure support for e-businesses (providing certification, prototyping, networking and information services)
- Improving conditions for high-tech business startups through the development of venture capital, incubators and other mechanisms
- Improvement of university-industry links through the support of partnerships between research and private sector entities
- Creation and dissemination of digital content and information (databases, libraries, etc.) relating to research needs
• Development of basic IT skills for the wider population, especially for socially disadvantaged groups, in connection with re-employment programmes
• Reduction of the existing gap between supply and demand of highly skilled professionals in the ICT field
• Promotion of employment by combined training and employment actions concerning the acquisition of working experience in ICT firms (trainees)
• Support of tele-work and tele-training pilot applications, especially in geographically remote areas

Communications
• Measures to enhance the liberalisation process in the telecommunications market (e.g. spaces for antennas, equipment for frequency spectrum management)
• Development of local-access network infrastructure in accordance with local needs in small towns and remote areas
• Support the development of broadband services for the public sector combined with special actions for the elderly and the disadvantaged
• Provision of access to people in less-favoured regions by using the existing postal agencies in remote areas as ICT access points

(OPIS 2000)

Two Ministries, namely the Ministry of National Economy and the Ministry of Interiors, Public Administration and Decentralisation, have been mainly allocated the responsibility of the running and supervision of the OPIS, in accordance with the guidelines of the eEurope initiative and the eEurope Action Plan of the Feira Summit.

According to legislation passed in 2000 (Law 2860/2000) several bodies have been set up to manage and implement the OPIS:

a) The Management Authority, operating under the Special Secretariat for the Information Society established within the Ministry of National Economy, which deals with the design, suggestion and approval of action lines for the OPIS, the follow-up and control of their implementation, as well as writing of annual techno-economic reports and supervision of financial, legal and logistical aspects

b) The Monitoring Committee comprising representatives of Ministries, public organisations, economic and social partners and non-governmental organisations and having a supervisory and advisory role

c) The Information Society S.A., a public not-for-profit organisation operating under the supervision of the Ministry of Interior, Public Administration and Decentralisation, which is charged with the administration of public call for tenders for projects seeking funding under the OPIS, while providing assistance and advice to government and other public and private institutions in the implementation of the OPIS

d) The Information Society Observatory, with the intention of cooperating with European initiatives to transfer expertise and best practice relevant with information society issues, as well as providing training tools and supervising benchmarking studies (this was put into place only in the summer of 2004)

(Constandelou 2001).
3. Current situation of the information society in Greece

Table 1 shows a series of indicators of ICT diffusion in Greece in 2000, when the OPIS had just begun. Greece was significantly behind the EU average in ICT infrastructure and use, with the exception of fixed and mobile telephones.

<table>
<thead>
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<th>Indicator</th>
<th>Greece</th>
<th>EU-15</th>
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<tbody>
<tr>
<td>#telephone lines per 100 inhabitants</td>
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<td>54</td>
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<tr>
<td>#cellular mobile subscriptions per 100 inhabitants</td>
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<td>63</td>
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<td>#personal computers per 100 inhabitants</td>
<td>7.1</td>
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<td>#Internet users per 100 inhabitants</td>
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</tr>
<tr>
<td>#personal computers per 100 teachers*</td>
<td>61</td>
<td>134</td>
</tr>
<tr>
<td>#personal computers per 100 students*</td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>

* January 2002

Table 1: Some measures of ICT diffusion, Greece and EU-15, 2000
Source: Eurostat 2003

Table 2 shows an increase in PC and Internet usage for individuals and PC and Internet possession for households between 2001 and 2003, but this increase cannot be characterised as take-off; on the contrary, falling rates are observed between 2003 and 2004 and household intentions to buy a PC and to connect to the Internet are dropping significantly. Moreover, the 2004 Internet usage (roughly 20%) is still far behind the 2004 average for the EU-15 (50%) or even for the EU-25 (47%).

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2001</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>% population over 15 using PC</td>
<td>20.8</td>
<td>27.1</td>
<td>25.9</td>
</tr>
<tr>
<td>% population over 15 using Internet</td>
<td>10.6</td>
<td>19.9</td>
<td>19.7</td>
</tr>
<tr>
<td>% population over 15 having email address</td>
<td>6.5</td>
<td>12.4</td>
<td>12.5</td>
</tr>
<tr>
<td>% population over 15 having personal Internet account</td>
<td>5.7</td>
<td>9.1</td>
<td>9.5</td>
</tr>
<tr>
<td>% households having PC</td>
<td>23.3</td>
<td>30.5</td>
<td>29.9</td>
</tr>
<tr>
<td>% households having Internet access</td>
<td>12.4*</td>
<td>15.2</td>
<td>17.1</td>
</tr>
<tr>
<td>% households intending to buy PC in next 6 months</td>
<td>6</td>
<td>7.5</td>
<td>4.9</td>
</tr>
<tr>
<td>% households intending to connect to Internet in next 6 months</td>
<td>1.1</td>
<td>8.6</td>
<td>4.3</td>
</tr>
<tr>
<td>% population having mobile phone</td>
<td>49.5</td>
<td>64.7</td>
<td>69.4</td>
</tr>
</tbody>
</table>

*in 2002

Table 2: Evolution of basic information society indicator in Greece
Source: EDET 2005

Furthermore, overall Internet use in the Greek population presents certain patterns of differentiation in terms of sex, age, educational level and geographical location:

i) The percentage of 23% for men is contrasted with 16% for women (2004).

ii) Very low use is observed in the over 55 age group, compared to 45% for men and 37% for women in the 16-24 group (2004). The group 15-17 in particular has experienced the highest increase (from 44.2% in 2002 to 53.5% in 2003), something attributed to a significant extent to the fact that the totality of secondary education units have been connected to the net according to OPIS priorities.
iii) Only 6% of men and 2% of women with primary education, and 31% of men and 25% of women with secondary education are connected, compared to 52% for men and 43% of women with higher education (2004).

iv) Only 9.7% of the population in rural areas are connected (2003).

(Eurostat 2005; EDET 2004a)

At the enterprise level, in 2003 92% of firms with 11-250 employees possessed PCs (94% in the EU), 82% were connected to the Internet (83% in the EU), while 48% had also a website (52% in the EU). These tendencies were reinforced through the “eBusiness” action of the OPIS, resulting in a 87% Internet connection in 2004 (90% for the EU-15). Very small enterprises (up to 10 employees) lagged significantly behind the EU average in 2003. The “Go-Online” programme for small enterprises, which subsidises initial purchase of ICT and also provides training, is expected to have an important contribution in this context (according to a recent survey, 60% of small entrepreneurs were of the opinion that the programme could sufficiently address their needs) (EDET 2004b; OPIS 2004).

The degree of broadband network diffusion in the EU remains low (about 5% of population according to the 2003 Summary of National Broadband Strategies of the European Commission), but in Greece it is significantly lower. Although the support of investment towards broadband infrastructures has been one of the fundamental priorities of the OPIS, in 2004 less than 1% of households and only 21% of enterprises were connected with broadband, percentages that are far from the lowest in the EU-15 and among the lowest even in the EU-25 (Eurostat 2005; OPIS 2004).

In the area of education and training, there has been considerable diffusion of ICTs and Internet in schools on a nationwide basis, with large numbers of teachers trained in ICT skills. In 2002, 100% of secondary education institutions were online (36% in 2000), while 47% of primary education institutions were online (only 3% in 2000). The national school net has been upgraded, 6204 ICT labs have been created (2002), telematic services and applications for students and teachers in higher education have been developed. With regard to training, there has been an increase in the percentage of those who have acquired IT skills in a school or university environment, from 22.8% in 2002 to 27.5% in 2003, something again linked with the progress of the OPIS in educational contexts (OPIS 2004). On the other hand, a 44% of those using a computer for professional purposes had received training in the workplace in 2002 (close to the EU-15 average of 49%).

Nonetheless, despite statistics suggesting ICT diffusion in primary and secondary education establishments, in many cases equipment was not used due to lack of education and technophobia. The percentages of those trained in ICTs remained considerably low compared to the EU average. Characteristically, the share of active population that used a computer for professional purposes was only 35% in 2002 (53% for EU-15). On the other hand, the share of computer professionals in total employment in 2002 was only 0.5% (1.7% for EU-15), something that also provides a clue as to Greece’s position vis-à-vis the information society (Eurostat 2003).

In spite of the comprehensive character of the OPIS, initial results indicated that the programme was slow in its implementation. In 2004 Greece continued to lag behind and occupied the last position in the EU-15 in terms of all indicators of information
society development, with the exception of telephone lines and mobile phones. In particular, it was behind in terms of ICT infrastructures, despite recent improvements, while these infrastructures are expensive compared to EU standards. Services were also particularly expensive.

4. The Greek information society model

4.1. Initial Observations
Despite the clearly articulated vision of the OPIS, Greece is, broadly speaking, still significantly behind not only in terms of ICT diffusion, but with respect to the overall ensemble of technological, economic, social, cultural and institutional aspects of the information society project. This is not surprising, since Greece has historically shown receptiveness to the idea of modernisation at a first level, but has found difficulties in the actual absorption and deepening of new ways of living and doing (Voulgaris and Sotiropoulos 2002).

In order to understand the physiognomy of the information society, it might be fruitful to link the information society with certain characteristics of the Greek social formation in its historical evolution. Such an approach could provide a perspective to the information society project by looking into the strengths and weaknesses of the Greek economy, society and polity for possible explanations both of the forms that the Greek information society takes and of potential assets, impediments, and prospects of implementation. In particular we claim that the specific state/economy/society relation that has been historically formulated in Greece can serve as an explanatory device of current developments in the information society. We argue that these relations define several of the dimensions along which a national information society can be evaluated and contribute to what can be called a ‘Greek model’ of information society. Cultural issues have also to be taken into account and can also have explanatory value.

As a starting point, in the taxonomy of world system theory Greece is taken to belong neither to the capitalist centre (most developed western economies) nor to the periphery (developing countries), but rather to the semi-periphery. Moreover, it can be seen to belong to the late-late development paradigm, i.e. to the economies where industrialisation only happened after 1929 (in contrast with the late western European industrialisers like Germany, which were late only in comparison to England).

Late development has been associated with an increased role of the state or state-controlled institutions for direction. As a result, looking into the state entity and state structures can provide insights as to why late developers with similar starting points still follow different developmental paths and perform unevenly in the world economy (Mouzelis 1986). One can argue that the weaknesses of the information society project in Greece are related to the weak structure or insufficient leadership of the state, which are in turn linked with the state/economy/society relations in the Greek context.

4.2. The state, economic development and the IT sector in Greece
The gradual integration of the Greek economy into the world market and the process of urbanisation in the late 19th century gave an important role to the state for building
infrastructures, regulating prices and exports etc. Industrialisation implied the articulation of agriculture with industry, but because this took place in ineffective ways the domestic market that emerged was quite limited. Increasing urbanisation, as a result, led to rising unemployment for large segments of population drawn in urban centres. These processes coupled with the relatively early development of democracy and parliamentary institutions resulted in increasing pressures for those segments of urban population to be absorbed in the tertiary sector, particularly public bureaucracies, which in turn grew enormously. The public sector size augmented and public administration soon became complex, fragmented and inefficient. Politicians started to operate in ways that sought to build their own political capital by granting posts and favours, resulting in a vicious circle that impacted further on state mechanisms. In this manner, the state acquired a significantly anti-developmental character which prevented Greece from satisfactory industrialisation and development (Mouzelis 1995; Tsoukalas 1977).

One aspect of the Greek capitalist model refers to the relationship between the state and the state-owned, protected or subsidised industrial enterprises that developed some time during the interwar period or after WWII. When industrialisation took off in the 1930s, the already established state structures were dominant, with regard to a still weak industrial sector. This cultivated a tendency for the private economic sector to expand its protection and acquire increased subsidies, rather than improving its own capabilities and building its own momentum (Lyberaki and Tsakalotos 2002). The articulation of the private sector with the state operated through clientelistic relations, with certain economic groups enjoying privileged access to public resources. Through 'national champions' strategies, many firms were protected through high tariffs from foreign competition and most continued to enjoy state protection until well into the 1980s (Mouzelis 1986).

The Greek model of industrial capitalism that eventually emerged was one where economic rationality systematically succumbed to political imperatives and the accumulation of political capital through clientelistic relations. In contrast to western Europe in the 1950s and 1960s, Greece’s incomplete industrialisation (based on light industry and consumer goods) generated an industrial structure overwhelmingly dominated by small firms. Clientelistic relations have also had an impact on the character of the state itself. In the post-1974 era, the Greek state has been considered a ‘weak state’, in the sense that public administration has systematically been subject to abusive interventions by successive governments, something which, in turn, has prevented the development of a public administrative culture of professionalism that could have acted as the motor of social reforms (Lyberaki and Tsakalotos 2002).

The historical characteristics of Greek capitalism and its relationship with the state are reflected in the current situation in the IT sector in Greece. The IT sector is still underdeveloped, characterised by a vast majority of small firms and only a very small number of large enterprises. The perceived absence of dynamism in the industry is put down to the articulation of the IT sector with other manufacturing branches, with the state and with the Greek society. In particular one can identify the following problematic dimensions:

- The IT firms, although private, have relied extensively on state promises for funding that either have not been materialised, or, have not been accompanied
by appropriate monitoring of industrial performance; this can be seen as an extension of the relationship of dependence of firms on the state observed in the industrial era. Furthermore, certain administrative details (e.g. procedures for acquiring funding) have continued to be quite complicated, often reflecting the enormous size and fragmentation of public administration that has been formed historically.

- The public sector itself has not been pursued adequate digitisation policies in public administration and has been inadequate both as provider and as consumer of ICTs; this has had a significant impact on the size of the internal IT market.

- A certain dynamic segment of the Greek market that tends to have an international outlook and could serve as a vehicle for attracting foreign investment has not been taken advantage of, while lack of synergies with foreign firms result in IT enterprises being limited to the internal small market.

(Voulgaris and Sotiropoulos 2002)

4.3. The state and (civil) society in Greece
The late industrialisation/development of Greece, as well as the role of the state in economic development, have also put their stamp the character of civil society. The long-standing Ottoman rule, operating in despotict ways, prevented the existence of intermediate groups standing between ruler and people, as the ones that had developed in West Europe. Moreover, state mechanisms were in place well before industrial capitalist development, while the fact that they sprang during the end of the Ottoman empire inherited to the structure of the state certain authoritarian features. All the above proved detrimental to the development of formal civil society, resulting in civil society groups operating in close association with state interests (e.g. the trade unions) and in corporatist arrangements in which business and labour representatives were not equal partners in policy, as in West European corporatist systems (e.g. Germany), but in actual fact controlled by the state (Davaki 2001).

On the other hand, the political relationship between the state and civil society in Greece has not followed a universal integrative mode, but rather what has been called ‘the incorporative-clientelistic mode’ according to which the political rights of the population are determined through personalistic patron-client networks (Mouzelis 1995). Clientelism has had a significant impact in the lack of development of civil society, as it potentially draws each citizen towards individual political participation and thus impedes the formation of horizontal associations to promote common goals and interests (Sotiropoulos 1996). This in combination with the patronage of trade unions and employer associations by the state, the limited independence of social movements (e.g. the feminist movement) from state mechanisms, the lack of significant voluntary organisations and the close connections between the church and the state, the small number of ethnic minorities, all compose a picture of a weak civil society and of a nation underdeveloped in social capital.

5 By civil society we denote societal interests, associations and institutions that exist outside of the state (Keane 1988).
In parallel, the prevalence of clientelism, together with incomplete industrialisation, lack of adequate social citizenship and welfare rights, weak trade unions and social movements, reliance on the family and disassociation from broader social collectivities, have contributed to social heterogeneity and have prevented the development of a universalistic and collective culture in Greece (Petmesidou 1996).

The weak civil society and the lack of collective civic spirit have had a negative impact on the evolution of the information society project. Firstly, the social networks and local communities that could help advance the information society by increasing awareness have either been absent or limited or characterised by inertia (the example of a remote village population in Norway that arranged at their own initiative excavation to facilitate the passage of fibre optic infrastructure is something uncommon in the Greek context). Secondly, the absence of a tradition of universality and the prevalence of clientelism, social heterogeneity and particularistic treatment has denied so far the possibility of an information society project implemented through broad processes of social inclusion despite the rhetoric expressed in the OPIS. Thirdly, low awareness of potential benefits and dominance of individualism and short-termism have resulted in the formation of resistance identities vis-à-vis the prospect of ICT-related social transformation. These identities are linked to some extent with technophobia, notably in older individuals, but they are overall determined by a lack of motivation to do things differently. Moreover, they can be particularly observed in public administration and bureaucracy, where reforms have been slow and difficult. Significantly, the culture of short-termism and short-sightedness has also impeded the realisation on a social level of multiplier economic and social effects resulting from the promotion of the information society. Characteristically, during deliberation procedures IT sector representatives have repeatedly reacted against the prospect of spending funds on education programmes (something that would indirectly boost demand) and have instead demanded channelling them towards direct purchases of IT equipment.

Nevertheless, the absence of strong civil society is to some extent compensated for by the strong presence of the family. The family is seen as a vehicle for the diffusion of ICTs in society, notably through young members who could form the ‘avant-garde’ of ICT inventiveness (something analogous to the ‘hackers’ in Finland).

On the cultural level, Castells and Himanen have argued that the success of the Finnish model of information society has depended on a strong national identity and a collective spirit, an orientation towards the future, a positive attitude towards technology (Castells and Himanen 2002). The Greek national identity had already developed before certain economic, political, cultural national institutions were established. Ideological inclusion thus preceded socio-political inclusion, which in any case operated through patronage networks. The identification with the nation has as a result taken an abstract and romantic form, rather than belief in national institutions. This has contributed to the formation of ambivalent national identities combining elements of patriotism with lack of collective spirit, or maintaining a romanticised view of ‘Greekness’ as superiority, coupled with a distrust towards Greek public institutions (Mouzelis 1995). This attitude, in combination with other cultural dimensions (e.g. the extrovert character of the people and the lifestyle) can possibly provide clues why new technologies have been deployed as instruments to
promote communication and acts of conspicuous co-consumption (e.g. showing-off latest mobile phone models in public gatherings) and not used for creative and productive purposes (e.g. infrastructures or PCs at work). The lack of a coherent national identity seems in any case to have denied a vehicle for the advancement of a broad socio-economic project such as the information society at the national level.

5. Conclusions

Greece has followed closely the tone of early EU reports in the formulation of an initial information society vision. Initial preoccupations had to do with the relative underdevelopment of the infrastructures of the country and the positioning in the development opportunities presented by ICTs. The liberalisation of telecommunications in the 1990s can be seen in the light of this initial disposition, in line with the international atmosphere. Subsequently and in parallel with the development of the eEurope initiatives, the country prepared more detailed and strategic plans with increased awareness both of the competitive potential and of the quality of life opportunities brought about by ICTs. The social and cultural dimensions of the information society were taken into consideration, as were also a number of socio-economic and cultural parameters historically endemic in the Greek reality.

The private sector is the motor of the information society in Greece, while the public sector presents inadequacies as provider of digital products and advanced applications, as well as consumer of digital products and services.

Unlike national cases where large ICT firms have acted as leading edge technological innovators (e.g. Nokia in Finland) the IT sector in Greece has been characterised by a very small number of large firms and a vast majority of small and very small enterprises. Despite adequate incorporation of the latest technologies, the sector is not competitive enough as it suffers from complex relationships with other productive entities and the public sector and follows the delays and anomalies of the Greek society and public sector (clientelistic relations, fragmentation, inefficiency and so on) (Voulgaris 2003).

The public sector in particular has been seen as a major impediment to the advancement of the information society project and its digitisation and rationalisation is regarded as a sine qua non for the ICT-related social transformation (Caloghirou 2003).

Private consumption, rather than production, drives the information society, resulting in the diffusion of simple infrastructures (e.g. for fixed or mobile telephony), while advanced infrastructures (e.g. related to Internet) are less spread.

Digital divides are observed, as ICTs are much more diffused in firms, than in households and individuals. ICTs are disproportionately diffused in large and medium enterprises in relation to small and very small enterprises. Digital divides are also observed among individuals, in terms of sex, age, education and geographical location.

The delays in the implementation of the information society in Greece are related to inadequate education and training programmes, lack of awareness, ignorance and
technophobia vis-à-vis the new technologies. The absence of significant civil society organisations and social networks has played a major role to this effect, but the family is seen as a vehicle for ICT diffusion and literacy.

These dimensions derive from specific features of the Greek historical formation, among else incomplete industrialisation, a complex relationship between the state, the economy and politics, a weak IT sector, a fragmented, over-bureaucratic, inefficient, unmotivated and resistant to change public administration, strong family and weak civil society and collective spirit, consumerist and individualist identities, contradictory cultural attitudes (traditionalism/nationalism vs. modernisation, technoc- consumption vs. technophobia).

These dimensions bring forward the idiosyncracies of the Greek society and economy towards the path of the information society and give legitimacy to the term ‘Greek model of information society’. They suggest that the Greek state seems to have a very important role to play in supporting and promoting the IT industry in a strategic manner that would avoid previous practices involving state-dependent enterprises that were detrimental for the economy. Political leadership seems to be overall necessary in the development of the Greek information society, since it is only through strong political will towards modernisation that the potential of ICTs can be exploited and chronic idiosyncratic weaknesses can be overcome.

The role of the Greek state has been particularly emphasised in the White Paper of 1999. Contrary to other European cases\(^6\), characterised by an indirect mode of state intervention, in Greece it is called upon to assume a more direct role, partly due to the extensive reforms required in the state/economy relationship, as well as to the significant public administration interventions that will be required to improve public bureaucracy and services. Indeed the type of state activity and the degree of state intervention in the IT market, economy and society can be seen as a significant dimension of differentiation between information societies in Europe.

\(^6\) The Digital Denmark 2000 report, for instance, suggests an indirect mode of state intervention, namely one seeking to improve environmental conditions by enhancing learning in society, by using state demand to boost production in certain areas and by improving communication between citizens/firms and public institutions through better organisation and administration (Falch and Henten 2000).
References


